



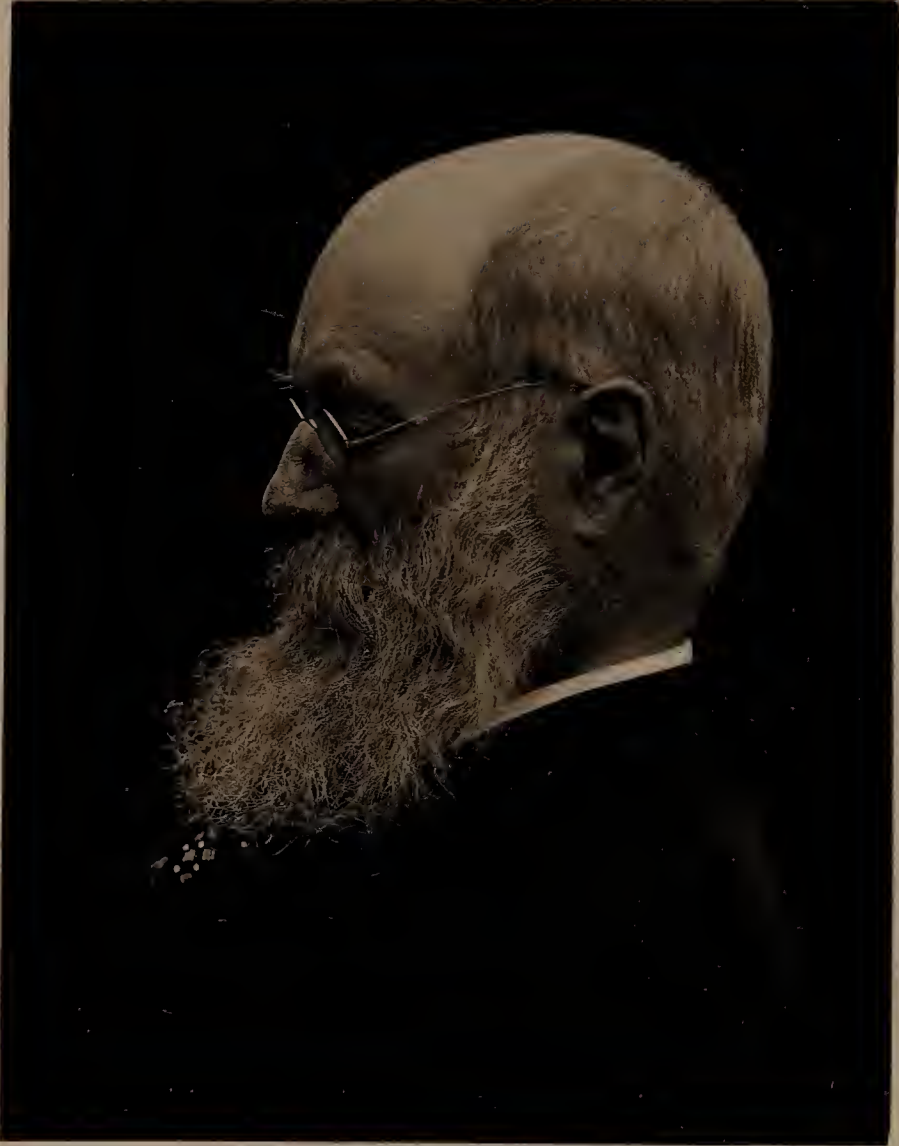
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APPLETONS'
ANNUAL CYCLOPÆDIA

AND REGISTER OF IMPORTANT EVENTS
OF THE YEAR

1897

EMBRACING POLITICAL, MILITARY, AND ECCLESIASTICAL AFFAIRS;
PUBLIC DOCUMENTS; BIOGRAPHY, STATISTICS, COMMERCE,
FINANCE, LITERATURE, SCIENCE, AGRICULTURE,
AND MECHANICAL INDUSTRY

THIRD SERIES, VOL. II

WHOLE SERIES, VOL. XXXVII



NEW YORK
D. APPLETON AND COMPANY
72 FIFTH AVENUE

1898

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PREFACE.

It is hardly so true in our day as when the maxim was first uttered, that laws are silent amid the clash of arms. But it is still true, and perhaps always will be, that the movements of armies and navies surpass all else in immediate popular interest, and the thunder of the guns appears to render the sounds of peaceful industry tame if not silent. In this volume we record the close of one war and a large part of the causes that are likely to produce another, in which Americans have the highest interest. The article on "Greece" narrates the closing operations of the war between that country and Turkey, and gives the terms of peace. The articles on "Cuba," "Spain," and the "United States" will enable the reader to inform himself as to the condition of things that led to the complication which will probably involve our own country in war by the time this volume is ready for delivery. Many questions that will naturally follow can be answered by turning to the enumeration of the land and naval forces of the two countries. A full account of the "National Guard of the United States" was given in the "Annual Cyclopædia" for 1895, and later statistics (where they exist) may be found in the articles on the several States in this volume. In pursuing the subject further, the reader will be interested in the articles on the United States Naval and Military Academies, the article on "Signals," which is accompanied by a colored chart, and that on the "Revenue-Cutter Service." If he is still further interested in the struggles for possession of territory that seem never to cease, he may turn to the articles on "India" and "West Africa," where he can read of the frontier wars carried on by European powers against uncivilized but not easily conquered tribes. And if he is inclined to consider the subject imaginatively—to follow the poet where he "saw the heavens fill with commerce," and heard "the nations' airy navies grappling in the central blue"—he may read the illustrated article on "Aërial Navigation."

In studying the progress of the arts of peace, the reader will find interesting the article on the Tennessee Centennial Exposition, and those on "Associations for the Advancement of Science," "Chemistry," "Uses of Compressed Air," the "Fine Arts," "Geographical Progress," "Metallurgy," "Railroad Service," "Street Railways," "Tin Manufacture," and "Wire Glass."

The summaries of American, British, and Continental literature will be found full as usual; and for those who take an interest in the trimmings and incidents of literature there is an interesting illustrated article on "Book Plates" prepared by an expert; while the illustrated description of the new Congressional Library is a subject for honest national pride.

To the articles on the larger religious bodies we add this year "Christian Scientists," the "Federation of Free Churches," the "German Evangelical Synod," "Oriental Churches in the United States," and "Volunteers of America."

A survey of the mercantile and monetary movements of the year may be had by

consulting the articles "Financial Review" and "United States Finances," together with the trade summaries in the articles on our own and other countries. Pursuing this subject into the speculative and adventurous region, the reader will be interested in our article on "The Klondike" with its accompanying colored maps.

A new and interesting feature will be found in the State articles this year, where we give the portraits of the Governors, with the exception of a few who failed to respond to our request for a photograph.

In the realm of science, the "Astronomical Progress" of the year is recorded by Prof. Swift, that in "Physiology" by Dr. Youmans, "Physics" by Dr. Bostwick, and the "National Academy" by Dr. Benjamin.

The yearly list of "Gifts and Bequests" will be found unusually interesting by reason of its extent. This feature was introduced in the volume for 1893, and the five lists thus far published make a remarkable showing. The aggregate in 1893 was \$29,000,000; in 1894, \$32,000,000; in 1895, nearly \$33,000,000; in 1896, \$27,000,000; and in 1897, \$45,000,000; making a grand total of nearly \$166,000,000.

Among the eminent dead of the year Charles A. Dana—who had a double career, as Assistant Secretary of War during the great civil contest and for nearly thirty years as the foremost journalist in the United States—comes first. We present not only a sketch of his life, but a fine portrait, which forms the frontispiece of this volume. The other men and women of letters who passed away in 1897 include: Alphonse Daudet, the French novelist; Jean Ingelow, the English poet; Margaret Oliphant, the story-writer and critic; William J. Linton, the artist and author; William T. Adams, known to the boys as Oliver Optic; Joel T. Headley, popular a generation ago; Margaret J. Preston, Alice Wellington Rollins, Margaret Hosmer, Justin Winsor, and Daniel G. Thompson in our country; and in Europe Isabella Banks; Cavalcaselle, the Italian art historian; Richard Holt Hutton; Meilhac, the French dramatist; Francis Turner Palgrave; Riehl, the German historian; Sir John Skelton; and Vacherot, the French philosopher. The necrology of the artists includes the names of Homer Martin, Johnson M. Mundy, John Sartain, Eliza Greatorex, Max Maretzek, George P. Boyce, Sir John Gilbert, Charles P. Knight, and John L. Pearson. Among the scholars we lost were Henry Drisler, Solomon Deutsch, James Hammond Trumbull, Francis A. Walker, E. Cobham Brewer, Sir Augustus Franks, James Legge, Francis W. Newman, and Charles J. Vaughan; while the scientists and inventors included Edward D. Cope, Alfred M. Mayer, Theodore Lyman, Campbell Morfit, Alvan G. Clark, George M. Pullman, Carl R. Fresenius, Sir Isaac Holden, Sebastian Kneipp, and Alexander M. Ross. The clergymen whose earthly career was closed included Father Hewit, Joshua H. McIlvaine, George H. Houghton, Bishop Rulison, Henry Drummond, Edward M. Goulbourn, William W. How (the hymn-writer), and Baron Plunket. Of statesmen the world lost Canovas del Castillo, the Spanish Premier, assassinated by an anarchist, Lord Rosmead (Sir Hercules Robinson), Sir Rutherford Alcock, John Anthony Mundella, James R. Doolittle, Daniel W. Voorhees, and Isham G. Harris. Of reformers Neal Dow completed a long life and Henry George was called away in mid career. Of those who played noticeable parts in our great civil war were Couch, De Trobriand, McLaws, Pleasonton, R. W. Meade, Samuel P. Lee, A. C. Rhind, and John L. Worden; while the eminent European soldiers who passed away included Sir Henry Havelock-Allan, Sir William Jervois, Sir George Malcolm, and Baron Sterneck. Of all these, and many more, brief but comprehensive sketches will be found here.

The book closes with an index covering the two volumes of the new series.

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THE ANNUAL CYCLOPÆDIA.

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A

ABYSSINIA, an empire in eastern Africa. The ruler, styled *Negus Negusti*, or King of Kings, is Menelek II, who after the death of Johannes II in battle with the dervishes overcame his rivals and established himself on the throne in 1889 by the aid of arms furnished by the Italians. He had entered into a treaty with Italy, signed at Ucciali on May 2, 1889, at the beginning of the struggle, while he was still only King of Shoa, and this treaty was confirmed in October of that year. The Italian version gave to Italy a protectorate over the Empire of Abyssinia, otherwise called Ethiopia. Menelek denied that the treaty conferred such right. The relations between him and the Italians became strained on account of his refusal to recognize the protectorate, and his denouncement of the treaty in 1893 led to a rupture. In 1895 the Italians occupied Tigre, the northern kingdom, and advanced into Amhara: but after the forces of Ras Mangascia, King of Tigre, had been driven out by the Italians, Menelek marched into the north with a large army from Shoa, surprised the Italian garrisons, surrounded the main body of Gen. Baratieri's army near Adowa, and well-nigh destroyed it in a general engagement fought on March 1, 1896. Through the friendly intervention of Russia a treaty of peace was concluded on Oct. 26, 1896, at Adis Abeba. By this treaty Menelek recognized as Italian possessions all territories lying north of the Mareb, Balesa, and Muni rivers, and Italy recognized the absolute independence of Abyssinia and the dominion of Menelek over all territories south of that line. The government of Abyssinia, or Ethiopia, is of a feudal character. The kingdom of Tigre in the northeast, the adjoining province of Lasta, the central kingdom of Amhara, Gojam next to it, and the powerful kingdom of Shoa in the south make up Abyssinia proper, the dependencies of which extend into Somaliland as far as Harrar and embrace a large part of the country of the Gallas. The port of Massowah, formerly disputed between Abyssinia and Egypt, has been annexed by Italy with the other dependencies to the north of the Abyssinian plateau and a part of the highland district in the northeastern part of Tigre. The area of the empire is estimated at 150,000 square miles, and the population at 3,500,000. The Abyssinians once followed Jewish rites, and still practice some of them, but since the fourth century they have been Christians of the Alexandrian rite. The head of their Church, called the *abuna*, is a Copt selected and consecrated by the Patriarch of Alexandria. There are about 12,000 monks, presided over by a native ecclesiastic, called the *echegeh*, and these and the priests instruct a select portion of the

youth in grammar, poetry, religious ceremonial, and song. The judicial magistrates are the governors, chiefs, and landed aristocracy. The people raise cattle, sheep, and goats, and cultivate the land to a limited extent. Cotton, coffee, the indigo plant, the sugar cane, the date palm, and the vine grow wild. There are extensive forests abounding in valuable woods. The principal exports, sent mostly through Massowah, are skins, ivory, butter, gums, and mules. Besides the forces of the feudal chiefs, the Negus has a trained army of enlisted men armed with modern rifles.

The climate is varied, producing the fruits of all zones, for Abyssinia is composed of a succession of table-lands rising from 4,000 to 8,000 feet in height, intersected with deep valleys and ravines. In the lower plateaus rice, sugar cane, indigo, and other tropical products grow wild; in the more temperate regions vines and nearly every species of European fruits and vegetables are found in great luxuriance; while the loftiest plains are suited to the cultivation of barley and some native species of grain. The southern districts are the natural home of the coffee tree. The principal crop is doura, from which the Abyssinians make a great part of their food. The banana is the principal fruit eaten by the natives. There are excellent breeds of horses and mules in the country. The mineral wealth of Abyssinia is unquestionable, and the lack of expert labor has been the obstacle to the production and manufacture of the useful metals. The sale of gold is forbidden by law. It is forbidden also to traffic in ivory, though elephants are numerous.

The ruling caste is of the Hebrew race, formed of successive immigrations from Palestine. The Jewish religion was established in Ethiopia by Menelek, son of Solomon and Makeda, or Nieaula, the Queen of Sheba. King Solomon provided his favorite son, when he went to join his mother, with a guard of 12,000 Israelitish soldiers, with whose aid, after Makeda's death, he founded the Solomonian dynasty of Ethiopian emperors. Jerusalem became from that time the center of pious pilgrimages of the Abyssinian people. An important Jewish immigration took place during the first captivity, and another during the reign of Salmanassar. These exiles became rapidly acclimatized and absorbed in the bulk of the Ethiopian nation. A last exodus followed after the destruction of the Temple, but these later comers have remained to the present day outside the pale of Abyssinian society, maintaining their *ghettos* in the province of Samen, where they follow metal working and remain faithful to their ancient creed. The Ethiopians, on the other hand, embraced Christianity at

a very early period, retaining, however, all the rites, the spirit, and the doctrines of their old religion that were not abrogated by the Gospel. These Ethiopians, who are genuine Hebrews in race, form the aristocracy of the country, furnishing the dignitaries of church and state and the feudal chiefs of society. There are about 400,000 of these descendants of Hebrew settlers, ruling over 14,000,000. The Negus can raise an army of 200,000 men, of whom more than half are equipped with modern rifles.

Diplomatic Missions.—The loss of the battle of Adowa on March 1, 1896, when the Italian army was beaten in pitched battle by the Abyssinians and 12,000 Italians were left dead on the field, led to the renunciation of the protectorate over Abyssinia claimed by the Italians in accordance with their version of the treaty of Ucciali, though the original Amharic text, as interpreted by the Abyssinians, contained no such meaning. The final agreement was facilitated by the intervention of the Pope, who sent Monsignor Macarius to the Emperor Menelek to intercede for the release of the Italian prisoners, and who also bespoke the good offices of France and Russia to bring the treaty negotiations to a satisfactory conclusion. The treaty of peace was finally concluded between Major Nerazzini, the Italian plenipotentiary, and the Negus Menelek at Adis Abeba on Oct. 26, 1896. As in regard to the former treaty, a difference of interpretation arose between the Italian and Abyssinian governments in regard to one of the clauses of the new one. According to the official Italian text, Italy undertook not to cede any portion of her Abyssinian territory to any power except Abyssinia until the frontier between Menelek's dominions and the Italian colony is definitely fixed. According to the Abyssinian version, Italy engaged herself never to cede any part of her Abyssinian territory to any power save Abyssinia.

Since the withdrawal of Italy's claim to conduct the foreign affairs of Abyssinia, a right that was not denied by any of the European powers except France and Russia before the new treaty supplanted the treaty of Ucciali, the Negus Menelek has obtained the unquestioned right to treat directly with foreign powers. The European governments were not slow in seeking to establish diplomatic relations and establish their influence at King Menelek's court. The French, whose colony of Obok adjoins Abyssinia, concluded a commercial treaty with the Negus in January, 1897, and four or five French expeditions were planned for the purpose of opening Abyssinia and the eastern Soudan to French influence and commerce. M. Bonvalot was officially commissioned to investigate the problem of entering the Soudan. Prince Henri d'Orleans undertook a similar mission without official credentials. Max Bavelør was sent out by the French Chamber of Commerce to prepare the way for another party under the Vicomte de Constantin. One of the objects sought by the French is permission to construct a railroad from Djibouti to Harrar. The line is expected to be completed to the Abyssinian town of Antotto before the end of 1899. M. Lagarde, the Governor of Obok, was intrusted with a new diplomatic mission to the Negus. An imposing diplomatic mission was conducted by Rennell Rodd, secretary to the British legation in Egypt, who was dispatched as special envoy, with a numerous staff, to reopen diplomatic relations with the Ethiopian monarch and to acquaint him with the nature and extent of the British claims in Egypt and the regions of the upper Nile, and secure his recognition of British and Egyptian rights over Kordofan and Sennaar and throughout the regions of the White Nile. One of the objects of

the mission was to induce King Menelek to retire from territories that he had conquered which formerly belonged to Egypt. A commercial convention formed part of the negotiations, also a proposal for co-operation against the dervishes of the Soudan. Russian expeditions of a semiofficial or patriotic character, though ostensibly religious or scientific, had been numerous in Abyssinia during the nominal Italian protectorate from the time when the Cossack Ashinoff led the way, in 1889. The Russian Church has sent missionaries to the country at various times. Lieut. Mashkoff went on a political errand in 1891. In 1895 a party of Abyssinian prelates and princes visited St. Petersburg under the personal conduct of M. Leontieff. Col. Maxinoff visited Menelek at Adis Abeba in the early part of 1897. A new Russian expedition under M. Poliakov set out from Europe in the beginning of April, 1897.

The English expedition, setting out from Zeila, reached Adis Abeba on April 28. An agreement between Great Britain and Abyssinia was signed on May 14, and on the following day the envoy and his suite took their departure.

The Emperor Menelek in treating with the English envoy was even less inclined to acknowledge as lying within the British sphere territories formerly conceded to Ethiopia by British diplomacy and others actually occupied by Abyssinian forces than he was to sanction the retention by Italy of the boundaries within the Abyssinian high plateau to which he had provisionally consented in the treaty of Adis Abeba. Kassala itself was formally restored to Ethiopia by the treaty of June 3, 1884, concluded between the Negus Johannes and the Egyptian Government under the auspices of Great Britain. Afterward Great Britain, on March 24, 1891, recognized as Italian the whole Ethiopian Empire, from the river Juba to the Blue Nile, and by a second treaty of April 15, 1891, completed this gift of Abyssinia to Italy, including in the gift the town of Kassala, with the stipulation that it should be retroceded to Egypt. In like manner England, after agreeing with France by the convention of Feb. 8, 1888, to neutralize Harrar, which at that moment was in the actual possession of Abyssinian troops, by a new treaty on May 5, 1894, expressly abandoned Harrar to Italy. Germany also, in the Anglo-German agreement of July 1, 1890, sanctioned the abandonment of Ethiopia and the Galla countries to Italy. Believing that the treaty of Adis Abeba canceled all these former treaties by which European powers disposed of his territory without his knowledge or consent, Menelek was anxious that in coming to a definite boundary agreement with Italy, and in fixing the boundaries between Abyssinia and the Egyptian Soudan, the great powers should ratify the arrangement. While the Negus was willing to concede the provisional boundary formed by the rivers Mareb, Belesa, and Muna as the permanent frontier, the various Ras wanted him to insist on a frontier considerably to the north.

Italian Policy.—Major Nerazzini was commissioned to delimit the frontier of the Italian possessions on the line laid down in the treaty of peace. King Menelek endeavored to persuade the Italians to abandon the Mareb boundary and accept a new frontier at the foot of the high plateau. The Government of the Marquis of Rudini decided to retain the positions on the plateau, which, according to expert opinion, could be defended by 5,000 men against an army. After a week's discussion, on May 22 the Italian Chamber passed a vote of confidence in the undefined plans of the Government, rejecting by a majority of 89 a radical proposal in favor of entire abandonment, and by a much larger

majority the motion of the Opposition to suspend action until the new limits were fixed at the widest extent allowed by treaty through the delimitation survey. Later in the year the Government decided to appoint a civil governor in the place of Gen. Vigano. Ras Alula before his death, in February, 1897, gave the Italians trouble by his raids upon their territory. On the opposite frontier the dervishes taxed their resources. Their horsemen attacked the Beni Amer tribesmen in Italian territory and drove away their cattle, killing 30 of the Askaris who were sent to repel the raid. A large dervish force left Ghedaref at the beginning of January, and, plundering the Bazas tribe, entered the country of Barias, who fled with their cattle to the hills. The Italians, anticipating an attack on Agordat, concentrated troops on the plain with such rapidity that the dervishes withdrew and intrenched themselves at Amideb. The Italian prisoners released by the Negus began to arrive home in the beginning of January. Toward the end of that month Menelek directed that no more prisoners should be set free until the Italians evacuated the part of Erythrea restored by treaty to Abyssinia. Further convoys of prisoners were sent to Zeila later. The last prisoner to leave Adis Abeba was Gen. Albertone. In the provinces a few Italians still remained in May. Major Nerazzini continued his negotiations with Menelek for a definitive treaty until early autumn, when he returned to Italy for fresh instructions. King Menelek would agree to none of the proposals of the Italian envoy, and promised only that he would grant to Italy a better frontier than that accepted by Count Antonelli but rejected by his Government in 1891. By this Italy would lose the two fertile provinces of Sraeh and Oguleh-Cusai, as well as the strong Mareb boundary. The boundary that he proposed starts from Tomat, on the Atbara, joins the Mareb at Todluk, follows that river to its confluence with the Mai Ambessa, which it mounts to its source, follows the Mai Feccia down to the upper Mareb, ascends the Mai Raetta, passes south of Gura, Diga, and Mahio, descends to the plain of Galline Faraone, and runs parallel to the Red Sea at a distance of 60 kilometres from the coast. On the southeastern border it continues at 180 miles from the shore of the Indian Ocean, joining the Juba to the north of Bardera and leaving Luk under the suzerainty of Abyssinia, though it remains an Italian trading center. This frontier was accepted by the Italian Government, with a reserve as to Adi Caje, a post that had been fortified by the Italians at an expense of 3,000,000 francs. The chief points of the negotiations, which were to be brought to a conclusion within a year of the signature of the treaty of Adis Abeba, on Oct. 26, 1896, were the amount of the ransom for the Italian prisoners and the delimitation of the frontier. Menelek abated his claim for ransom from 20,000,000 to 10,000,000 lire, but grew more exacting in regard to boundaries. The Italian Government was not ready to evacuate at once the high plateau, on account of political considerations at home and international complications, and for fear of intertribal conflicts resulting upon the withdrawal of Italian forces. The prospective restoration of Kassala to Egypt, which could be accomplished as soon as the Anglo-Egyptian forces gained possession of Khartoum and Berber, would hasten the development of the ultimate Italian policy in Africa. If the colony could not be made self-supporting and defensible without any further sacrifice of Italian blood or treasure, the Rudini Government would prefer withdrawal from the Abyssinian plateau, from Asmara and Keren, and even from Massowah. The Erythrean budget as prepared and presented to the Chamber

on May 18, provided for an expenditure of 19,800,000 lire for 1897. Subsequently the estimate was cut down by the ministry to 8,900,000 lire. In May Signor Rudini induced the Chamber to indorse the possible limitation of the military occupation to Massowah alone and the organization of the rest of the colony, including the high plateau, under tributary native chiefs. Hence Menelek increased his demands and refused the Mareb frontier, which he was willing to concede after the battle of Adowa. Major Nerazzini concluded with Menelek a commercial treaty securing for Italian citizens full freedom of movement and of trade, with protection for merchants and merchandise and most-favored-nation treatment in respect to customs and *octroi* duties. Both contracting parties bind themselves to promote the opening of routes for the better development of commercial relations between the Italian territories on the Indian Ocean and the south of Abyssinia. The treaty gave to Italy the right to have a permanent representative at the Abyssinian court. Capt. Ciccodicola was appointed to this post, while Senator Bonfadini was made Civil Governor of Erythrea. In August the Italian Government informed the British Government that it was desirous of transferring Kassala to the Anglo-Egyptian authorities as soon as possible.

Operations in Somaliland.—After the defeat of the Italians in 1896, Ras Makonen, a cousin of King Menelek, and the most powerful of the feudal princes of Abyssinia, established himself in Harrar, of which he was appointed governor, and with his army of 40,000 men extended his conquests over the Somalis, occupying Ogaden, a district lying within the sphere assigned in conventions to Great Britain.

The Equatorial Provinces.—Rennell Rodd's mission, so far from obtaining from Menelek an admission that the region of the White Nile was within the Anglo-Egyptian sphere, took back to England the reply that he considered the whole *Hinterland* as Abyssinian, including the banks of the Nile down to Khartoum and up to the Lake Nyanza, with all the country of the Gallas. He declared, however, that he would not assist the dervishes against the English, and when the Khalifa sent an ambassador later, seeking an alliance, he declined to enter into a league with his hereditary enemies. In Gallaland and Somaliland the English envoy conceded to Abyssinia some of the places reserved to British influence in the Anglo-French agreement of 1891. The Russian Major Leontieff, who obtained from King Menelek the appointment of Governor-General of the Equatorial Provinces of Ethiopia, made arrangements with Prince Henri of Orleans to organize an expedition to take possession of both banks of the Nile up to the borders of the Congo State, in the name of the Emperor of Ethiopia, and thus frustrate the British plan of connecting the East African protectorate with Egypt, and at the same time establish communications through Bahr el Ghazal with the French outposts on the upper Ubangi. French engineers had obtained the right to build a railroad from Jibouti to Harrar and Adis Abeba. A concession for railroads in Abyssinia was granted to a company formed by Alfred Ilg, a Swiss engineer, and Alfred Chegneux, a French explorer. The French were already erecting for King Menelek a telegraph line over this route. The rival French expedition that went out under M. Bonvalot, with whom Prince Henri of Orleans quarreled at the outset, reached the White Nile first, passing through the Galla country, where the intercession of Menelek secured a good reception for the Frenchmen, who were now led by the Marquis de Bonchamps. The object of this expedition was to establish France solidly on the left

bank of the White Nile with the help of an Abyssinian Ras, and afterward support the French on the Ubangi.

The sphere of influence claimed by the Emperor Menelek extends from 14° to 2° of north latitude. Starting from the boundary line of Italian Erythrea, the frontier follows the fourteenth parallel to Tomat, on the Atbara, and thence goes straight to the White Nile, leaving to Abyssinia a good part of the island of Meroe, Sennar, and Abu Harraz, on the Blue Nile, and reaching the White Nile a little below Koweh, about 150 kilometres up the river from Khartoun. From this point it ascends the White Nile, leaving the left bank to Abyssinia as far as Lake Albert, whence the frontier follows the second parallel of north latitude eastward to the Juba river, and by this stream follows the Italian frontier of the Somali coast up to the English frontier above the Ogadayn. This new frontier was provisionally accepted by England, which retains on the Gulf of Aden no more than a strip of about 75 kilometres behind Zeila and Berbera. Menelek submitted this series of delimitations to France, Russia, and Turkey for their approval, with the view of settling the definitive boundaries of his empire under the guarantee of Europe.

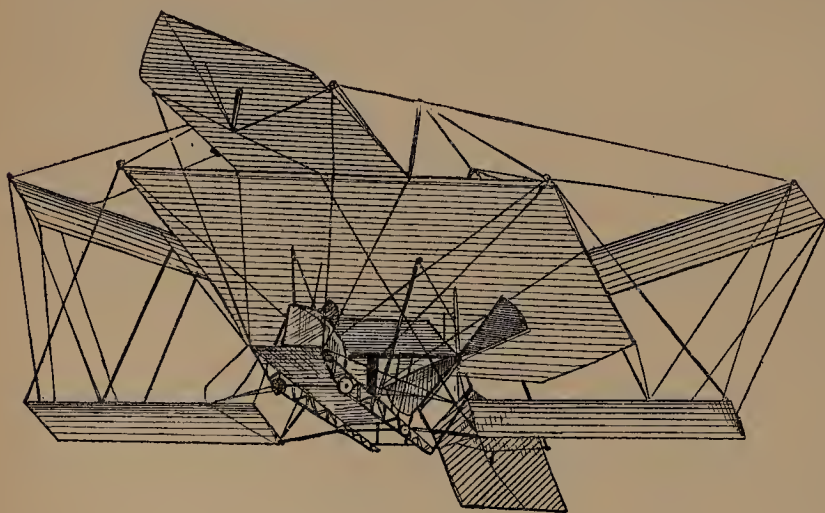
AËRIAL NAVIGATION. The introduction of aëroplanes has caused marked advances in aëronautics during the past decade, largely through the experiments of Hiram S. Maxim, of England, Otto Lilienthal, of Prussia, and Samuel P. Langley, of the Smithsonian Institution, Washington, D. C. These three have made extensive and costly experiments, extending over a period of years, and Lilienthal gave his life to the advancement of the science, being killed by a fall from his soaring apparatus Aug. 11, 1896. Other investigators in this field, whose researches have added to our knowledge of the principles of mechanical flight, are Octave Chanute, of Chicago; Arthur Stentzel, of Altona, Prussia;

Montgolfiers. The experiments of all the investigators favor aëroplanes slightly concave on the lower side, and they have had to overcome immense difficulties in the way of securing material combining the requisite strength and lightness.

Maxim's aëroplanes were stretched on frameworks of steel tubing, stiffened with wire, the material being balloon cloth in two thicknesses. The reason for making the cloth double was that the planes, being large, developed a great tendency of the material to flap and bag, causing a deformation that interfered seriously with the lifting capacity. By using two thicknesses, set slightly apart, and making the lower thickness somewhat porous, while the upper was almost air-tight, it was possible to preserve a flat surface of the lower thickness of cloth, transferring all the flapping to the upper surface, where it causes no serious inconvenience. The propelling machinery was placed on a deck of trussed construction, suspended below a large aëroplane, set at an angle of about 1 to 10, and having other and smaller aëroplanes above and at the sides, set well apart, the object being to prevent their taking the wind from each other. The mechanism was quite large, constituting an air-ship, with 4,000 feet of lifting surface. A steam engine was used for motive power, and the apparatus was run along a light railway track until the speed gave the required lifting power to take it from the ground. Maxim took infinite pains in the construction of engines and boilers of sufficient lightness, and finally settled on a boiler having thin copper water tubes, curved among the flames. Through these he maintained a forced circulation and was able to obtain 800 feet of heating surface with only 34 feet of flame surface. The boiler weighed half a ton, carried 200 pounds of water, and by means of gasoline fuel, with flames 22 inches high, was made to furnish steam enough for the engines, whose efficiency was 364 horse power. The engines were

of marvelous construction, and would have served to make Maxim famous had he done nothing else in the line of invention. They weighed less than 2 pounds to the horse power, which is about one thirtieth of the weight of the latest and best marine or stationary steam engines. They were of the double-expansion type, used the steam at 300 to 350 pounds pressure, had a piston speed of 750 feet a minute, and were made throughout of high-grade steel, many of the parts being tempered to increase the tensile strength. These engines drove the screw propellers, which were $17\frac{1}{2}$ feet in diameter, with 16 feet pitch. Each engine being separately connected with its propeller,

they could be used for steering, as well as driving the machine, by simply running one engine, and consequently its propeller, a little faster than the other. Unfortunately, this flying machine was badly wrecked on the first day of its trial; but as the wreck was caused by the unexpectedly great lifting power developed, causing a bending of the axles of the upper wheels that had been provided to confine the machine so that it could not take any extended flight, and as numerous data were obtained of the details of its operation, the experiment was universally regarded as a success. On the day of trial three runs were made over the track, which was about 1,800 feet long. The first two runs

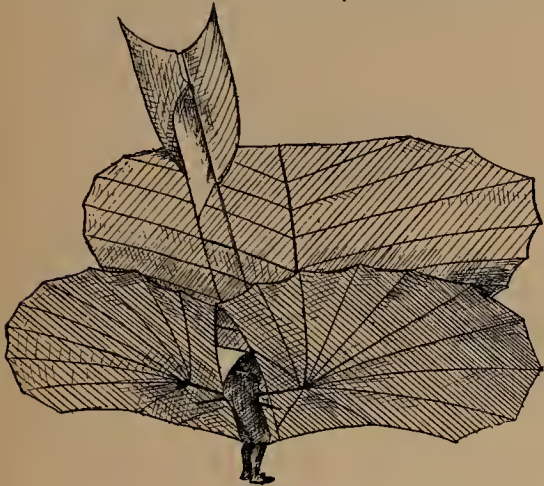


MAXIM'S FLYING MACHINE.

MM. Tatin and Richet, of France; Carl E. Myers, of Mohawk, N. Y.; A. M. Herring, Horatio Phillips, and Pilcher, of England; and George Wellner, of Brünn, Austria. All these, except Myers, have made use of some form of arëoplane, imitating the soaring of birds or the suspension of kites. Investigations in kiteflying have aided the aviators, and a description of recent progress in these will be found in the article KITEFLYING in this volume. Maxim was the first to build a machine that actually lifted itself off the ground without external aid or the pull of a bag of gas, and this feat, accomplished July 31, 1894, marked the greatest achievement in aëronautics since the time of the

were made at moderate speed, in the endeavor to familiarize the operators with the workings of the mechanism. The third run was made with the steam at 310 pounds. The whole mechanism weighed a little less than 3 tons, and the dynamograph showed that the following lifting powers were exerted: 100 feet, 700 pounds; 200 feet, 1,700 pounds; 300 feet, 3,000 pounds; 400 feet, 3,700 pounds; 500 feet, 3,950 pounds; 600 feet, 5,750 pounds; 700 feet, 6,600 pounds; 800 feet, 6,450 pounds; 900 feet, 6,500 pounds; 1,000 feet, 8,700 pounds. The machine was lifted from the ground after running about 600 feet, and continued to ride against the upper rails until the unexpected lift of 8,700 pounds caused the break-up.

Otto Lilienthal was a Prussian engineer, who began experimenting about 1890 with winglike planes,

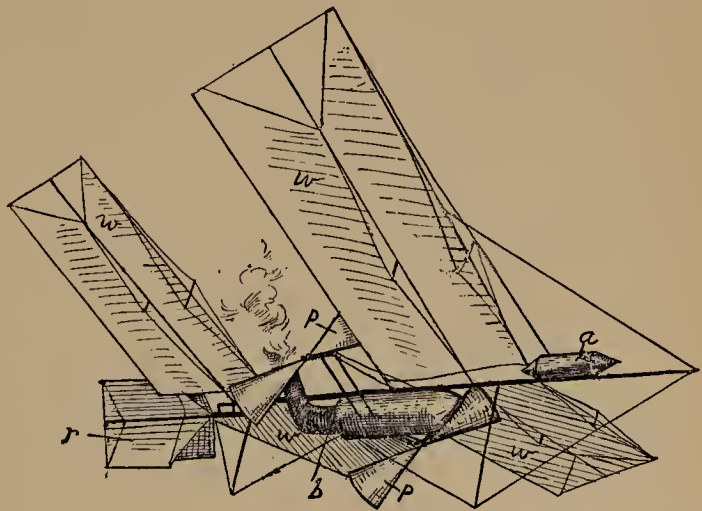


LILIENTHAL'S LAST SOARING APPARATUS.

which he carried just below his armpits, and, by taking a swift run from a hilltop against the wind, was able to soar or slide down on the air to a considerable distance. He called his mechanism a soaring apparatus, and by patient trials and experiments developed and improved the structure until it assumed the form here shown. He built about a dozen different types in all, and patented them in many countries, selling some to other investigators and experimenters. Lilienthal constructed a hill on purpose to have one convenient for conducting his experiments. His first apparatus was about 16 yards in extent of surface. He practiced with this, and learned to balance and guide it to a certain extent by the swaying of his body. Later he added a tail or rudder, and in 1895 he built one with two superposed aëroplanes, between which in the rear was hung the rudder. This arrangement gave him a larger area of supporting surface, and he was able to soar higher, and at times to remain stationary in the air. His longest flight was somewhat over 900 feet. He exercised great care and seldom soared more than 25 feet above the ground. He was endeavoring to soar in curves, so as to circle in imitation of birds, shortly before he received his fatal fall. It was generally thought that his two-plane apparatus was not so safe as the single plane, with which there had been no serious accidents. Of the various sizes made, he preferred those having surfaces of about 100 feet and measuring about 18 feet from tip to tip. He built these of a weight of 50 to 60 pounds, and so constructed that they could be folded up for easy conveyance.

Pitchee, of England, and Mouillard, of Cairo, Egypt, have also built soaring apparatus, on the principles developed by Lilienthal, with devices of their own invention. Both of them have used surfaces as great as 300 feet, but these can be used only in calm weather. A. M. Herring and several others in the United States have also built similar mechanisms or purchased them from Lilienthal for experiments. Octave Chanute, of Chicago, built them in a variety of forms, some having six or eight wings or planes.

Samuel P. Langley's experiments began about 1896, with a circular whirling apparatus, having an arm swinging around a circle about 65 feet in diameter, from the end of which he suspended all sorts of weights and planes, and whirled them at different speeds, to study the laws that governed rapid motion through the air. A few years later Horatio Phillips conducted similar experiments in England on a somewhat larger whirling mechanism. He constructed a machine with a series of superposed aëroplanes, the whole weighing 350 pounds, and was able to whirl it around a circular track with very little power. Prof. Langley tried small weights, studying the principles involved, before he tried to build a machine that would fly. He found that a thin brass plate weighing a pound, when hung from a spring at the end of his whirling arm, could be made to reduce its pull or strain on the spring from 1 pound when stationary to an ounce or less when rapidly rotated, and that actually less power was required to rotate and sustain the weight than to sustain it when stationary. His experiments in this line continued until 1889, demonstrating that an engine of 1 horse power could support 200 pounds weight in horizontal flight, by taking advantage of the inertia of the air as a support. Having established the conditions to be met, Prof. Langley set about building a machine, which has been styled an aërodrome. This was completed in November, 1893, but was not sailed with satisfactory success until May 6, 1896, when a successful trip was made over the waters of the Potomac, the place being selected in order that the aërodrome might alight on the water and not damage itself by falling. Prof.



LANGLEY'S AÉRODROME.

a, empty float; b, boiler; p, p, propellers; r, rudder; w, w, w, wings or aëroplanes.

Langley speaks of the machine as a great steel kite made to suspend itself in the air by the speed or thrust of its motor instead of a restraining kite string. The great difficulties that he encountered in its construction were sufficient reduction in weight and proper balancing. As originally designed, his aërodrome was to be a mechanical bird

of about 25 pounds weight, including a 1-horse-power engine. When the first construction was completed it weighed about 40 pounds, and the motor developed but half a horse power, and this after months of endeavor to secure a sufficiently strong construction with little weight. Subsequent machines were built with engines driven by compressed air and by carbonic-acid gas; but these also had to be abandoned, because it was found impossible to bring the weights of the boilers within the limits. Steam boilers were made in many ways, in the endeavor to secure one light enough and yet large enough to make sufficient steam. At last one was designed which was very wasteful of steam, but which would deliver from 1 to $1\frac{1}{2}$ horse power, and which weighed, engine and boiler together, without fuel, 7 pounds. Gasoline vaporized was used for fuel, and about 2 quarts of water supplied the boilers. The main frame is of steel tubing, the entire length 16 feet, the wings measuring $12\frac{1}{2}$ feet from tip to tip, and being fixed—that is, not flapping. The total weight is slightly under 30 pounds. The two propellers are each about 4 feet long; and make 800 to 1,300 revolutions a minute. It had to be launched in the face of the wind, and when completed was designed to be shot off with a spring mechanism from the top of a house boat in a dead calm. It could not start itself, because of the initial velocity (about 25 miles an hour) required to sustain it in the air. Two years and a half were occupied from the time the *aërodrome* was completed until it was made to soar away as designed. First, days were spent waiting for dead calms that never came; then the spring motor proved unsatisfactory, and another launching device had to be contrived and constructed; then, when a launch was actually made, it was found that very nice balancing was necessary to preserve the position in the air. The *aërodrome* had a way of starting off on an up curve and tumbling over itself, as it were, or of shooting suddenly downward into the water, until it seemed as if it never could be made to sail properly. At last, in May, 1896, one day of trial, at which it was expected that the machine would develop the usual or new eccentricities, the operators were delighted to see it soar away as steadily as a great bird, describing large curves in the air, and after its water supply was exhausted sink gently down on the surface of the Potomac, without the slightest injury. The trial was immediately repeated, with equally satisfactory results. Several subsequent successful trips have been made, the most notable being on Nov. 28, 1896, when the *aërodrome* sailed three fourths of a mile, at a speed of 30 miles an hour, rising, from a starting point perhaps 15 feet above the water, to an elevation of about 100 feet. The flight is limited by the small amount of water carried. Prof. Langley believes that if a sufficiently light condenser can be added to preserve the water for use over and over, a flight may be sustained for hours.

Two French investigators, MM. Tatin and Richey, in 1896, made a test of an air-ship that seems, from the brief description sent out, to be somewhat like Prof. Langley's, but larger. Steam was used as a motive power, the engines being fixed on a car or body made of light pine, braced with steel wires, and sustained by two fixed wings or *aéroplanes* of 86 square feet surface. The total weight of the machine was 73 pounds. Two oppositely revolved propellers were used, one being placed forward and the other aft. A fixed tail or rudder was employed to steady the flight. The entire apparatus weighed 73 pounds, exclusive of fuel and water, and was propelled, entirely by its own motor, for a distance of 460 feet, measured in a straight line on the ground, the velocity attained being 59 feet a second. Guided

by their experience with this machine, they built another in 1897, in which the weak points were improved. This second mechanism soared or flew about 250 feet, when it met with an accident.

The majority of recent investigators in this field of research regard stationary or fixed *aéroplanes* as the best arrangement, rather than flapping or beating wings in imitation of birds. Rudolph Kosch, a follower of Lilienthal in experiments with soaring apparatus, dissents from this opinion, and has constructed an apparatus to demonstrate the truth of his assertion, and also that circular wings are the best form. His mechanism consists of four circular planes or wings, slightly concave beneath, and arranged in pairs, each having a rotary motion

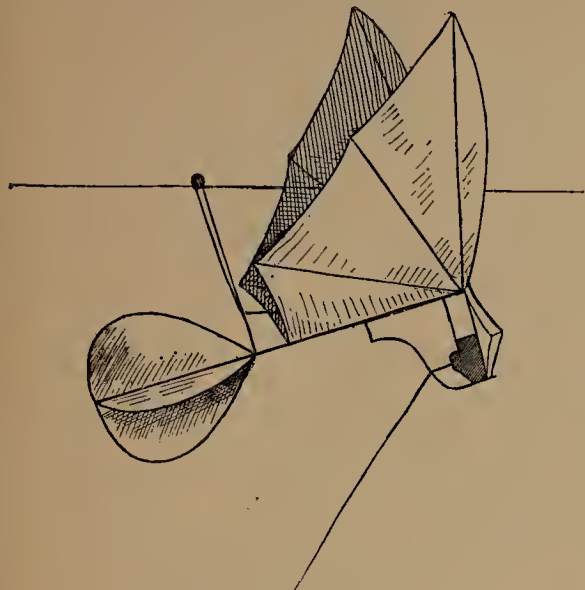


RUDOLPH KOSCH'S MECHANISM FOR ILLUSTRATING THE POWER OF CIRCULAR WINGS.

about the upright member, and also an up-and-down motion, communicated by a man working cranks below. The pairs are rotated oppositely. With this apparatus a man of average strength exerted for a short time a lifting strain of 50 pounds, or, to express it technically, with an angle of incidence of 10 and a speed of 72 rotations a minute, the dynamograph recorded a lift of 50 pounds. The circles of these wings were made of steel tubing, with wire spokes, and the covering was of cambric. Mr. Kosch points out that the circular form, which he was the first to construct, gives more surface for the same weight of frame than is possible with any other construction. The machine illustrated weighed 56 pounds, the planes being 6 feet 4 inches in diameter. His experiments suggest that propellers are best placed side by side, as were Maxim's.

Arthur Stentzel, of Altona, Prussia, after some years of experimenting with soaring apparatus, evolved a flying machine in 1896 that bore some resemblance to a gigantic butterfly with an exaggerated tail. The spread of the wings was 21 feet, and the surface $8\frac{1}{2}$ yards. Compressed carbonic acid was the motive fluid used in the engine, which gave 3 horse power at a pressure of 9 atmospheres, or 1 horse power with 5 atmospheres. The machine weighed 75 pounds, and in use was suspended from a safety cable, to guide it in its flight and prevent damage by falls. When the wings were flapped with 1 horse power, the machine advanced 10 feet along the cable at each stroke of the wings; with $1\frac{1}{2}$ horse power the advance was 13 feet to each stroke, in 1.3 seconds, the machine being lifted clear of the cable. The machine showed good stability

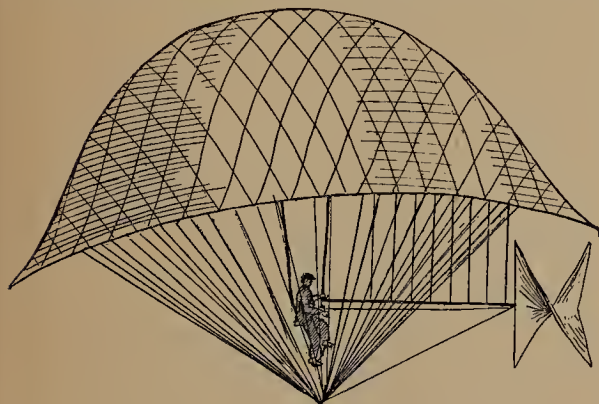
in the air, the rudder serving efficiently as a guide. Steel tubes were used for the main parts of the framework, and ribs of bamboo, with rubber



STENTZEL'S FLYING MACHINE.

cloth for the covering. The performance of the machine was so satisfactory to Stentzel that he is now building a larger one, designed to carry a man. This will have about 23 yards of surface, employing a $4\frac{1}{2}$ -horse-power motor, and is designed to weigh 200 pounds.

Carl E. Myers, of Mohawk, N. Y., patented, April 20, 1897, what he styles a sky cycle or gas kite, this being a balloon of peculiar form shaped so as to split the air in its advance, the motor power being a man centrally suspended, so that he may operate both foot and hand cranks for rotating a propeller placed forward. This propeller is of most ingenious construction, having an area of 15 feet, but weighing only $2\frac{1}{2}$ pounds. It is made of a light steel frame, on which a cloth covering is twisted heliacally, so that it not only serves as a surface, but keeps the parts of the frame in position. Myers began his experiments by firing projectiles of all sorts and shapes from a spring gun of known force, thus learning the form best adapted to travel against the wind. He claims to have arrived at a formula that enables him to produce the very best form for the purpose; and though he has constructed the gas bags of his sky cycles in different forms, yet by



MYERS'S SKY CYCLE.

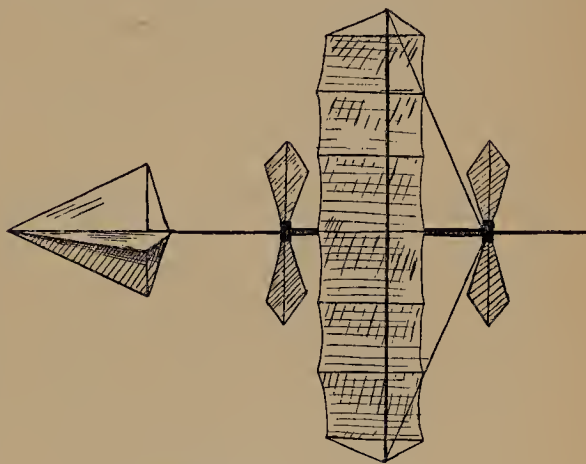
following his formula he always secures a shape that makes good headway against the wind. He constructs his apparatus so that it is slightly heavier

than the air, depending on the propeller to draw it upward. He evidently uses the lower surface of his gas bag as an aeroplane. Several successful exhibitions have been given with his apparatus.

Dr. Louis Martin, a professor in the University of Kolozsvár, Hungary, in a lecture at Buda-Pesth in 1893, exhibited an apparatus of rotating paddles operated from an eccentric, so that they beat down on one side, and were feathered on the rise. The pressure exerted by this mechanism was so satisfactory that the Hungarian Government has made an appropriation to enable him to continue his experiments, with a view of adapting the principle to a flying machine.

A. M. Herring, of the United States, has experimented with a great variety of aeronautical mechanisms, mostly with small models. He has made numerous mechanical birds, driven by motors of twisted rubber that rotated propellers as it untwisted, and with these he has obtained flights of five to seven seconds, with distances of 80 to 135 feet. They can be made to fly successfully in winds of not more than 7 miles an hour. One of his larger models is shown here, this weighing 5 pounds and carrying a condensing engine of two fifths horse power. It presented a surface of 14 square feet, and, with no aid in starting, flew 240 feet, and might have done better had not the boiler burst early in its career.

There is an aeronautical society in London and one in Boston, the latter growing out of an aeronautical conference, which was called in Chicago in



HERRING'S FLYING MACHINE.

1893. The society publishes an "Annual," the first issue of which appeared in 1895. A monthly publication devoted to the subject is also issued in New York city by A. M. Forney. Recent literature on aeronautics includes an exhaustive treatise by Octave Chanute, in which he elaborates and explains all the modern theories and principles developed, and describes most of the flying machines exploited within the past fifty years. Samuel P. Langley has written articles concerning the principles and conclusions derived from his investigations, and Hiram Maxim and Otto Lilienthal have also written much on the subject. Maxim, in writing on "Natural and Artificial Flight," says: "I have found that if one only desires to lift a large load in proportion to the area, the planes may be made very hollow on the underneath side; but when one considers the lift in terms of screw thrust, I find it advisable that the planes should be as thin as possible and the under side nearly flat." Octave Chanute says of the conditions of sailing flight: "1. There must be wind, although it may be light. 2. No flapping whatever is needed when under way. 3. The bird

must have a peculiar conformation. 4. The bird needs a certain mass or weight." Prof. Langley calls attention to the fact that birds soar in up currents of air, and by taking advantage of increased wind speed at the higher elevations. He also advises the use of the propeller rather than flapping wings. A. M. Herring is hopeful of the future of flying machines, but not optimistic. He says they never will carry freight, and that the machine to carry two persons successfully "is an invention of the relatively distant future."

Through the efforts of various aviators and investigators in aeronautics, Mr. Lodge, of Massachusetts, introduced into the United States Senate, Dec. 4, 1895, a bill to secure aerial navigation. It provided for the giving of \$100,000 from the United States Treasury to the person who, prior to Jan. 1, 1901, should construct an apparatus carrying 400 pounds through the air, without the aid of gas, at a speed of 30 miles an hour, and having its power wholly within itself. A second clause provided a gift of \$25,000 to the person who, before Jan. 1, 1900, should demonstrate the practicability of safely navigating the air in free flight, for a mile or more, without gas. This bill still remains with the Committee on Interstate Commerce, to which it was referred.

AFGHANISTAN, a monarchy in central Asia, lying between Russian Turkestan and British India. The Ameer is Abdurrahman Khan, who was installed in July, 1880, while the British occupied Cabul, the capital, having expelled Shere Ali's son, Yakub Khan. The Indian Government has since paid an annual subsidy of 1,200,000 rupees per annum, increased in 1893 to 1,800,000 rupees, to enable Abdurrahman to consolidate his power and preserve a strong, united, and independent Afghanistan as a buffer state between the Russian dominions and India. The military forces of the Ameer consist of the feudal militia and the regular army, said to number 20,000. The artillery has 76 modern guns. In the arsenal at Cabul are manufactured gunpowder, cartridges, rifles, and cannon by the aid of machinery under the superintendence of Englishmen. The infantry of the feudal army have received a permanent organization. The cavalry consists of the retainers and vassals of the chiefs. In 1896 Abdurrahman Khan attempted to introduce universal conscription, and ordered the enrollment of one man in every seven, but the objections of the people induced him to defer the realization of his project. The arsenals contain breech-loading rifles enough to equip an army of 50,000 men, which is said to be the war strength of the Ameer's army.

The boundaries between Afghanistan and the Russian territory and dependent khanates have been at various times a subject of negotiations between the governments of Great Britain and Russia. In 1895 the last portion of this line, that which runs through the Pamirs, was finally delimited. The line follows the Amu Daria or Oxus river up to the confluence of the Murghab and the Panjah, and then this latter, the southern branch, up to its source in Victoria lake, from which it runs eastward to a fixed point near one of the peaks of the Sarikol range. This delimitation gives to Russia the territories of Darwaz, Roshan, and Shighnan, which Afghanistan had occupied while the question as to which was the principal branch of the Oxus, and consequently the conventional boundary, was being discussed between the British and Russian governments. In the west the boundary, leaving the Oxus at Khamiab, runs in a southwesterly direction to Zulfikar, on the Heri Rud, thence southward to the peak of Kuh Malik-i-Siyah, southwest of the Helmand river, and from there in a general eastward direction to the Kwajah Amran range. Sir

Mortimer Durand arranged with the Ameer in 1893 the basis of a boundary delimitation between Afghanistan and British India, which has since been carried out by a joint commission, with the exception of the stretch between the Khaibar pass and Asmar. By this agreement Chitral, Bajaur, Swat, and Chilas fall within the British sphere, while Afghanistan retains Asmar and the Kunar valley as far as Chanak, also the Birmal tract. The demarcation included Kafiristan in the Ameer's dominions, and when the people of this district, who differ from the neighboring Afghans in race, customs, and religion, and have always been at feud with them, refused to acknowledge his sovereignty, Gholam Haider with an Afghan army reduced them to submission.

Afghanistan is divided into the four provinces of Cabul, Herat, Turkestan, and Candahar, over each of which is a *hakim* or governor, and the recently subjugated district of Badakshan, with its dependencies. Afghans and Pathans form the bulk of the population, but with them are mingled the descendants of the former Tartar and Persian conquerors and the various armies that have invaded India through Afghanistan. The Ghilzai, Duranis, Aimaks, Uzbeks, and the Tajiks are Sunnite Mohammedans, while the Kizilbashis and most of the Hazaras are Shiites. The Tajiks, who are of Iranian descent, live in the towns and are scattered among the other tribes, carrying on industrial, commercial, and agricultural pursuits. The Aimaks and Hazaras, inhabiting the Paropamisus mountains in the north, have Tartar features and are supposed to be descendants of colonies left by Gengis Khan. The total population of Afghanistan is about 4,000,000. The Ameer's revenue is derived from the tithes of agricultural produce, increased to as much as a third of the crop on irrigated lands.

The Afghans raise usually two crops a year, one of wheat, barley, or legumes in the spring, and one of rice, millet, panicum, or corn in the autumn. Afghanistan abounds in fruits, such as apples, pears, quinces, almonds, peaches, apricots, plums, cherries, pomegranates, mulberries, grapes, and figs, which form the main part of the food of a large section of the population, and in a preserved state are exported to India and other countries. The castor-oil, madder, and asafoetida plants are abundant in the wild condition. Asafoetida is exported in great quantities to India. Lead, gold, iron, copper, and precious stones are found. Silk, felt, carpets, and rosaries are made by the people and exported. Horses, spices, nuts, and sheepskin garments are other exports. The principal articles of import are China tea, cotton goods, indigo, and sugar.

The Mittai Question.—Under the terms of the Durand convention of 1893 provision was made for demarcating the respective spheres of the Government of India and the Ameer. The object aimed at was to lay down definitely the law under which powers of sole control over particular tribes or clans were to be exercised on either side. The country dealt with was a long, narrow strip lying for 1,200 miles between British India and Afghanistan proper. The demarcation had been carried out by various commissions from Chitral and the Kafiristan border to the Helmand river before the beginning of 1897 with the important exception of the tract lying between the Kunar and Cabul rivers, from the Nawar Kotal to the neighborhood of Landi Kotal, in the Khaibar. This is the country inhabited by the large tribe of the Mohmands, which has figured prominently in the politics of the Indian border for many years. There were peculiar difficulties to be faced in dealing with this people, and by common consent the demarcation of the boundary of sole control in

this region was left to the last. If the Afghans had remained quiet the Ameer and the Indian Government might have been willing to postpone it indefinitely, contenting themselves with the indeterminate joint control that they had exercised for forty years, each granting allowances and punishing or rewarding tribesmen as occasion demanded. The Khan of Lalpura, who is the hereditary chief of the Mohmands, has hitherto considered himself a vassal of Cabul, though he and the tribes under his control have often transferred their allegiance from the reigning Ameer to various pretenders in times of civil war. The eastern Mohmand clans, inhabiting the country between Lalpura and the Peshawur border, have had more intimate relations with the British authorities, some of their headmen holding land within the Indian border. The Durand convention draws a line right through the tribe, dividing it in halves, one of which falls to the Ameer and one to the Indian Government. It cuts off the residence of the hereditary chief from clans directly subject to him that live within the sphere assigned to British control. In the early part of 1896 a clan of Mohmands living in a range of hills south of the Kunar river, near Asmar, fell to quarreling among themselves. The local Afghan officials could not resist the temptation to interfere, and Gen. Gholam Haider, commanding the Ameer's troops in eastern Afghanistan, placed a strong outpost in the Mittai valley, which was on the British side of the Durand line, for the convention provided that the watershed east of the Kunar and north of the Cabul river, from Jellalabad to Kam Dakka, was to be the boundary between Indian and Afghan authority. This forward movement of the Afghan troops caused a stir in Bajaur and imperiled British influence along the new route through Swat and Dir to Chitral, where subsidized chiefs began to look with alarm for a further advance of Cabul troops, while the Mohmands and other semi-independent tribes showed signs of restlessness. The Afghans, by pushing forward their outposts, threatened, intentionally or not, to outflank the road from Malakand to Chitral. Hence the British Government was compelled to take measures of self-protection and to press for a delimitation of the frontier, which otherwise it would have preferred to leave in abeyance. All the clans on the Indian side of the Durand line were informed that they are under the sole control of the British Government. A *darbar* was brought about by Mr. Merk, the commissioner at Peshawur, at which a large number of Mohmand headmen acknowledged allegiance to the British notwithstanding the pressure exerted from the Afghan side to induce them to hold aloof from the assembly. Meanwhile the Afghan outpost still remained in Mittai at the beginning of 1897. No answer from the Ameer having been received in January to the invitation to appoint a new frontier commission, the commissioner of Peshawur issued a proclamation declaring that all Mohmand country and its border is now within the limits of the British Government and will have no connection whatever with the Ameer of Cabul. The British claimed as theirs under the Durand agreement not only the Mittai valley, but the whole of Bajaur, of which that valley forms a part. When the Afghan troops first occupied Mittai the British authorities sent a protest to Gholam Haider at Asmar that the valley was indisputably British under the Durand treaty. The Afghan general replied that the step had been taken by the Ameer's orders, and that the only way in which he could withdraw from the valley was on the instructions of his sovereign. The new British agent at Cabul, Ghafar Khan, when he went to his post in October, 1896, was the bearer of a strong letter from the Government of India on this sub-

ject, and in the course of November the Ameer replied that he was fully prepared to abide by the Durand treaty and that he recognized the watershed as the boundary, which excluded Bajaur from his dominions. For an account of the military operations on the frontier, see INDIA.

ALABAMA, a Southern State, admitted to the Union Dec. 14, 1819; area, 52,250 square miles. The population, according to each decennial census since admission, was 127,901 in 1820; 309,527 in 1830; 590,756 in 1840; 771,623 in 1850; 964,201 in 1860; 996,992 in 1870; 1,262,505 in 1880; and 1,513,017 in 1890. Capital, Montgomery.

Government.—The following were the State officers during the year: Governor, Joseph F. Johnston; Secretary of State, James K. Jackson; Treasurer, George W. Ellis; Auditor and Comptroller, Walter S. White; Attorney-General, William C. Fitts; Commissioner of Agriculture, J. F. Culver; Superintendent of Education, John O. Turner; Adjutant General, H. E. Jones; Chief Justice of the Supreme Court, Robert C. Brickell; Associate Justices, Thomas N. McClellan, Thomas W. Coleman, James B. Head, and Jonathan Haralson; Clerk, Sterling A. Wood—all Democrats.

Finances.—The report of the Treasurer for the fiscal year ending Sept. 30, 1896, showed a balance in treasury at close of Sept. 30, 1895, of \$18,366.67; receipts from Oct. 1, 1895, to Sept. 30, 1896, \$1,999,930.13; total, \$2,018,296.80. By disbursements from Oct. 1, 1895, to Sept. 30, 1896, \$1,959,977.40. Balance in treasury Sept. 30, 1896, \$58,319.40. Some of the principal items of receipts were: From State taxes of 1895, \$1,245,096; special State taxes of 1895, \$115,566; poll taxes of 1895, \$145,894; licenses, \$124,821; solicitors' fees, \$22,602; sales and redemption of lands, \$22,582; express, telegraph, and sleeping-car companies, \$10,261; insurance companies' license, \$10,600; insurance companies for taxes on premiums, \$23,926; railroad licenses, \$12,500; Agricultural Department, \$45,614; Penitentiary fund, \$148,043; colleges of agriculture and mechanic arts, \$22,000. Some of the chief items of disbursement were: Salary of circuit-court judges, \$32,499; of solicitors, \$29,600; of chancellors, \$12,176; expense of geological survey, \$6,900; expense of Agricultural Department, \$47,009; interest on Agricultural and Mechanical College fund, \$20,280; interest on University fund, \$24,000; Alabama Insane Hospital, \$119,366; interest on the public debt, \$380,000; temporary loans, \$100,000; feeding State prisoners, \$80,648; military encampment, \$15,000; educational purposes, \$574,434; normal schools, \$32,000; salaries of convict officers and employees, \$27,610; expenses of convict department, \$91,299; pensions to Confederate soldiers and widows, \$115,686.

From Oct. 1, 1896, to Jan. 22, 1897, the receipts in the treasury were \$7,775 in excess of what they were during the corresponding period of the preceding year, and on Feb. 15 the State had all old obligations wiped out and a balance in the treasury of \$101,231. On June 4, 1897, the Auditor reported cash in the treasury, \$288,194.99. Liabilities: Confederate soldiers and widows, \$104,073.81; two-and three-per-cent. fund, \$189; school indemnity lands, \$4,250; convict fund, \$8,872.06; agricultural fund, \$39,540.23; colleges, agricultural and mechanic arts, \$3,003; outstanding warrants, \$15,840.81; due several counties as surplus solicitors' fees, etc., \$6,632.41; general fund balance, \$105,793.67; total, \$288,194.99. Treasury receipts from January, 1897, to date, \$1,332,221.21; disbursements (warrants), \$974,150.82; excess of receipts, \$358,070.39.

The report of the internal-revenue collector for the State for the fiscal year ending June 30, 1897,

showed a large gain over the collections made for the year previous, the total collections for the year ended amounting to \$22,000 more than the foregoing year. The following figures were given as the collections: Miscellaneous, \$5,617.05; beer, \$33,638.14; spirit tax, \$68,718.55; cigars, manufactured tobacco, and snuff, \$21,301.89; special privilege tax, \$29,721.62; total collections, \$159,001.23. The total gain was larger than ever before.

Commerce.—The annual review of the trade of the port of Mobile, published by the "Register," showed that the exports for the fiscal year ending June 30, 1897, were \$10,131,189, against \$6,995,127 for the previous year—an increase of 45 per cent. The greatest increases were in the timber and lumber trade, and in the exports of cotton (foreign), the exports in cotton being 306,639 bales, against 209,944 the previous year. The statement was made that but for the lack of room in steamers the exports of cotton would have been very much larger. Cotton equal in amount to the above increase had to be refused by the steamship lines; but arrangements were being made for additional steamers. The total foreign exports of lumber amounted to 68,000,000 superficial feet, an increase of 10,000,000 feet, which increase was about the same as was noted the previous year. There were exported 1,066,528 cubic feet of hewed and 7,070,215 cubic feet of sawed timber, of the latter about 6,500,000 feet going to the United Kingdom. The total lumber exports, foreign and coastwise, was 71,228,574 feet; the total of lumber and timber in superficial feet was 209,738,490 against 162,403,106. In shingles and hard wood there was considerable increase. The receipts of grain at the port were 4,220,955 bushels, against 2,331,871 the previous year, and there were exported 2,807,225 bushels, showing that the exports of grain for the year were greater than the receipts of the year previous. The exports of flour were 20,451 barrels, and of cotton-seed meal 36,780 sacks. For the first time in her history Mobile exported pig iron from the Birmingham furnaces, the exports amounting to 52,000 tons. The Central American business of the port showed considerable increase, the Plant line handling 56,394 tons against 37,600 tons the previous year. There was a falling off in vegetable shipments from truck gardens of about \$9,000 in value. The wool business reached 225,000 pounds, an increase of 50,000 over the previous year, and an increase in value of \$15,000. There were imported 2,067,755 bunches of bananas, against 1,887,059 bunches the previous year, and the imports of coconuts were 3,405,425 against 3,398,714 the year before. Many improvements were made in wharf facilities during the year, representing about \$150,000 in value. These improvements, made by the Mobile and Ohio and the Mobile and Birmingham Railroads, will, when fully completed, double the capacity for loading steamships. The financial condition of the city was reported better than it had been for twenty years. The amount of cash on hand to the credit of the city Aug. 1 was \$55,453, an increase of \$24,779 over the previous year.

Industries.—The output of coal in 1896 was 5,743,697 tons; in 1897, about 6,000,000 tons. The total amount of coal dug every day in Jefferson County alone amounted to about 19,000 tons.

The most important discovery made in the Birmingham district since it was ascertained some years ago that Alabama coal could be coked, came to light at Leeds, where a rich vein of high-grade brown iron ore was found, 10 to 40 feet below the surface and about 10 feet thick. Forty openings were made, and in all but 3 apparently continuous leads of brown ore were exposed. It had been thought that this quality of ore existed only in

pockets and small deposits in the State. This ore analyzed from 49 to 52 per cent. of pure iron and is especially easy to flux, thus rendering it equivalent to 60-per-cent. ores.

The first run of steel by the open-hearth basic process was made July 23 at the new 60-ton steel mill of the Birmingham Rolling Mill Company. The process was the same by which low silicon pig iron, made in that district, of Alabama red ore, by the Tennessee Coal, Iron, and Railroad Company, was converted into steel at Pittsburg and Chicago. By the middle of August the Birmingham mill began regularly to use this new steel in all its departments. Theretofore steel billets had been brought from Pittsburg to be rolled in the plate and rod mills of that company. The company found a ready sale for all its product. In August 14 furnaces were in blast in the Birmingham district, making 2,700 tons of iron daily.

In March a rich bed of lead ore was discovered in the vicinity of New Market, analysis of which showed enough silver to pay for the working, aside from the large percentage of pure lead. On another tract in the same section was found a four-foot seam of coal. A company was organized to develop these fields.

Education.—The State has established 23 institutions of learning, putting at least one in each congressional district. There appears to be evidence of a general educational revival in the State, and schools, from the lowest to the highest, are reported as having been uncommonly prosperous. The State Normal College, at Troy, reports 761 students, State appropriation \$5,000, total income \$11,479, value of property \$22,500; the State normal school at Florence, 310 students, State appropriation \$7,500, total income \$14,116, value of property \$55,000; the State normal school at Jacksonville, 230 students, State appropriation \$2,500, total income \$4,906, value of property \$10,250; the Normal College for Girls, at Livingston, 138 students, State appropriation \$2,500, value of property \$15,000; the Girls' Industrial School, at Montevallo, 350 pupils, State appropriation \$15,000, value of property \$35,000. Following is a report of colored schools: Tuskegee Normal and Industrial School, 1,072 pupils; total income, \$124,723; of which amount \$77,114 was used for current expenses, and the remainder went into new buildings; value of property, \$30,000. Normal school at Montgomery, 930 students; total income, \$13,000; value of property, \$30,000. Agricultural and Mechanical College at Normal, 400 students; total income, \$30,896.

Railroads.—Associate Railroad Commissioner Ross C. Smith reported the mileage of railroads in active operation in the State at 3,625 miles, representing a taxable valuation of \$45,496,602, and furnishing employment to 14,000 men. Less than 170 miles were in the hands of receivers, while four years prior more than half of the mileage was forced into bankruptcy. The Commissioner says that "the disappearance of receiverships, and as a result the reorganization of these once insolvent roads, establishes the confidence of capitalists in the ultimate success of our railroad property and in the further development of our State resources." The gross tonnage of railroads in the State for the year reviewed was given at 11,453,443 tons, and the sum of \$2,274,215 was spent in improving the physical condition of the railroads.

Legislative Session.—One of the few important laws passed by the Legislature was that establishing a tax commission. Concerning this law, to which there was considerable opposition, the Governor is quoted as saying: "The question that confronted the General Assembly was, how to meet a

deficit, admitted by all and variously estimated at from \$225,000 to over \$500,000. There were but two ways to meet this deficit and secure a larger revenue to the State that would enable us to improve our public schools. One was by increasing the rate of taxation and compelling those who are now bearing the burdens of government to contribute more largely, and the other was to require those who have been evading just and fair taxation to contribute their share. The Legislature chose the latter plan, and I think chose wisely. To say that this act reflects upon the assessors is absurd, for it is well known that the census of 1890 shows that the taxable property of the State amounted to more than \$623,000,000, whereas the assessments for taxation amount to only \$260,000,000."

Other laws passed were:

Prohibiting combinations in rates.

Abolishing slot machines.

Prohibiting pools and gambling devices of all kinds.

Exempting capital not exceeding \$50,000 invested in the future in cotton manufacture in the State.

Among the more important general bills that failed were: The calling of a constitutional convention, the giving arbitrary powers to the Railroad Commission, and to abolish the convict lease system.

Condition of Convicts.—In March the city council of Birmingham decided to lease the city convicts to the Sloss Iron and Steel Company, who have convict stockades at Coalburg. Only those of the prisoners who had been fined \$30 or sentenced to sixty days' service, and were unable to pay their fines, were to go to the stockades. The Sloss Company offered to pay \$5 a month and board the convicts, which offer the city accepted, the aldermen saying that they were forced to take this course because of the overcrowded condition of the city prison.

Decision.—In the general revenue law passed at the late session of the Assembly there is a section levying a license tax on the capital stock of all incorporations except banks. The Phoenix Carpet Company, of Birmingham, refused to pay the tax, on the ground that the law is unconstitutional. They were arrested and convicted. An appeal was taken to the Supreme Court, which held that the law is constitutional.

Still's destroyed.—The following is a list, by counties, of the illegal distillery outfits destroyed during the year ending June 30: Randolph, 64; Cleburne, 36; Limestone, 24; Coosa, 21; Marion, 17; Lauderdale, 16; Chilton, 14; Madison, 12; Chambers, 11; Jackson, 8; Franklin, 8; Shelby, 7; Marshall, 5; Lawrence, 5; Clay, 5; Lamar, Tallapoosa, Fayette, and Calhoun, each 4; Morgan and Winston, each 3; Dale, Cullman, Blount, Walker, and Pickens, each 2; Autauga, Perry, Macon, De Kalb, Colbert, and Lee, each 1. Total, 291. During the previous fiscal year 276 outfits were destroyed, or 15 fewer than in this year.

Lynching.—In June a committee of citizens of Decatur, bearing a petition signed by over 2,000 citizens of Morgan County, waited on Judge Speake, at Huntsville, and requested him to call a special term of court to try negroes accused of rape. The committee stated that nothing short of their request would appease the enraged populace, and that if a special term were not called the citizens of Morgan and adjoining counties would defy resistance and hang the prisoners. Without hesitation Judge Speake ordered a special term as requested, and a number of executions resulted.

In his message to the General Assembly, touching the question of lynching, Gov. Johnston said:

"I especially invite your attention to the consideration of the violation of our laws by mobs.

Where the administration of the law is wholly within the grasp of the best citizens of the State, where the sympathies of the judge and jury are entirely on the side of victims of brutal lust, no excuse justifies the spirit that would override the orderly administration of justice. All of us understand how difficult it is to restrain the passion and indignation that arouses the hot blood of relatives and friends to visit summary punishment upon those who commit the most heinous and unforgivable crime against society; but our people must be made to understand that the proper way to punish these and all other crimes is by the law of the land. The danger of inflicting punishment upon the innocent when passion and not reason holds the scales is so great that all good citizens should repress their just indignation and aid in preserving peace and enforcing the laws of the land, which are surely of sufficient severity, and I earnestly appeal to all the good people of the State to unite with us in the resolve that during this administration not a single lynching shall occur. I suggest that authority be given the Governor to call a special term of the court and have speedy investigation and trial on information whenever any crime has been committed calculated to arouse great public indignation."

Political.—At a meeting of the Democratic State Executive Committee in Montgomery in January, the following resolutions were adopted as a substitute for one providing that only those who voted the State and national tickets of the party should participate in primaries, to wit:

"*Resolved*, That we cordially invite all conservative voters, irrespective of past political association or differences, who can unite with us in the effort for pure and economical and constitutional government, and who will support the nominees and principles of the Democratic party, to participate in the primaries of the party throughout the State.

"*Resolved, further*, That all persons so participating in the primaries, or mass meetings of the party hereafter to be held, thereby pledge themselves to support the nominees of such primaries, conventions, or mass meetings, whether municipal, county, State, or Federal.

"*Resolved, further*, That it shall be competent for the local executive committee of each county to determine whether any other than white voters shall be allowed to participate in said primaries."

ANGLICAN CHURCHES. The forty-ninth annual report of the Ecclesiastical Commissioners represents that the income, on the whole, has been fairly maintained, a diminution in the receipts from agricultural lands, tithe rent charges, and minerals having been met by increased receipts from property in London, and by a temporary reduction in certain items of expenditure attached to the estates. For the current year a sum of £150,000 would be appropriated for the augmentation and endowment of benefices. During a period of fifty-six years, extending from 1840 to Oct. 31, 1896, the commissioners had augmented and endowed upward of 5,700 benefices by annual payments charged on the fund; by capital sums expended on the provision of parsonage houses, etc.; and by the annexation of lands, tithe rent charges, etc. The value of these grants exceeded £808,835 per annum in perpetuity, and was equivalent to a capital sum of, say, £24,320,909. The value of benefactions, consisting of land, tithe, and other rent charges, stock, cash, etc., secured to benefices, and met for the most part by grants from the commissioners, exceeded £181,940 per annum in perpetuity, and was equivalent to a permanent increase of endowment of, say, £5,458,200. A sum exceeding £26,000 per annum was also contributed by benefactors to meet the commissioners' grants for curates

in mining districts. The total increase in the incomes of benefices thus resulting from the operations of the commissioners exceeded £1,016,775 per annum, and might be taken to represent a capital sum of £30,559,100.

The number of Episcopal churches in Scotland has increased from 75 to 321 in the past sixty years. A gain of nearly 1,000 communicants was recorded in 1896.

Church Missionary Society.—The receipts of the Church Missionary Society from all sources, excluding special funds, as reported at the annual meeting in May, amounted to £297,626, exceeding those of any other former year by £25,000, and also exceeding the aggregate of general and special funds together in any former year. The excess in general contributions was £13,668, just balancing a diminution in legacies of £13,366. The associations had sent up £5,000 more than ever before. Adding special funds of £43,769 (including £7,900 for the Famine fund) the total amount contributed for all purposes was brought up to £341,400. The expenditure had risen to £297,260. A deficit was still left of £9,000. Eighty-five missionaries had been accepted for service. Seventy-seven hundred adult baptisms, the largest number recorded in any one year, were returned from the mission fields. The history of the society during the sixty years of the reign of Queen Victoria was referred to as calling for great thankfulness, while progress was especially conspicuous during the past ten years. A liberal response had been made to the appeal on behalf of the "Three Years' Enterprise."

The full report of the missions gives the following statistics, most of the numbers being much in excess of those of the previous year: Number of stations, 483; of European clergy, 372; of European laymen, 110; of European wives, 293; of European woman missionaries, 238; of Eurasian clergy, 20; of native clergy, 341; of native lay agents, 4,108; of native women laborers, 1,211; of baptized native Christian adherents, 203,701; of native catechumens, 29,409; of native communicants, 62,785; of baptisms during the year, 8,020 of adults and 8,399 of children; of schools and seminaries, 2,171, with 92,804 scholars and seminarists. In the medical work, 7,749 in patients and 500,674 out patients were treated. The number of missionaries sent out by the society between 1837 and 1887, the first fifty years of Queen Victoria's reign, was 900, a yearly average of 18, the average of the last ten of those years being 23. The number sent out between 1887 and 1897, between her Majesty's jubilee and her diamond jubilee, was 666, a yearly average of 66. On June 1, 1887, there were connected with the society 247 missionaries, 40 laymen, and 22 women (not including wives); on June 1, 1897, there were 376 ordained missionaries, 110 laymen, and 244 women. The advance in the aggregate number during the ten years exceeded by 114 that of the first eighty-eight years of the society's history.

Society for the Propagation of the Gospel.—The one hundredth and ninety-sixth anniversary of the Society for the Propagation of the Gospel was celebrated in London June 25, the Archbishops of York and Canterbury severally presiding at the different sessions. The secretary, reading an address of welcome, spoke of the progress of the Anglican Church since the Queen's accession as having been marvelous. In 1837 there were only 7 bishoprics owning allegiance to Canterbury, and in the United States there were only 16 sees; now the 7 had grown to 92 and the 16 to 78. In India in 1837 there were only 2, where now there were 10 sees, and the 4 natives ministering in the Church sixty years ago had increased to 300. In Australia there were now 14 sees, and in New Zealand the single-

handed labors of Marsden had led to a succession of bishops, of whom Selwyn was the chief, and there were now 6 dioceses. A like record could be made of the efforts of the Church in every part of the empire, and the society now ministered through the agency of 766 missionaries in 55 dioceses, where 54 languages were spoken. Many colonial and missionary bishops were present and took part in the proceedings by the reading of papers and reports relative to the condition of religion and the Episcopal Church in the countries of their residence. The Bishop of Calcutta spoke of "The Extension of the Episcopate and Church Organization in India"; the Bishop of Chota Nagpur, on "Missions to the Aborigines in India"; the Bishop of South Tokyo, on "The Church in Japan"; the Bishop of Korea, on missions to that country; the Bishop of Cape Town, on "The Province of South Africa"; the Bishop of St. John's, Kaffraria, on "The Church's Work among the Native Tribes of South Africa"; the Bishop of Bloemfontein on the work of the physician in the mission field; the Bishop of Grahamstown on the ministries of women in the mission field; the Archbishop of Rupertsland, on "The Ecclesiastical Province of Canada"; the Bishop of Perth, on the work of the Church in Australia; the Bishop of Jamaica, on the West India province; Bishop Blyth, on "The Relations of the Anglican Church to the Churches of the East"; the Bishop of Gibraltar, on "English Congregations on the Continent"; the Bishop of Missouri, on the domestic missions of the Protestant Episcopal Church in the United States; and the Bishop of Kentucky, on the foreign missions of that Church.

Other Missionary and Benevolent Societies.—At the meeting of the United Boards of Missions of Canterbury and York held in May, a resolution was adopted inviting the Society for the Propagation of the Gospel, the Church Missionary Society, and other missionary associations in the Church of England to conference in order to consider what steps might be taken to mitigate the evils arising from the division of missionary interests and organizations. The Committee on Legal Disabilities of native Christians in India reported that after receiving evidence from the majority of the Indian bishops and from several missionaries they had found no serious disabilities for which a remedy must be sought by legislation except, perhaps, in regard to marriage; and the committee had recommended "that when both the parties in a heathen marriage subsequently profess the Christian faith they should be encouraged to make a solemn and public profession of their desire to maintain their union on the basis of Christian marriage, that a special form of service to be used in churches on such occasions should be prepared and promulgated by the synod of the Church in India, and that application should be made to the legislature to permit the registration of such public acknowledgments of the parties to the continuance of their marriage contract on the conditions which attach to marriages recognized by the Church.

The annual meeting of the Colonial Missionary Society, now sixty-one years old, was held in London May 13. Sir William Dunn, Bart., M. P., presided. The society had spent more than £4,000 during the year in colonial missionary work, but for the first time had incurred a small debt.

The income of the Colonial and Continental Society for 1896—£18,022—was £1,000 in excess of that of the previous year. An old debt of £2,000 still remained, and an additional £10,000 was needed for all purposes. Including the sums raised and spent in the colonies, the year's income rose to £39,285. An addition of £1,700 had been made to the Endowment fund, which now amounted to £6,-

834. A younger clergy and laity association had been formed, and a ladies' association was at work auxiliary to the society. Assistance was rendered by the society to churches in eastern and western Canada, Newfoundland, Australia, Madras, and British Honduras; and many outlying places depended on it for spiritual care.

The Student Volunteer Missionary Union of Great Britain since 1892 has banded together 1,300 men and women purposing to be missionaries, 300 of whom have gone into the service. It is not a society for sending out missionaries, but seeks to influence young men to devote themselves to the service of Christ in heathen and foreign lands. It besides encourages Christian students to support the work abroad "by real sacrifice, systematic missionary study, and definite prevailing prayer." An international conference held at Liverpool early in 1896 was attended by 715 students from 23 different nations.

The year's income of the Additional Curates Society was returned at £63,119, and its expenditure at £63,296. The sum of £8,000 and upward had been received for the Quinquennial fund, and this had enabled the committee to vote grants to the extent of £1,600 a year, to the great benefit of 36 parishes. The Archbishop of Canterbury said in his anniversary address that the society was at the center of a number of local societies which were independent of it, and their work must be regarded as an addition to the work that it was doing. There was, however, a great advantage in such a society, because the local societies could not undertake the work in all its fullness.

The report of the Incorporated Church Building Society, May 26, showed that 22 grants of land had been made for new churches, amounting to £2,730, 17 for mission buildings, amounting to £500, and 33 for enlarging and rebuilding churches, amounting to £1,140. The year's revenue had been £5,014, including £465 from legacies, as against £9,760 in the previous year, when the legacies amounted to £5,886.

The Church Army.—The report of the Church Army presented at the annual meeting, May 5, represented that the year had been one of great prosperity. The number of evangelists, nurses, and colporteurs had increased from 418 to 504; the number of vans had doubled; and the evangelists in charge had held nearly 1,000 seven-day parochial missions, and sold £2,248 worth of Bibles, prayer books, etc. The social department in the 47 institutions had dealt with nearly 9,000 people suffering under adverse conditions, paying them £11,000, and more than 50 per cent. of them had thus obtained a fresh start in life. The labor home work was approved by the Prison Commissioners, and the Charity Organization Society and many boards of guardians supported it with money grants. The year's income had been £77,257, including £6,171 from the sale of property and stocks; and the expenditure £70,659, including £5,000 for the purchase of consols; and instead of a deficit of £1,867 the society had a surplus of £4,749. The balance sheet showed assets amounting to £26,592, with liabilities of £719. Two diamond jubilee funds were proposed: one of £10,000 for new headquarters, and one of £5,000 for the Workers' Benevolent fund. For the current expenses of the ensuing year £85,000 were wanted, and for extension of homes, etc., £15,700. Resolutions were passed declaring that the mission work deserved greater support from the Church, and that the social and rescue work claimed the fullest co-operation of the prison and poor-law authorities.

The Church Union.—The thirty-eighth anniversary meeting of the English Church Union was

held in the Church House, Westminster, Lord Halifax presiding, June 1. The report showed that 2,277 members and associates had been added during the year, and the union now had 34,000 names on its roll, with 409 branches and 71 district unions, in addition to the Scottish Union. The expenditure for the year had been £7,614, and the treasury returned a balance of £418. A falling off was shown in the annual subscriptions. In reference to the objection lodged against the confirmation of Bishop Temple as Archbishop of Canterbury (see "Annual Cyclopædia" for 1896, article TEMPLE, p. 725. No hearing was given to the protests, because no legal provision for such hearing existed), the report said that the president and council of the union had no sympathy with the objection taken, but they felt that it was a grave scandal that objections should be invited when there was no intention of hearing and adjudicating on them, even if of substantial importance and made in proper form. They believed it was an entire misapprehension of the facts to say that the Queens bench had ruled that objections could not be heard. In the Hampden case the judges were equally divided, and therefore no *mandamus* could issue to the archbishop to hear the objections. The report further affirmed that nothing was more remarkable than the steady advance of sound Church principles on the subject of the indissolubility of the marriage bond. There were now 17 dioceses in which the bishops had been able to take effective steps to restrain their officials from issuing licenses for marriage in the case of divorced persons. It was represented during the meeting that the daily eucharist was now celebrated in 500 churches, incense was used in 337, and proper vestments in 1,032. The prejudice against confession was rapidly dying out. On the other hand, the dead were still largely forgotten in prayers, and the right to reserve the consecrated elements for the sick was not fully recognized. There was almost too much elaborate music, and visiting was greatly neglected, even in many "advanced" parishes.

At a meeting of the Church Union, April 29, a resolution was unanimously passed to the effect that the confirmation of an election to a vacant bishopric and of the person elected should be solemnly made by the archbishop in person, accompanied by such other bishops of the province as may be, and that it should no longer have the appearance of a merely formal legal ceremony; also that opportunity should be freely given for objectors to appear with their advocates with written objections in formal legal and canonical shape.

The Liberation Society.—The annual meeting of the council of the Society for the Liberation of Religion from the patronage and control of the state was held in London, May 5. Mr. F. A. Channing, M. P., presided. The report mentioned that the Evangelical Free Church Council, lately formed, had been found useful in furnishing opportunities for the advocacy, by representatives of the society, of its fundamental principles in new places or circles. The multiplication of these societies was likely greatly to strengthen the political as well as the religious influence of the free churches. As among the events of the year bearing on the work of the society were mentioned the defeat of the burials bill by a majority of only 44, Mr. Smith's motion for disestablishment, the question of mixed marriages in Malta, and the defeat of the "sectarian" education bill of 1896 and the carrying of the bill of 1897. The formation of the schemes, the proceedings of the educational associations, and the course pursued by the department would need immediate and vigilant watching. The increasing demand among Churchmen for Church reform and the increasing

openness of ritualists indicated that the tendencies of the times were operating to hasten the termination of the existing connection between the civil power and ecclesiastical bodies. As Parliament was asked to relieve the clergy in connection with local taxation, it might become necessary to resist financial charges which would practically further endow the established Church at public expense. During the past year a Churchman's Liberation League had been established. A resolution was adopted calling upon the friends of religious liberty to decide without delay on an educational policy to be pressed upon the constituencies and upon the next Liberal administration. The year's income of the society had been £4,836, and the expenditure £4,402.

The Church Reform League.—The first report of the Church Reform League, which was presented at the annual meeting, May 10, covers only six months. It represented that substantial progress had been made in advancing the purposes of the organization. The membership was increasing rapidly, and nearly half of the present 800 members were clergymen. As to future action the council advised the concentration of all efforts on getting a short enabling act through Parliament which would "set the Church free to exercise her inherent right of constitutional self-government, subject to the control of the Crown, and in all matters of legislation subject also to the veto of Parliament." The Church could thus gradually effect all needful reforms itself, especially those connected with the position of the laity, discipline, patronage, and finance. A letter was read at the public meeting of the league from Mr. Gladstone expressing his sympathy and approval in the tentative efforts for the gradual enlargement of self-governing power in the Church, and adding: "I am far from sorry to have belonged in 1853 to the Cabinet of Lord Aberdeen which gave to Convocation its first installment of free action, a gift which had been refused by Mr. Walpole on behalf of the Government of Lord Derby in 1852. Viewing this, with other Church matters, as a whole, I am astonished at the progress made in the last fifty years, and am confident that many a 'convert' would have been arrested on the brink of his change could he have been endowed with a prophetic vision of what was to come. It also excites a lively thankfulness to observe that all this progress has been attended with a marked improvement of feeling as between Churchmen and nonconformists."

The Church Association.—The chief proposals of the scheme of Church reform recommended by the council of the Church Association contemplate, the readjustment of the incomes of the dignitaries and inferior clergy on a fairer basis than at present, and amendment of the mode of appointment of the bishops; that the Church should take part in the election of its chief pastors, and the bishop's veto should be abolished. The scheme aims at securing deprivation instead of imprisonment of clergy for disobedience, greater equality in incomes, with compulsory retirement for gross scandal, immorality, or incapacity, and provision of liberal pensions for long service and old age. It advises that the election of church wardens be restored to the parishioners and their number increased according to the size of the parish. All requisites for services should be provided by them alone. And either of them should have power to remove ornaments introduced without a faculty. It proposes that parishioners should have a veto on all appointments of parochial clergy, and the laity should have a legal franchise secured to them; that power to form parochial councils be given to the parishioners; that no change be made in the services without approval

of the parochial council; that sales of benefices by auction and sales of next presentation be abolished; that a diocesan patronage board be formed and all Crown patronage be exercised by and with its advice; that parishioners should have power to purchase advowsons of their own parish; that the freehold of the fabrics be vested in the incumbent and church wardens for the time being, but only as trustees for the parish, dereliction of duty to be a violation of trust; that the finances be controlled by the incumbent and the church wardens jointly under the direction of the parochial council; that convocation be reformed so as to secure a true representation of both clergy and laity, thus constituting a national council; and that the ecclesiastical courts be fused into the high court of justice and their procedure be assimilated to that of the civil courts.

A memorial addressed by this association to the Queen, bearing the signatures of 86,876 women, asked her Majesty when selecting future bishops to confer her patronage on those who are opposed to the efforts being made to revive the confessional and to restore the sacrifice of the mass, which her Majesty on her accession to the throne publicly declared to be both "superstitious and idolatrous."

Church Defense.—The Church Committee for Church Defense and Church Instruction was formed in the autumn of 1896 by the amalgamation of the Church Defense Institution and the Central Church Committee. The work of education and organization performed previous to the union by these two bodies is now continued and carried on by the amalgamated body, which, with the assistance of the diocesan and other local committees, is endeavoring to extend the field of its operations throughout the whole of England and Wales. The receipts of the two bodies during 1896 amounted, including two special gifts of £2,000 and £1,200 respectively, to £12,548, while the expenditure was £13,289. The work of the societies proceeded without interruption through the negotiations for union during the whole year. The general committee, at its annual meeting, April 6, by resolution, reaffirmed the necessity for continued and extensive organization in defense of the Church and of the dissemination of information among all classes as to its origin, history, and work. The Archbishop of Canterbury addressed the meeting in reference to methods in which boys could be taught and encouraged to learn concerning Church matters.

Home Reunion Society.—The report of the Home Reunion Society, presented in June, represented that there were many signs of an advance toward that outward unity which must eventually be accomplished. Wherever social barriers had been removed a more friendly response was now assured in all communications with Nonconformists. Avoidance of overlapping in the mission field was also mentioned as a means of promoting a better understanding.

Christian Knowledge Society.—At the general meeting of the Society for promoting Christian Knowledge, Oct. 5, grants amounting to £4,944 were voted for the building of 39 churches and schools in Canada, British Columbia, the West Indies, South Africa, Mid-China, Australia, New Zealand, etc.; for scholarships for the training of Canadians for holy orders and for studentships for Christian girls in India; also £1,000 for an endowment fund for clergy in the poor diocese of Algoma, and £2,000 for the maintenance of the medical work of the society in India. Grants of publications were made for various institutions at home and abroad, the aggregate value of which was placed at £1,158.

Church-of-England Temperance Society.—A letter addressed by the Archbishops of Canterbury and York and the Bishop of Chichester, Chairman of the Church-of-England Temperance Society, to the clergymen of England, commended the society and the temperance cause, inviting them to form branches of the society in their several parishes, and earnestly asking them "to consider the question and see whether it may not help at any rate some of your people to a higher and better life if they can find assistance to overcome what may perchance be a besetting sin. If not an adult branch, perhaps you can establish a Band of Hope. The training of the young in habits of temperance (self-control) is of the greatest importance to the future well-being of the nation, and this can be best accomplished, at any rate as regards drink, by means of the Band of Hope. We would only urge you not to pass the matter by as one of no importance. It is the experience of most parish priests who have tried it that organized temperance work is the greatest possible help to a due discharge of the spiritual functions committed to them."

Ministry of Women in the Church.—A conference on the organization of women ministries in the Church was held at the Church House, Westminster, July 21, the Bishop of St. Andrew's presiding. The chairman referred to the great influence exercised by women in the present day, and said it was recognized by thoughtful men of every school as one of the leading ideas of the nineteenth century. Canon Body gave an address on "Woman's Place in the Church," and the Bishop of Grahamstown followed with one on "The Sisterhood Life." The Bishop of Stepney said that he favored the suggestion that deaconesses should hold a high position as ministers of the Church, and he was disposed to support the taking of vows.

The Right of Public Meeting.—The Rev. H. L. Young, rector of St. John's Church, Portsea, having been advertised to take part in a public meeting in connection with the Portsmouth and South Hants Protestant Association, the Bishop of Winchester addressed him a letter deploring the fact of his choosing such an occasion and mode of action to protest against ritualism in the Church of England. Mr. Young replied, admitting his intention to participate in the meeting, and explaining that the Baptist chapel was chosen merely as a matter of convenience, and expressed surprise at the bishop's writing on such a matter, seeing that he was acting within the civil and religious liberty given him by the Crown. As regarded the lay members of the Church of England, it was a pure assumption on the part of the bishop to imagine that he could in any way restrict their liberty of public meeting. It was also surprising that the bishop could have written to him, as he not only could tolerate in the parish of Cosham, where the meeting was about to be held, the most shameful ritualistic practices and lawlessness, but similar proceedings took place in other churches of his diocese. Recently, at a confirmation service at St. Agatha's, the bishop had taken part in a procession and was preceded by acolytes with lighted torches, thus not merely aiding lawlessness, but treating with contempt the decisions of her Majesty's judges. The writer concluded by saying that if the bishop had kept his episcopal contract with the realm to banish strange and erroneous doctrines contrary to God's word, there would be no occasion for him to address the meeting at Cosham or for the bishop to write him a letter criticising him for so doing. Mr. Young attended the meeting and addressed it, denouncing ritualistic practices in the Church. The Rev. T. Stringer, vicar of Christ Church, Potsdown, who had re-

ceived a similar letter from the bishop, also attended the meeting.

Defense of Anglican Orders.—The reply of the archbishops to the circular of the Pope denying the validity of Anglican orders was published as a general letter, March 8. The archbishops begin by speaking of the serious nature of the duty imposed upon them as "one which can not be discharged without a certain deep and strong emotion. But, since we firmly believe that we have been truly ordained by the Chief Shepherd to bear a part of his tremendous office in the Catholic Church, we are not at all disturbed by the opinion expressed in that letter." They then point out that, with respect to the form and matter of holy orders, "it is impossible to find any tradition on the subject coming from our Lord or his apostles, except the well-known example of prayer with laying on of hands, and that little is to be found bearing on this matter in the decrees of provincial councils, and nothing certain or decisive in those of œcumenical and general assemblies. Nor, indeed, does the Council of Trent, in which our fathers took no part, touch the subject directly." The whole judgment of the Pope, the answer continues, "hinges on two points—namely, on the practice of the court of Rome and the form of the Anglican rite, to which is attached a third question, not easy to separate from the second, on the intention of our Church. We will answer at once about the former, though it is, in our opinion, of less importance. As regards the practice of the Roman court and legate in the sixteenth century, although the Pope writes at some length, we believe he is really as uncertain as ourselves. We see that he has nothing to add to the documents which are already well known." Certain documents cited by the Pope and their bearings are reviewed, and the archbishops acknowledge with the Pope that the laying on of hands is the matter of ordination; that the form is prayer or blessing appropriate to the ministry to be conferred; "that the intention of the Church, as far as it is externally manifested, is to be ascertained, so that we may discover if it agrees with the mind of our Lord and his apostles and with the statutes of the universal Church. We do not, however," they add, "attach so much weight to the doctrine . . . that each of the sacraments of the Church ought to have a single form and matter exactly defined, nor do we suppose that this is a matter of faith with the Romans." Baptism stands alone as a sacrament in being quite certain both in its form and its matter; and as to confirmation, "if the doctrine about a fixed matter and form in the sacraments were admitted, the Romans have administered confirmation imperfectly, and the Greeks have none." Responding to that part of the Pope's bull that deals with the question of intention, the archbishops show and maintain that "if, according to the Pope's suggestion, our fathers of the year 1550 and after went wrong in the form by omitting the name of bishop they must have gone wrong in company of the modern Roman Church," and quote words immediately following in the ordinal which are used by St. Paul in reference, they believe, to the consecration of Timothy as bishop as sufficiently meeting the purpose. "The form of ordering a presbyter employed among us in 1550 and afterward was equally appropriate. . . . The two commissions taken together include everything essential to the Christian priesthood, and, in our opinion, exhibit it more clearly than is done in the sacramentaries and pontificals." When, in 1662, the addition for the office and work of a priest "was made, it would not seem to have been done in view of the Roman controversy, but in order to enlighten

the Presbyterians, who were trying to find a ground for their opinions in our prayer book," the Church of England's debate then being much more severe with them and other innovators than it was with the Romans. In answer to other assertions of the Pope against the intentions of the Church, the archbishops quote the title of the ordinal of 1552, which ran, "The fourme and maner of makynge and consecratynge Bishoppes, Priestes, and Deacons," and the words of the preface enlarging this phrase and emphasizing its meaning as quite clearly setting forth that intention "to keep and continue these offices which come down from the earliest times, and 'reverently to use and esteem them' in the sense, of course, in which they were received from the apostles, and had been up to that time in use." The argument is closed with a reiteration of the charge that in overthrowing the English orders by the denial of their validity in the shape in which he has made it the Pope "overthrows all his own, and pronounces sentence on his own Church." Finally, the archbishops declare themselves equally zealous with the Pope in their devotion to peace and unity in the Church. "We acknowledge that the things which our brother Pope Leo XIII has written from time to time in other letters are sometimes very true and always written with a good will. For the difference and debate between us and him arises from a diverse interpretation of the self-same Gospel which we all believe and honor as the only true one. We also gladly declare that there is much in his own person that is worthy of love and reverence. But that error, which is inveterate in the Roman communion, of substituting the visible head for the invisible Christ will rob his good works of any fruit of peace. Join with us, then, we entreat you, most reverend brethren, in weighing patiently what Christ intended when he established the ministry of his Gospel. When this has been done more will follow as God wills in his own good time."

Many protests were uttered against the tenor of this letter and the point of view from which the question was regarded in it by persons and societies maintaining Protestant principles. The National Club Association and the Protestant Reformation Society issued a declaration that (1) "while holding firmly the validity of the orders of the Church of England, we yet unhesitatingly maintain that her ministers are simply presbyters and not priests; (2) that the statements put forth by the Archbishops of Canterbury and York in reply to the papal bull concerning Anglican orders on the subject of the 'priesthood' and 'the eucharistic sacrifice,' as well as on other points, are not in harmony with the doctrine of the Church of England, as set forth in the articles, liturgy, and ordinal; and we record, therefore, our solemn and deliberate protest against these statements as being nothing more than private and unauthorized opinions of the two archbishops; (3) that, as a matter of fact, neither sacrificing priest, altar, nor propitiatory sacrifice is to be found in the legal standards of our Church, which embody only the 'Protestant Reformed religion established by law'; and further (4), that we deprecate any attempt on the part of individual bishops to negotiate terms of communion with foreign churches."

The Committee of the Irish Church Missions in June unanimously adopted a minute concerning the letter, in which they expressed themselves constrained, "with the deepest sorrow, to declare it to be as a whole, both in matter and tone, unworthy of the Protestant and Reformed Church of England. That it should have emanated from the two archbishops of the Church is, in the opinion of the committee, a fact of solemn and portentous signifi-

cance in view of the prevalence of sacramentarian and sacerdotal teaching. The committee feel it to be incumbent upon them to record their solemn protest against the unscriptural views advanced by the archbishops on the doctrine of the Lord's Supper, as well as the attempt to claim for clergymen of the English Church the position and functions of sacrificing priests—a dogma absolutely without sanction in the standards of the Church or in Scripture, and in support of which an attempt is made to minimize the significance of the changes made in the ordinal at the Reformation."

A letter addressed by the council of the National Church Union, in June, to the Archbishops of Canterbury and York, expressed the reasons of that body for being unable to agree with certain statements contained in the answer. After discussion of the points of the letter in detail, the letter concludes: "The council regard it as a reason of profound regret that your lordships have not in these particulars adopted the interpretation of the formularies of the Church of England followed by the great body of her leading divines ever since the Reformation, and which would have commanded the cordial support of every loyal Churchman. The adoption, on the contrary, of an interpretation in favor only with an extreme and comparatively modern school of theologians can not but further increase our present unhappy divisions, while any attempts to render such an interpretation authoritative would rend the Church in twain. It is with the utmost regret that the council are constrained to dissent from statements publicly set forth by the archbishops of their Church; and they trust that your grace will accept their assurance that nothing but the most solemn sense of responsibility to God and the Church would have induced them to undertake this painful duty."

A petition addressed to the Queen, in July, by the Church Association, invited her Majesty's attention "to the recent public action of their Graces the Archbishops of Canterbury and York in taking upon themselves to address the heads of the corrupt Latin and Greek Churches, thereby claiming independent authority to speak in the name of the established Church of this country, and also to the fact that they have attempted to justify their action by misquoting the legalized formularies of our Church, while adducing, as authoritative, documents which have no official character." The memorialists prayed that the Queen would, in accordance with her coronation oath, be pleased to maintain the Protestant faith within the realm, and to require explanation from the archbishops as to their unauthorized action in thus encroaching upon the royal prerogative.

Convocations of Canterbury and York.—In the Convocation of Canterbury the upper and lower houses, at the meeting in January, agreed upon provisions to be recommended for enlarging the representation of the clergy by increasing the number of proctors. The upper house unanimously requested the archbishop to take such steps as were necessary for elucidating or amending the use now observed in confirming the election of bishops. The president (archbishop) on presentation of this petition to him intimated that the house had decided that it was not the business of convocation to deal with that matter, and that therefore the petition could not be received. On this subject the House of Laymen unanimously resolved that the form of confirmation of bishops as recently carried out should be altered so as, on the one hand, to prevent the scandal of calling for opponents and then refusing to hear them, and, on the other hand, to safeguard the Church of England in the appointment of fit persons to her bishop-

ries. A resolution adopting the scheme of the Clergy Central Sustentation fund as the Church's memorial of the Queen's reign was adopted by both the upper and lower houses. The subject of the marriage laws, with special reference to the conflict as to some points between the civil and the ecclesiastical laws, was considered in the upper and lower houses. The House of Laymen resolved to approve any bill that would place limitations on the transfer and exercise of patronage, and would provide safeguards against the institution to benefices of men not fit to be incumbents, while it should protect both patron and presentee from possible injustice by insuring full trial before a competent and final tribunal, and which should provide against gross neglect of duty.

At the meeting of the convocation, May 11, the archbishop spoke in the upper house of the voluntary schools act, in respect, first, of the area of the association created by it. The education department were not prepared to accept a small area, and would prefer to deal with associations embracing not fewer than 200 schools. This pointed to the diocese constituting the area of the association, and it was of very grave importance that diocesan associations be established as soon as possible. The department would allow cooptation to the governing board, and that would enable them to include on the board those officers of the Church whom they would all like to see connected with the management of such associations—such, for example, as the bishop, the archdeacons, and the proctors in convocation. It would be a great gain if these associations should in time become the educational authorities of the Church. On the question of what schools should be admitted to the associations, the archbishop's opinion was very decidedly that they should be Church of England schools only. The Roman Catholics would refuse to join any such associations, even if they were invited to do so. The Wesleyans were contemplating the formation of associations, and those who preferred undenominational education would doubtless form their own. It was best they should do so. The archbishop also mentioned the formation of a secondary educational council to be constituted in accordance with the terms of a report presented to both houses in July, 1896. Had such a council been in existence before, the Welsh intermediate educational act would probably never have been passed.

Resolutions were adopted commending the formation of parish councils as a thing that would tend to quicken the life and strengthen the work of the Church; and advising that the initiative in forming such councils should rest in the incumbent, subject to the approval of the bishop, and that they should consist of the church wardens and duly appointed sidesmen, together with elected councillors. In view of legislation for enforcing retirement on the clergy, an inquiry was recommended whether a scheme of adequate pensions could not be provided which should not diminish the income of the benefices vacated, and whether the principle and organization of the Clergy Pensions Institution might not be adopted in any such scheme with advantage to the Church.

The lower house expressed its approval of the benefices bill before Parliament, with the qualification that it should be made clear that power is given in the bill to a commission to enforce the attendance of witnesses and to examine them upon oath. It asked the archbishop and the upper house to consider whether any and, if so, what steps could be taken by the Church to recognize teachers of its own communion "desirous of such recognition as holders of a spiritual calling and to create a closer bond of union among all such teachers." Another

resolution requested the archbishop to appoint a joint committee on special prayers and services.

The House of Laymen in May adopted a vote of thanks to the archbishop "for vindicating the position and rights of the Church of England and defending the Anglican communion in the recent encyclical letter addressed by his Grace and the Archbishop of York to the bishops of the Catholic Church." A report was adopted on the increase of the episcopate proposing the foundation of four new dioceses, and in connection with it a resolution "that no arrangement of the sees in and near London can be regarded as satisfactory or final which does not fully recognize the responsibility of the metropolis for the spiritual need of those populations belonging to it but living beyond its borders." A report on the conditions under which religious instruction should be imparted to the children of Church parents recommended that action be set on foot in each diocese to charge, if possible, some existing diocesan organization with the duty of caring for the interests of Church children in reformatory and industrial schools, and that steps be taken to inform the minds and rouse the consciences of churchmen on the subject.

The house by resolution expressed its opinion that "the Church of England should, saving the supremacy of the Crown and subject to the veto of Parliament, have freedom for self-regulation by means of reformed convocations, with the assistance, in matters other than the definition or interpretation of the faith and doctrine of the Church, of a representative body or bodies of the faithful laity."

In the Convocation of York, the House of Laymen, April 27, besides various expressions respecting voluntary schools and concerning the benefices bill and the Queen Victoria Clergy Sustentation fund, unanimously passed a vote of thanks to the archbishop "for the vindication of the rights of the clergy of England and the defense of the Anglican communion, contained in the recent encyclical letter addressed by his Grace and the Archbishop of Canterbury to all the bishops of the Catholic Church."

The Convention of York, at its meeting in June, adopted a resolution urging measures to check the spread of contagious diseases among the soldiers in India; also a resolution recommending the inclusion in any measures for the compulsory retirement of incapacitated incumbents, of provisions for dealing on similar lines with incapacitated bishops, deans, archdeacons, and canons. A remedy was demanded for the injuries occasioned to tithe owners by the operation of the agricultural land-rating act, 1896.

The Lambeth Conference.—One hundred and ninety-nine bishops accepted the invitation to attend the Lambeth Conference. A reference to the numbers at former conferences shows that there has been a steady and marked increase since the first Lambeth Conference was held. Thus in 1867 76 bishops accepted the invitation of Archbishop Longley "to meet together for brotherly counsel and encouragement." The second conference was held in 1878 at the invitation of Archbishop Tait, which was accepted by 108 bishops, of whom 100 were able to attend. The third conference, which took place in 1888, was summoned by Archbishop Benson, and was attended by 145 bishops.

The devotional services which had been arranged for the opening day of the conference were held June 30, beginning with the celebration of the holy communion at Lambeth Palace Chapel. On July 1 an evening service was held at Westminster Abbey, with a sermon by the Archbishop of York. On July 3 the bishops visited Ebb's Fleet, Isle of

Thanet, the spot where St. Augustine is said to have landed when he went to England under the direction of Pope Gregory to preach the Gospel to the then heathen people. A service was held at the cross erected by the late Lord Granville in memory of St. Augustine—a simple memorial of gray stone bearing a Latin inscription which set forth the fact of St. Augustine's landing. After this the bishops went to Richborough, where they were entertained by the trustees of the castle, and visited the extraordinary Roman remains. On July 3 special services were held in Canterbury Cathedral, with an address of welcome by Archbishop Temple; after which a visit was paid to St. Martin's Church, supposed to be the oldest parish in England and to have been the place of worship attended by Queen Bertha, wife of King Ethelbert, at the time of the coming of Augustine. The words chanted by Augustine and his party as they entered Canterbury were sung as an anthem by the choir. Another service was held at the cathedral, which was attended upon invitation by representatives of nonconformist bodies and civil officers.

The regular sessions of the conference were begun in Lambeth Palace, July 5, and were continued as general meetings till the 10th, when they were suspended, in order to give the committees opportunity to meet and consider the matters presented to them, till July 21. At these general meetings papers were presented and formally discussed: "On the Organization of the Anglican Communion—(a) as a Central Consultative Body; (b) a Tribunal of Reference; (c) the Relation of the Primates and Metropolitans in the Colonies and elsewhere to the See of Canterbury; (d) the Position and Functions of the Lambeth Conference"; "The Relation of Religious Communities within the Church to the Episcopate"; "The Critical Study of the Holy Scriptures"; "Foreign Missions—(a) the Duties of the Church to the followers of (I) Ethnic Religions, (II) Judaism, (III) Islam; (b) Development of Native Churches; (c) Relation of Missionary Bishops and Clergy to Missionary Societies"; "Reformation Movements on the Continent of Europe and Elsewhere"; "Church Unity in its Relation (a) to the Churches of the East; (b) to the Latin Communion; (c) to Other Christian Bodies"; "The Office of the Church with Respect to Industrial Problems—(a) the Unemployed; (b) Industrial Co-operation"; "Degrees in Divinity"; "Additional Services"; "Local Adaptation of the Prayer Book." A fraternal message was received from the General Assembly of the Church of Scotland. As in accordance with the invariable rule of the conference no corporate answer could be returned to this address, the Archbishop of Canterbury undertook, with the approval of the conference, himself to write expressing appreciation of the brotherly message. A special reception was given the bishops by her Majesty the Queen, at Windsor, July 13.

The bishops attending the Lambeth Conference met again at Lambeth, July 22, to receive and consider the reports of the various committees which had been sitting at the Church House and to adopt formal resolutions upon them. A memorial resolution of the late Archbishop Benson of Canterbury was adopted, in which mention was made of the fact that "up to the latest moment of his life his thoughts were given to the defense and maintenance of the principles of the Church of England. 'There is not a break anywhere in our orders, sacraments, creeds, scriptures, spiritual gifts, in all that compacts and frames the holiness of the catholic and apostolic Church of the ages.' These were his last words, written just before he passed, in the act and attitude of worship, after the early eucharist, through the confession and under the very utter-

ance of the absolution, to receive the seal of divine favor and forgiveness."

The results of the conference were given to the public in the forms of an encyclical letter reviewing the whole; of the 63 resolutions for which the conference held itself responsible, and the tenor of which is summarized in the encyclical; and the reports of the committees which, it is explained, represent the mind of the conference in so far only as they are reaffirmed or adopted in the resolutions. The encyclical letter, following the course of the resolutions in a general way, considers the subjects of temperance and purity, in both of which it is urged that the religious aspects and religious control should be made most prominent; the dignity and sanctity of marriage; industrial problems, in which the brotherhood of man should be regarded; duty to the poor; and international arbitration. Of ecclesiastical subjects (which are the first presented in the resolutions), the first is the organization of the Anglican communion, with provision for steady and rapid intercourse between the several branches for the development of unity of feeling; a central consultative body, to supply information and advice, but without other than moral authority, under charge of the Archbishop of Canterbury; and the formation of provinces with archbishops, so that no bishop should be left to act absolutely alone. Religious communities are commended in a general way as capable of rendering great service to the Church, but are acknowledged to need more regulation. The critical study of the Bible by competent scholarship is strongly commended as essential to the maintenance in the Church of a healthy faith. The Book of Common Prayer should not be tampered with in matters of doctrine, but can not possibly provide for all needs in every variation of local circumstances, and a limited discretion is recommended to be given to local bishops to make provision for such emergencies. The necessity for increased facilities for theological study in colonies and dependencies is insisted upon, in order that preachers may be properly armed for the defense of the Church and its doctrines. Christian care of emigrants and the defense of native races from demoralizing influences are urged. The letter approves the opening of correspondence with the Churches of the East; the cultivation of friendly relations with the Moravians and with the Scandinavian Church; the emphasis of the divine purpose of visible unity among Christians as a fact of revelation; advises the appointment of committees of bishops everywhere to promote united prayer and mutual conference between representatives of different Christian bodies; and recognizes the endeavors of the Old Catholics and other bodies "to escape from the usurped authority of the See of Rome." Although "such movements may sometimes end in quitting not merely the Roman obedience, but even the Catholic Church itself, and surrendering the great doctrine of the sacraments, or even some of the great verities of the creeds, . . . we must not anticipate that they will do wrong until they have begun to do so." Foreign missions are treated with respect to the conditions to be met in dealing with the Jews, with the Mohammedans, and with the other religions. While the Jewish, Mohammedan, and the other religions are admitted to have some good deserving recognition, "it is necessary to be cautious lest that good, such as it is, be so exaggerated as to lead us to allow that any purified form of any one of them can even in any way be a substitute for the Gospel. The Gospel is not merely the revelation of the highest morality; it reveals to us also the love of God in Christ, and contains the promise of that grace given by him by which alone the highest moral life is possible in man." While

collisions in foreign missions between different branches of the Anglican communion are deprecated, the avoidance is also advised of obstacles to the growth of unity as to other communions so far as possible without sacrifice of principle.

On some of these subjects the expressions of the resolutions are more specific and formal. Concerning the conference itself, they recommend that similar meetings continue to be held every ten years; that their resolutions be communicated to the various national churches, provinces, and extra-provincial dioceses of the Anglican communion for their consideration, and for such action as may seem to them desirable. They deem it advisable that "a consultative body should be formed, to which resort may be had, if desired, by the national churches, provinces, and extra-provincial dioceses of the Anglican communion, either for information or advice, and that the Archbishop of Canterbury be requested to take such steps as he may think most desirable for the creation of this consultative body." They regard the revival of the custom of attaching the title of archbishop to the rank of metropolitan as justifiable and desirable, and advise that the proposed adoption of such a title be formally announced to the bishops of the churches and provinces of the communion.

"Where it is intended that any bishop-elect, not under the metropolitan jurisdiction of the See of Canterbury, should be consecrated in England under the Queen's mandate, it is desirable, if it be possible, that he should not be expected to take an oath of personal obedience to the Archbishop of Canterbury, but rather should, before his consecration, make a solemn declaration that he will pay all due honor and deference to the Archbishop of Canterbury, and will respect and maintain the spiritual rights and privileges of the Church of England and of all Churches in communion with her. In this manner the interests of unity would be maintained without any infringement of the local liberties or jurisdiction.

"If such bishop-elect be designated to a see within any primatial or provincial jurisdiction, it is desirable that he should, at his consecration, take the customary oath of canonical obedience to his own primate or metropolitan."

Besides recommending comity as to missionary work among Anglican churches, the resolutions advise "that in the foreign mission field of the Church work, where signal spiritual blessings have attended the labors of Christian missionaries not connected with the Anglican communion, a special obligation has arisen to avoid, as far as possible, without compromise of principle, whatever may tend to prevent the due growth and manifestation of that unity of the spirit which should ever mark the Church of Christ." The movement for the formation of an autonomous church in Mexico is recognized in the resolutions. Sympathy is expressed with the reformatory movements in Brazil, France, Italy, Spain, and Portugal; the Archbishops of Canterbury and York are requested to confer with Eastern Churches for the purpose of promoting closer relations with them; inquiry is recommended concerning the orders of the Moravian Church (*Unitas Fratrum*) and concerning the validity of the orders of the Swedish Church; further, the bishops of the several churches of the Anglican communion are urged "to appoint committees of bishops, where they have not been already appointed, to watch for opportunities of united prayer and mutual conference between representatives of different Christian bodies, and to give counsel where counsel may be asked in this matter; that these committees confer with and assist each other, and regard themselves as responsible for reporting to the next Lambeth

Conference what has been done in this respect." The Archbishop of Canterbury was requested to take such steps as may be necessary for the retranslation of the *Qui cunque Vult* (or Athanasian Creed).

After the close of the conference the bishops visited the ruins of Glastonbury Abbey, which is believed to have been erected on the site of the first Christian church built (of wattles) in England, according to tradition, by Joseph of Arimathea, and held services commemorative of the event.

The Church Congress.—The thirty-seventh Church Congress met at Nottingham, Sept. 28. The preliminary sermons were preached by the Archbishop of Canterbury and the Bishops of Calcutta, Iowa, and Argyll and the Isles. The Bishop of Southwell presided at the congress, and referred in his opening address to the jubilee of the Queen, the Church schemes of the late Archbishop Benson, the Lambeth Conference, industrial problems, the anticipated range of topics to be discussed by the conference, and the missionary character of the body. The subjects considered in the discussions, in appointed papers, and voluntary addresses included "The Organization of the Anglican Communion," by Bishop Barry; "Methods of Theology" ("Inductive," by Sir G. G. Stokes and Archdeacon Wilson; "Historical," by the Rev. A. C. Headlam and the Rev. Dr. Sanday); "The Book of Common Prayer"; "The Progress of Life and Thought in the Church of England during the Victorian Era" (the Bishop of Ripon speaking on the factors which had been at work in this progress; the Rev. Dr. Moule, on the "Contribution of the Evangelical Movement to the Life and Thought of the Church"; and the Rev. J. Llewellyn Davies, on "The Element contributed by Broad Church Teaching"); "Foreign Missions" (treated under the several heads of the development of native churches, the comity of independent missions in the same district, women's work, and medical missions); "The Church and Dissent"; "The Church in India and the Colonies" ("The State in Relation to the Church in India," by Sir T. C. Hope; "The Organization of Mixed Races in a Church," by the Bishops of Natal and Iowa; and "The Duty of the Church of England to the Colonies," by the Archbishop of Sydney); "Art and Architecture in the Service of the Church"; "Church Reform" ("Freedom of Legislation for the Church," by the Rev. Dr. Fry and others, and "Methods of Preferment and Patronage in the Church of England, compared with Other Existing Methods and considered in Reference to the Actual Circumstances of the Church," by the Archdeacon of London and others); "National Education" ("University Education, the Organization of the School System, and Religious Instruction," by the Bishop of Hereford; "The Limits of Primary and Secondary Education," by Dr. Gow; and "The Formation of Educational Councils," by the Archdeacon of Exeter); "Industrial Problems" ("Poor Law," by Mr. Geoffrey Drage, M. P.; "The Duty of the Clergy in Regard to Trade Disputes," by Mr. E. Bond, M. P.; "Methods of Conciliation," by Canon Moore Ede; and "The Christian Social Union," by the Rev. J. Carter). At a devotional meeting papers were read on "Prayer in Relation to Personal Life and Holiness" (the Bishop of Lincoln); "The Doctrine of the Incarnation as determining the Character of the Church and the World"; "The Influence of the Doctrine of the Incarnation on the Christian Ministry" (the Dean of Norwich); and "The Devotional Aspect of Missionary Work" (the Bishop of Grahamstown). Other subjects were "Practical Religion in Citizenship, in Commerce, and in Other Business Relations" and "The Supply and Preparation of Candidates for Holy Orders, and the

Causes affecting the Supply of Suitable Men, and Means of increasing it."

The workmen's meeting was largely attended, and was addressed by the Archbishop of Canterbury, Lord Hugh Cecil, M. P., and the Dean of Rochester. Meetings were held for men of business and for women. At an evening meeting "Archbishop Benson's Last Two Proposals for the Organization and Maintenance of the Church—Church Defense and Church Instruction Committee and the Queen Victoria Sustentation Fund"—were discussed by Lord Balcarras, M. P., the Dean of Norwich, and others.

ARCHÆOLOGY. American. Magnitude of Mexican Ruins.—Of the ruins of ancient cities in Mexico which Mr. W. H. Holmes has examined and described in his publications respecting them, none, perhaps, are more remarkable and extensive as a whole than those near the city of Oaxaca. Many of the important works here are found on mountain tops, "and one soon comes," he says, "to rec-

until not a trace of natural contour remained. There was a vast system of level courts inclosed by successive terraces and bordered by pyramids on pyramids. Even the sides of the mountain descended in a succession of terraces." The ruins of San Juan Teotihuacan are described by Mr. Holmes as surpassing in magnitude and in the evidence they afford of a vast ancient population those of any of the other ancient cities of Mexico. The site "lacks the well-preserved, sculpture-decorated buildings found elsewhere in Mexico and Central America; . . . but if the entire mass of the ruined structures of either Chichen, Uxmal, or Mitla was to be heaped up in a single mound, it would hardly surpass the great pyramid of the Sun alone in bulk, and the whole bulk of the Teotihuacan remains is many times that of its chief pyramid."

Ruins of Quechmictoplican.—Some important ruins have been explored by Mr. W. Niven, of New York, at the ancient city of Quechmictoplican, about 40 miles northeast of Chilpancingo, capital of the



FIG. 1.—ONE OF THE TEMPLES AT QUECHMICTOPLICAN, MEXICO.

ognize the notched profiles of the ridges and peaks that border the valley as being due to the strangely directed enterprise of the ancient inhabitants. . . . As the explorer climbs the slopes and picks his way from summit to summit he is fairly dazed by the vast array of pyramids and terraces, which not only crown the heights, but overspread the steep slopes, destroying traces of natural contour, and making the mountains actual works of art." Climbing one of the larger pyramids of the group on the summit of Monte Alban, the author obtained a panoramic view of the mountain and the surrounding valleys and ranges, of which he says: "The crest of Alban, one fourth of a mile wide and extending nearly a mile to the north, lay spread out at my feet. The surface was not covered with scattered and obscure piles of ruins, as I had expected, but the whole mountain had been remodeled by the hand of man

State of Guerrero, Mexico. On a preliminary expedition in search of the site of this city Mr. Niven found it very difficult of access, but, having reached it, discovered ruins denoting a city of very considerable extent. He returned to New York, and, having made his preparations and secured a provision of means, started in August, 1896, for a thorough exploration of the ruins. He describes them as occupying an area about as great as that of the city of New York, and as betokening not an extreme antiquity. Twenty-two temples and numerous altars, forming the principal monuments of the city, were recognized. The bases of the altars—large pyramids of *adobe*—were distinguished in all parts of the city. The temples were generally built of stones, of large dimensions, carefully squared. Of many the foundations alone remained. In other cases the walls rose a few feet.

Some of the temples covered surfaces of 600 square feet. In the center of them was always seen an altar from 5 to 20 feet high, and averaging 15



FIG. 2.—SCULPTURED HEAD IN STONE, QUECHMICTOPLICAN, MEXICO.

feet square in the base. In the temple of which a representation is given in Fig. 1 the steps, arabesques, and windows offer numerous analogies with the buildings at Uxmal, Labna, Kabah, and Chichen-Itza. But no hieroglyphics of the style

so numerous in the cities of Yucatan have yet been found here. Two immense stone columns with rounded tops rise in front of the temple, suggesting the idea of phallic worship. In two parts of the city, called Cerro Portorio and Calchiatapet, pyramids were observed about 65 feet high, and near them temples of 600 feet by 200 feet superficial area. Excavations under one of these temples brought to light 9 feet below the surface an altar, beneath which was a terracotta vessel containing 72 objects of nacre, 4 of which represented human heads with curious coiffures, and others birds, fishes, and various animals. The vessel was unfortunately broken by a workman. Underground passages seemed to be more numerous than in any other American city. At Organos and at Tejas



FIG. 3.—HIEROGLYPHIC SIGNS, QUECHMICTOPLICAN, MEXICO.

Mr. Niven discovered immense halls filled up with deposits of ashes and broken pottery wares belonging to quite different epochs. At Xochocotzin he found a head sculptured on stone, measuring 7 feet in length. The face is expressive, and the singular headdress of a style not before known (Fig. 2). At Texcal the whole edifice was subterranean, and the excavations have so far only uncovered the slabs that formed the roof. Everywhere, in the temples as in the caverns, the explorers collected in the masses of rubbish and pottery beads, pearls, ear-drops, masks, rings, amulets, and ornaments of every sort in jade or enamel.

While the numerous bas-reliefs in stucco or stone bore no inscription, on one of them something that suggested hieroglyphic signs could be distinguished (Fig. 3). Human bones were piled up in an ossuary at least 20 feet long. A few skulls were recovered intact, but they fell to pieces immediately on being exposed to the air.

England. Further Discoveries at Silchester.—The explorations at Silchester were continued during the season of 1896-'97, in the *insule* that had been already excavated. One of them, like several others, appeared to have been given up to the dyeing industry. It contained two houses, one of large size, and four other blocks of buildings, as well as the remains of several hearths and furnaces; and it is conjectured that a large area toward the north was used as a bleaching ground. Two wells were discovered, one with a wooden framing at the top and bottom, and the other with a large wooden tub. Insula XVI contained a large house of the courtyard type in the northwest angle, and two other houses of the corridor type, besides an isolated square building. In one pit were found a large number of sheep's bladebones, the perforations in which showed that they had been used for rings and counters. Various other minor objects were found. A cutting about 6½ feet deep outside the city and leading to the wall afforded remains of iron collars at regular intervals, which were interpreted as showing that wooden pipes had been laid in the trench, the collars being used at the joints. A precisely similar discovery was made on the site of a Roman town at Châtelet, France, in 1772. The tracing of the pipe led to the discovery of a hitherto unknown gate in the city wall.

Greece. Temple of Artemis Agrotera.—In excavating on the left bank of the Ilissus, near Kallirhoe, M. Skias discovered about 100 steps from the spring the foundations of the "Ionic temple of the Ilissus," which were seen and drawn by Stuart and Revett in the last century. The temple was afterward so completely destroyed that the present ruins could hardly have been regarded as the foundations of such a building but for the drawing of Stuart and Revett, with which they exactly correspond. Prof. Dörpfeldt regards this as the temple of Artemis Agrotera, which Pausanias mentions as standing immediately at the crossing of the Ilissus, before the visitor turns toward the stadium.

The British School at Athens reported a satisfactory session, notwithstanding the war. The excavations on the supposed site of the gymnasium of Kynosargos in Athens had been carried to completion. The work had been continued at Melos, on the site of Phylakopi. There was now no doubt that the remains of an important prehistoric city had been discovered. Some good finds had been made at Patras, especially a statuette of Athene of singular interest and beauty, which might safely be attributed to the third century B. C.

Palestine. A Map in Mosaic.—In the course of official inspection of a new church erected over the ruins of an old basilica in the Moabite city of Medeba Kleophas M. Koidydéales, librarian of the

nately broken by a workman. Underground passages seemed to be more numerous than in any other American city. At Organos and at Tejas

Greek Society of the Holy Sepulcher, discovered a mosaic which had apparently been 100 feet long and 66 feet wide, constituting a geographical chart of Syria, Palestine, and Egypt, of which parts of Palestine and Egypt remained. It appears to have formerly included also Asia Minor, for an old resident of Medeba said that the names of Ephesus and Smyrna were still found several years ago in their proper situations. The date of the chart is assigned, from the character of the lettering and from the political divisions given and the absence of certain sacred places that should have been marked if it were of later composition, to between 350 and 450 A. D. The names of holy places are given only as to those for whose identity the authority of the Lord or of one of the prophets or of an early martyr can be cited. In addition to the old division, according to the twelve tribes, the plan of Palestine contains also the Roman division into a first, second, and third Palestine. The work is regarded as an important addition to our resources for Hebrew and Christian archæology, history, and geography, in respect to which the author points out as among the advantages it offers that it makes us acquainted with a number of places hitherto not known; it gives to the Christian geographical identifications of that period; it designates exactly the cities and sites of the time; it is valuable for the identification of certain passages of Scripture, as, for example, the prophecies of Jacob concerning his sons Joseph and Benjamin; and it delineates exactly the shape, style, and foundation plan of the houses of the period. It is represented as marking "where there were plains and caves, deserts and oases, hills and mountains, rivers and creeks and woods, springs hot and cold, lakes and pools, boats and ships, palms and bananas; and these are all designated in their natural colors." The map appears to have been prepared with conscientious care, and is regarded as accurate.

Baalbec.—An appeal has been made by M. Casolani for the protection of the ruins of the temple of the Sun at Baalbec. It is believed that there were originally 58 columns. Of the 8 that remained in the latter part of the last century 6 are now standing, and some of them are rather dilapidated. The little that is left of the roof of the peristyle of the temple of Jupiter is also fast crumbling, two of the largest slabs that form it being in imminent danger of coming down.

Babylonia. Ruins of Nippur.—Reference was made in the "Annual Cyclopædia" for 1896 to some of the results of the excavations carried on by the expedition dispatched from the University of Pennsylvania at Niffer, the site of the ancient Nippur, on the Shat-en-Nil. More complete and definite accounts of these results have been published in books by Dr. J. P. Peters, the director of the first expedition, and in the editions of the cuneiform texts recovered, edited by Prof. Hilprecht. The central feature of the ruins at Niffer is the mound called by the Arabs Bint el Amir, "the Amir's daughter," which rises to about 100 feet above the surrounding plain. It marks the site of the great Ziggurat, or tower and temple which was built by Ur Gur or Ur Bahu, about 2800 B. C., and repaired and added to by later kings. Around this the explorations were conducted by Mr. Haynes, leader of the later expedition. A resemblance was noticed between the arrangement of this temple and tower and that of the early Egyptian pyramids and of the causeway connected with it and that between the temple of Khafra and the temple of the Sphinx; and a question is suggested as to which is earlier in origin. The tower was found to rest on a massive platform of crude brick, but beneath this was a second pavement of much finer construction, built of large

sun-dried bricks, nearly all of which were stamped with the names of Sargon I and Naram-Sin, his son, about 3800 B. C. These kings were both described as "builder of the temple of Mullil," which temple has been removed. Northwest of the temple the excavation of a line of mounds marking a rampart brought to light the remains of a solid brick wall, 52 feet thick and of unknown height, resting on a foundation of solid clay mixed with soil and puddled down—the work of Naram-Sin. A similar wall, of half the thickness of this one, was found at Tello by M. de Sarzec. Southeast of the great tower and close to the rampart was a chamber about 36 feet long and 12 feet wide, without a doorway and therefore supposed to have been entered from above, its floor resting upon the platform of Naram-Sin, which was built by Ur Gur. Beneath it was another chamber similar to it, the relics in which showed it to be the temple-archive chamber of Sargon. It had been partly restored by Ur Gur, who had also erected the upper chamber for his own archives. This chamber had been rifled some time between the reign of Ur Gur, 2800 B. C., and the rise of the Kassite dynasty, 2200 B. C., and the pillaging is supposed to have taken place during the Elamite invasion, 2285 B. C. The excavations were continued by Mr. Haynes to virgin soil, 30 feet farther down, through the *débris* of ruined buildings, accumulations of broken pottery, and fragments of inscribed stone objects and well-constructed drains. These remains proved the existence of at least two temples beneath the pavement of Naram-Sin. These strata had been disturbed and the buildings pillaged, but much remained to cast light upon earlier phases of Babylonian civilization than had been opened to us before. An altar of sun-dried brick, about 13 feet by 8, had a rim of bitumen around its upper course, and a large deposit of white ashes on its top. Around it was a low wall marking the sacred inclosure, and outside of this were two large vases of terra cotta, decorated with rope pattern. Southeast of the altar was a brick platform, about 23 feet square and 11½ feet high, built of fine unbaked bricks, round the base of which were water vents, leading to a drain passing underneath the platform, in the roof of which was the earliest known keystone arch.

More than 26,000 tablets and numerous inscribed fragments of vases and *stelæ* were received from this site, a considerable number of them of the period previous to Sargon. Among them were broken vases and other objects, many of them of the most archaic type, that had been votive offerings to the shrine of Mullil from the earliest time. A stone boulder, inscribed with a lineal inscription of a king named Lugal Kigub Nidudu, bore a second indorsement by Sargon in arrow-headed characters. Among the broken fragments were pieces of more than a hundred vases dedicated to the temple by a king named Lugal-Zaggi-si, from which Prof. Hilprecht has constructed a complete text of 120 lines. Fragments of similar verses were found beneath the Sargonide pavement. When examined along with the earliest monuments from Tello the inscriptions were found to form a complete historical series relating to affairs of which no mention is found in the annals of Sargon or after. They relate to a series of primitive wars, and form certainly, whatever their age may be, the earliest historical record known. The earliest of them is the inscription, written in most archaic character, of Eshagsagana, who is styled "Lord of Kengi," or Lower Babylonia, "the land of channels and reeds." It describes a war against the city of Kish, the modern El Hymer, whose priest ruler had entered into alliance with tribes called "the hosts of the Land of the Bow," and describes how

the Babylonians "conquered the King of Kish and his ally," the evil-hearted "horde of the Land of the Bow," spoiled his city and burned his property, carrying away the statue of the king, his bright silver, and his furniture which he dedicated to Mul-lil. The next inscription in the sequence records the conquest of Babylonia by the king of the "hordes of the Bow." It shows that the victor had established himself in the ancient capital of Erech, and that he ruled in Ur-Larsa as well, describing his empire as extending from the Lower Sea of the Tigris and Euphrates to the Upper Sea (Mediterranean), and asserting "dominion over all lands from the rising to the setting of the sun, whom he has caused to dwell in peace." This foreign dynasty was followed by one whose capital was Ur or Mughier. The identification of the people of the "Land of the Bow" has not been determined. Although Prof. Hilprecht's estimate that these relics date from a period three or four thousand years earlier than the time of Sargon is regarded by many scholars as exaggerated, no doubt is entertained that they are of much higher antiquity than any Babylonian records previously recovered.

Egypt. Tombs of an Early Dynasty.—The earliest remains yet found in Egypt have been discovered by M. Jacques de Morgan, Director General of Antiquities, in the region of Abydos, the capital of the first dynasty. In the course of the excavation flint arrowheads of extremely ancient pattern, sickles, saws, and figures of fishes, birds, and insects in slate were found. In a mound of peculiar shape not far from Negada the excavators came upon a tomb, whence passages led, with rows of columns, their walls covered with antique hieroglyphic inscriptions and bas-reliefs. Twenty-one rooms were opened, each containing a sarcophagus, of which the largest and central room had one larger than the others, resting upon a pedestal of solid rock. Around it were forms of fishes and dogs crudely carved in ivory; near the feet were the remains apparently of a lion, composed of pieces of ivory; and at its head and facing it was a life-sized figure of a man carved in wood. The sides of the room were covered with inscriptions of so remote a date that they could not be interpreted. Within the sarcophagus was a mummy case covered with hieroglyphics. The ceilings of the passageways were lined with bricks—probably sun-dried—of coarse workmanship, and the floors were of granite. The walls in many places were in so crumbled a condition that parts of the inscriptions were obliterated. Urns were found in all the rooms tightly closed and bearing on their tops the "banner name" or seal of the king. The royal names on the sarcophagi consisted of a few signs, not written in ear-touches, but inscribed in squares similar to the banner names on the vases. The seals on the vases in the king's chamber were different from the usual Egyptian seals in being made from cylinders and not from scarabs. The chief sarcophagus, after having been opened, was closed and sealed for removal to Gizeh, where the body is to be unwrapped. The other sarcophagi are also to be taken to Gizeh and opened. The tomb is supposed to be of as early date as the first dynasty.

Sayings of Jesus.—A large store of papyri has been discovered by Messrs. B. P. Grenfell and A. S. Hunt in the ground at Behnesa. The find is described as appearing as if the shelves of a library had been emptied on the ground and then spaded over and lost to view. The papyri include contracts, wills, accounts, and other public and private documents, dating between the first and ninth centuries of the Christian era; portions of the works of Sophocles, Euripides, and Thucydides, and fragments of early copies of the New Testa-

ment in Greek. The document which has aroused the most interest is the one called the *Logia*, or sayings of Christ, a fragment $4\frac{1}{2}$ by $3\frac{1}{2}$ inches in diameter, and containing 8 sayings of Jesus, each beginning with the words, "Jesus saith." The fragment is marked with the number 11, leaving it to be presumed that it is a part of a larger collection. The following is the Greek text of the *Logia*:

1. . . . καὶ τότε διαβλέψεις ἐκβαλεῖν τὸ κάρφος τὸ ἐν τῷ ὀφθαλμῷ τοῦ ἀδελφοῦ σου.

2. Λέγει Ἰησοῦς. Ἐὰν μὴ νηστεύσῃτε τὸν κόσμον οὐ μὴ εὐρήσετε τὴν βασιλείαν τοῦ θεοῦ. καὶ ἔὰν μὴ σαβ-
βατίσῃτε τὸν σάββατον οὐκ ὀφέσθε τὸν Πατέρα.

3. Λέγει Ἰησοῦς. Ἔσθην ἐν μέσῳ τοῦ κόσμου, καὶ ἐν σαρκὶ ὠφθην αὐτοῖς, καὶ εὗρον πάντας μεθύοντας, καὶ οὐδενα εὗρον διψῶντα ἐν αὐτοῖς. καὶ πονεῖ ἡ ψυχὴ μου ἐπὶ τοῖς υἱοῖς τῶν ἀνθρώπων ὅτι τυφλοὶ εἰσιν ἐν τῇ καρδίᾳ αὐτῶν.

4. [. . . .] . . . [. τ] ἦν πτωχεῖαν.

5. Λέγει Ἰησοῦς. Ὅπου ἑάν ὦσιν [gap] θεοὶ καὶ τῷ [gap] ἔσμεν μόνος, τῷ ἐγὼ εἰμι μετ' αὐτῶν. Ἐγειρον τὸν λίθον, καὶ ἐκεῖ εὐρήσεις μέτ' σχίσσον τὸ ξύλον, καὶ ἐγὼ ἐκεῖ εἰμι.

6. Λέγει Ἰησοῦς. Οὐκ ἔστιν δεκτὸς προφήτης ἐν τῇ πατρίδι αὐτοῦ, οὐδὲ ἱατρὸς ποιεῖ θεραπείας εἰς τοὺς γινώσκοντας αὐτόν.

7. Λέγει Ἰησοῦς. Πόλις οἰκοδομουμένη ἐπ' ἄκρον ἵρους ὑψηλὸν καὶ ἐστηριγμένη, οὔτε πεσεῖν δύναται οὔτε κρυβῆναι.

The eighth saying is illegible.

These lines have been translated to read:

"1. And then shalt thou see clearly to cast out the mote that is in thy brother's eye.

"2. Jesus saith, Except ye fast to the world, ye shall in no wise find the kingdom of God, and except ye keep the Sabbath, ye shall not see the Father.

"3. Jesus saith, I stood in the midst of the world, and in the flesh was I one of them, and I found all men drunken, and none found I athirst among them, and my soul grieveth over the souls of men, because they are blind in their heart. . . .

"4. . . . Poverty

"5. Jesus saith, Wherever there are . . . and there is one . . . alone I am with him. Raise the stone and there thou shalt find me, cleave the wood and there am I.

"6. Jesus saith, A prophet is not acceptable in his own country, neither doth a physician work cures upon them that know him.

"7. Jesus saith, A city built upon the top of a high hill, and stablished, can neither fall nor be hid."

A Depository of Hebrew Manuscripts.—The *genizah*, or treasure house, of an ancient synagogue in Cairo, as described by Dr. S. Schleehter, is a room at the end of the gallery, without doors or windows, and entered through a hole reached by a ladder. In it were deposited, in obedience to the injunction that none of the sacred books should be destroyed, not only castaway copies of those works, but also in the course of time Hebrew writings of many kinds. The collection made by Dr. Schlechter from one of these depositories and presented to the University of Cambridge embraces numerous copies of the Old Testament and parts and of liturgies, going as far back as the tenth century. These fragments, though they offer no textual variations of importance, are of interest from the marginal glosses or Chaldaic and Arabic versions they contain, and on account of specimens of old forms of writing and punctuation, differing from both the Eastern and Western styles. Next to these

are fragments of the Babylonian and Jerusalem Talmud, which are of great importance as furnishing a new class of manuscripts and restoring parts of old rabbinic works long ago given up as lost. Both Bibles and Talmud are accompanied by numerous commentaries and subcommentaries in Hebrew and Aramaic. Further are large quantities of autograph documents, dated from the eighth to the fourteenth centuries, with hymns, legal papers, letters, prescriptions, and fragments of miscellaneous works.

A Scepter of the Eighteenth Dynasty.—A colossal scepter, recovered by Prof. Petrie from the remains of a temple of Set at Nubt, near Nagada, has been presented to the British Museum. It was broken into many pieces, which were thought at first to belong to different objects, but were afterward found to form parts of a whole. Several pieces are still missing, but the general structure of the object is clearly defined. The shaft is 5 feet high and 6 inches in diameter, with the upper part curved and terminating in a head which is supposed to be of Set, and which, being 2 feet long, gives a total height of 7 feet. The shaft is inscribed in fine characters, with cartouches of Amenhotep II, of the eighteenth dynasty—all burned in dark glaze into the white, sandy grit of the paste of which the object is composed, and fired with a rich blue glaze. An important part of the inscription was found to be in a private collection, and has been presented to the museum to accompany the rest.

Antiquities of El Kab.—Writing of his last season's work at El Kab, in which he was assisted by Mr. Quibell, Mr. Somers Clarke observes that while it is no doubt true, that so far as we can tell by inscriptions the tomb of Sebeknekht is the oldest of the rock tombs there, it is hardly probable that there may not have been others older than it. Buried beneath the slope of sand that lies against the north side of the great wall were found several *mastabas* of brick with paneled sides; bowls of diorite—two bearing the name of Senefru—were with other things in the wells. Staircase tombs were also found similar to those at Nagada, a number of Libyan burials, also a cemetery of the twelfth dynasty, part of it outside the great wall and part within. The remains of *mastabas* similar to those found outside and of the same period were found inside the inclosure. The wall was evidently built regardless of the ancient sanctuaries. The date of the great wall has not been determined. While the inscriptions in the immediate neighborhood had already demonstrated the importance of El Kab in the sixth dynasty, the researches have now carried it back to the fourth dynasty, when, judging by the importance of the tombs, it must have been a place of no little consequence.

Stone Implements from Egypt and Somaliland.—A collection of prehistoric flint implements discovered in Egypt by Mr. H. W. Seton Karr in November, 1896, was exhibited in June at the rooms of the Archaeological Institute. The mines are situated in the Wady-el-Sheik district, in the eastern desert of Egypt, about 30 miles distant from the Nile. Many of the types of implements are new to science. Only two palæolithic implements of the earliest date were found in this region. Others included in the exhibition came from Abydos, Nagada, Nagh Hamdi, Thebes, and other places in the western desert. At some of the mines are shafts about two feet in diameter, filled up with drifted sand, and surrounded by masses of excavated rock neatly arranged. There was usually a central work place where most of the objects were discovered. In some mines a number of clubs or truncheons lay distributed uniformly as though hurriedly

left when the quarries were abandoned. Other implements—of flint and quartzite—are from Somaliland. They were found on a long low hill about 100 miles from the coast. The country around was of limestone, in some places overflowed by lava, and the implements lay in ones, twos, and threes. Sir John Evans wrote to the Royal Society that these discoveries "have an important bearing on the question of the original home of the human race. Of their identity in form with some from the valley of the Somme and other places there can be no doubt, and we need not hesitate in claiming them as palæolithic."

The question of the origin of the Egyptian race is discussed by M. le Vicomte J. de Rouge in the "Bulletin et Memoirs de la Société des Antiquaires de France." Three theories have been suggested on the subject: 1, That the Egyptians came from Asia through the isthmus of Suez; 2, that they came, partly from Asia, through Ethiopia; and 3, that the majority of them originated in Africa and passed into Egypt by the west and southwest. M. de Rouge cites reasons, based on the later excavations in Babylonia and the comparison of the remains of the earliest known Egyptian art with the probably still earlier remains recently found there, for believing that Egyptian civilization was derived directly from Babylonia.

Historical Value of Mr. Petrie's Discoveries.—Prof. Petrie spoke at the annual meeting of the Egypt Exploration Fund, Nov. 10, of the results of his labors among tombs of the fifth dynasty at Deshasheh as being of the greatest interest for the early history of Egypt. From the mass of bones he had now collected they had, for the first time, an insight into the great question of the populations of the country. They could now definitely say that there was no clear change during three or four thousand years, and that a distance of 50 miles made more difference in the type than a lapse of four thousand years in one place. They had the fortune to find a group of statues of the fifth dynasty, and to bring to England one of the two best, which was far the finest piece of Egyptian statuary that had ever reached that country.

Algeria. Mussulman Ruins of Kalaa.—M. Blanchet, working under the Archaeological Society of Constantine, Algeria, reports the discovery of the Mussulman city which was in the eleventh century the capital of northern Africa—the Kalaa of Beni Ihammad. This city, which once had 80,000 inhabitants, is now covered with grain fields, and to reach it the traveler has to ride seven hours among the mountains. Many archæologists have passed within a few miles of it without suspecting its existence. M. Blanchet has exhumed on the site a mosque of about 200 by 180 feet dimensions, covered with green emeralds and sustained by columns of rose marble; a palace; a public fountain; a castle imposingly situated on the top of a rock and flanked by towers, the least ruined of which was about 45 feet high. The discovery derives additional interest from the fact that no Mussulman ruin of the epoch of this one was known to exist in Algeria. The monuments of Tlemcen were built in the twelfth century; those of Kalaa date from 1007. A new chapter in the history of art has thus been revealed to us.

India. Ruins of Dimāpūt.—The ruins of Dimāpūt in Assam consist of a number of tanks, large quantities of broken pottery, and a number of carved speckled gray sandstones, inclosed in an area about a mile square by a brick wall of later building, with a moat and a gate. Dimāpūt was sacked by the Ahōms in 1535, and has been uninhabited since, while a dense jungle has grown up all over the upper valley of the Dhunsiri. The

stones are carved with geometrical designs, figures of animals, conventionalized lotus flowers, and trees. They are of two kinds—round, free-standing, with expanded mushroomlike tops, and narrow necks, gradually widening again to their bases; and others Y-shaped, the stem of the Y forming the base, while the free ends of the limbs have mortises. The moldings of both these kinds suggest a wooden origin. At present three groups of these stones have been found, with two solitary stones. Their orientation approaches north and south. They are arranged in rows, in one group a double row of round stones, each pair of which apparently stood due east of a double row of Y-shaped stones; in a second group a row of round stones; and in the third group a row of stones shaped like a U, to the east and west of each pair of which stood a pair of round stones. In the first group are the remains more or less complete of 64 stones: in the second group of only a few; and in the third group of 20 or 30 at least. While the round stones were evidently free-standing, the others bore in their mortises crowning ornaments of some kind, all traces of which have been lost. The vagueness of the symbolism employed precludes at present a definite attribution of the works to any particular religion. Local tradition refers them to rites of human sacrifice.

In the Lake of Nemi, about 17 miles southeast of Rome, where the Emperor Tiberius had a pleasure house, with two triremes on the waters, there have recently been discovered several massive mooring rings and tops of stakes by which the vessels could be moored to the quay. The rings are fixed in the mouths of bronze heads of lions, wolves, and Medusæ, by the teeth of which they are retained in their proper places. The heads are modeled with great accuracy and skill, and the faces are lifelike in similarity to the animals represented. Notwithstanding their long immersion, they are all perfectly preserved.

ARGENTINE REPUBLIC, a federal republic in South America. The legislative power is vested in a Congress, consisting of a Senate and a House of Representatives. There are 30 Senators, 2 for each province and 2 for the capital, and 86 Representatives, 1 to every 20,000 inhabitants. The President and Vice-President are elected for six years. One third of the Senate is renewed every two years, and one half of the House of Representatives at the same time. José E. Uruburu, the Vice-President, became acting President for the term ending Oct. 12, 1898, when Dr. Saenz Peña, on Jan. 22, 1895, resigned the presidency. The Cabinet officers at the beginning of 1897 were: Interior, Dr. B. Zorilla; Foreign Affairs, Dr. Amancio Alcorta; Finance, Dr. J. J. Romero; Justice, Worship, and Public Instruction, Dr. A. Bermejo; Army and Marine, Gen. Villanueva.

Area and Population.—The estimated area and population of the capital and of the provinces and national territory, according to the census of May 10, 1895, are given in the table in the next column. Including 60,000 persons omitted, 30,000 Indians, and 50,000 Argentines abroad, the total is 4,092,990. The population has increased since 1869 at the average rate of 4.6 per cent. per annum. The city of Buenos Ayres in June, 1896, had a population of 690,788, of whom 345,500 were foreigners. The next largest town, Rosario, had 93,584 inhabitants in 1895. From 1873 to 1893, inclusive, 1,683,000 persons arrived from foreign countries and 567,000 departed, making the net immigration 1,116,000. The number of immigrants in 1894 was 54,720; in 1895, 46,783. The bulk of the immigrations is from Italy. In 1894 the Italian immigrants numbered 37,699; Spaniards, 8,122; French, 2,107; Germans,

971; Russians, 3,132; Austrians, 440; Russian Jews, 2,890. The departures in 1894 numbered 41,399. The number of foreigners in the republic in 1895 was estimated at 1,000,000, compared with 600,000 in 1887, when there were 280,000 Italians, 150,000 French, 100,000 Spaniards, 40,000 British, and 20,000 Germans. About two thirds of the foreign population are males. Among the native Argentinians the females are in excess. The Jewish Colonization Association acquired 330,000 acres of agricultural lands in Buenos Ayres, Entre Rios, and Santa Fé, of which 180,000 acres are occupied by Jewish settlers from Russia and other European countries. Elementary education is secular, gratuitous, and compulsory. In 1890 the amount raised by school taxes, with the Federal contribution, amounted to \$10,415,789 in Argentine currency. There were 2,744 public schools in 1895. There is a lyceum in each province under the direction of the Federal authorities, and universities are established at Cordoba and Buenos Ayres.

PROVINCES, ETC.	Square miles.	Population.
City of Buenos Ayres.....	115	663,854
Provinces:		
Buenos Ayres.....	63,000	921,225
Santa Fé.....	18,000	397,285
Entre Rios.....	45,000	290,994
Corrientes.....	54,000	239,570
Rioja.....	31,500	69,228
Catamarca.....	31,500	90,187
San Juan.....	29,700	84,251
Mendoza.....	54,000	116,698
Cordova.....	54,000	351,745
San Luis.....	18,000	81,155
Santiago del Estero.....	31,500	160,445
Tucuman.....	13,500	215,693
Salta.....	45,000	118,138
Jujuy.....	27,000	49,543
Territories:		
Misiones.....	23,982	33,005
Formosa.....	73,000	4,829
Chaco.....	85,000	10,280
Pampa.....	91,000	25,765
Rio Negro.....	124,000	9,300
Neuquen.....	57,000	14,517
Chubut.....	154,000	3,748
Santa Cruz.....	182,500	1,058
Tierra del Fuego.....	13,000	477
Total.....	1,778,195	3,952,990

Finances.—The revenue for 1895 was \$29,805,651 in gold and \$28,958,460 in paper, compared with \$27,790,500 in gold and \$24,861,412 in paper in 1894. The expenditure in 1895 was \$24,165,239 in gold and \$83,933,387 in paper. For 1896 it was estimated that the expenditure would be \$15,811,338 in gold and \$87,022,058 in paper. The actual expenditure was \$29,390,000 in gold and \$92,224,000 in paper, and the receipts were \$32,127,000 in gold and \$34,237,000 in paper. The budget for 1897 makes the gold revenue \$32,078,000, of which \$29,200,000 are derived from import and export duties, \$1,976,000 from port dues, \$280,000 from stamps, and \$622,000 from interest. The revenue in paper currency is estimated at \$63,700,000, of which railroads and public works produce \$4,500,000; land taxes, \$1,500,000; licenses, \$1,750,000; stamps, \$5,400,000; the post office, \$2,300,000; internal taxes, \$17,600,000; use of credit, \$25,000,000; and various resources, \$5,650,000. The expenditure for 1897 is estimated at \$16,303,955 in gold, viz., \$1,600,000 for the interior and Congress, \$366,880 for foreign affairs, and \$14,337,075 for the debt, and \$109,128,372 in paper, of which \$28,401,086 are required for the interior and Congress, \$635,448 for foreign affairs, \$7,515,495 for the Finance Department, \$10,323,034 for the debt, \$14,057,434 for the Ministry of Justice and Instruction, \$19,634,958 for the Army Department, \$10,560,917 for the navy, and \$18,000,000 for extraordinary expenditures of the Department of War and Marine.

The estimated expenditure of all the provinces for 1894 was \$30,312,519. The revenue of the province of Buenos Ayres in 1895 was \$13,125,667, and the expenditure \$12,881,551. The total amount of the provincial debts in 1895 was \$137,261,866 in gold, including arrears of interest. The aggregate debt of the municipalities is \$24,596,422. In 1896 Congress passed an act for the unification of the national and provincial external debts. The settlement of the railroad guarantees was also approved, and bonds were issued and accepted by the companies in satisfaction of all claims against the Government, excepting two companies that refused to agree to the arrangement.

The debts of the Federal Government at the beginning of 1896 amounted to £78,483,515 sterling, consisting of £55,519,123 of external loans, an internal debt of \$91,883,031 in gold, equal to £18,230,700, and one of \$83,502,338 in paper, equal to £4,733,692. This does not include floating liabilities, reported to amount to \$1,370,000 in gold and \$9,020,000 in paper on Dec. 31, 1895. The debt charge for the fiscal year 1895 was \$13,846,322 in paper and \$1,478,311 in gold. The state debts amount to \$28,000,000.

The new national bank, opened on Dec. 1, 1891, after the old one went into liquidation, has 62 branches, with a total invested capital of \$51,987,366 of paper and \$58,961 of gold on April 1, 1895. Its note circulation on Aug. 31, 1896, amounted to \$46,000,000, the guaranteed notes of the national banks to \$117,046,150, those of the Central National Bank in liquidation to \$90,019,533, those of the Banco Hipotecario to \$30,000,000, and those of smaller institutions and of the municipality of Buenos Ayres brought the total of the paper currency in circulation up to \$296,737,023, according to the report of the Caja de Conversion. The amount of notes redeemed in the year 1894 was \$8,000,394.

The Army and Navy.—The regular army consisted of 1,659 officers and 10,404 men in 1895. The Government proposed in 1896 to bring the effective up to 15,302 men. The National Guard has about 480,000 men enrolled. The younger members receive a brief military training, being called into camp when first inscribed, at the age of twenty, and drilled for sixty days. The rest of the National Guard is drilled on Sundays for two months of each year.

The navy is one of the strongest in South America. The English-built armored cruiser "Almirante Brown," of 4,200 tons, protected by 9-inch steel-faced armor, carried 8 12-ton Armstrong guns. The first-class cruisers "San Martin" and "Vareza" were purchased from Italy. The "Nueve de Julio," a cruiser of 3,575 tons displacement, armed with 4 6-inch and 8 4-7-inch quick-firing guns and 24 Hotchkiss guns, has made 21-9 knots with natural draught. The ram cruisers "Libertad" and "Independencia," launched in England in 1890 and 1891, are powerfully armed and well protected for their size—2,500 tons—each carrying 2 9½-inch Krupps, mounted to fire at an angle of 40°, and 4 4-7-inch quick-firing Armstrongs and having 8-inch plates on the sides and on the barbettes. The powerfully armed torpedo gunboat "Patria," built to replace the lost "Rosales," has made 20-5 knots with forced draught. The smaller "Aurora" has a speed of 18-5 knots. The new protected cruiser "Buenos Aires," of 4,500 tons displacement and 14,000 horse power, made the extraordinary speed at her trial of 23-2 knots. Her armament consists of 2 8-inch, 4 6-inch, 6 4-7-inch, 16 3-pounders and 8 1-pounder guns. The "25 de Mayo" is a powerful second-class cruiser. Of third-class cruisers there are 6, and the torpedo fleet consists of 10 first-class and 4 third-class boats. Four destroyers

designed for a speed of 26 knots are being built in England. Two old monitors serve for harbor defense.

Commerce and Production.—The imports of merchandise in 1895 amounted to \$94,856,000 and the exports to \$118,937,000, gold value. The values of the various classes of imports were: Textiles and wearing apparel, \$37,304,411; articles of food, \$11,543,370; iron and manufactures thereof, \$9,800,565; beverages, \$8,798,254; timber and manufactures of wood, \$3,812,243; railroad material, etc., \$1,922,179; paper and paper manufactures, \$2,236,949; various metals, \$1,430,009; pottery and glass, \$2,256,423; chemicals, \$4,830,067; coal and oil, \$6,306,834; miscellaneous, \$2,158,574. Of the total exports \$74,629,876 were animals and animal produce, \$39,100,000 agricultural produce, \$2,348,012 manufactures, \$338,982 mineral products, and \$358,554 miscellaneous products. The quantity of wool exported was 201,353 tons, having increased in two years from 123,230 tons; of sheepskins, 33,664 tons, compared with 25,569 tons in 1893; of wheat, 1,010,269 tons; of corn, 772,318 tons, against 54,876 tons in the preceding year; of meat, 99,757 tons, increasing from 68,371 tons in 1893 and 80,000 tons in 1894.

The imports of coin and bullion in 1895 were \$4,723,333; exports, \$118,275. In 1896 the imports of specie were \$6,000,000 and the exports \$2,000,000. The average rate of exchange was 296, against 343 in 1895. The total gold value of imports in 1896 was \$112,000,000, and of exports \$116,000,000.

The value of the commerce with each of the principal foreign countries in 1894 is shown in the following table:

COUNTRIES.	Imports.	Exports.
Great Britain.....	\$39,524,270	\$14,694,783
France.....	9,116,870	20,357,169
Germany.....	11,162,549	13,323,324
Belgium.....	7,441,356	15,417,711
United States.....	6,686,999	8,947,165
Italy.....	10,363,129	3,518,087
Brazil.....	4,095,665	8,096,105

Only 15,000,000 acres out of 240,000,000 acres of cultivable land was actually under cultivation in 1895. There were 5,500,000 acres under wheat, yielding 1,400,000 tons in 1896. Corn is grown extensively, and a considerable area is devoted to raising flax. The sugar plantations cover 82,000 acres in the north, yielding 120,000 tons in 1896. The area of vineyards was 71,135 acres in 1895, when the wine crop was 42,267,200 gallons. There were 4,447,000 horses, 21,702,000 cattle, 74,380,000 sheep, and 3,885,000 goats and other animals in 1895. The number of cattle slaughtered in 1895 was 1,954,800, and in 1896 there were 1,204,288 slaughtered from the pampas of the Argentine Republic, Uruguay, and the southern province of Brazil. The Argentine *saladeros* slaughtered 733,660 head in 1895 and 367,230 head in 1896.

Navigation.—During 1895 there were 6,496 steamers, of 5,461,468 tons, and 3,382 sailing vessels, of 785,633 tons, entered from foreign ports. About 86 per cent. of the import trade and 51 per cent. of the export trade passes through the port at Buenos Ayres. The mercantile navy of the republic in 1895 comprised 75 steamers, of 21,613 tons capacity, and 125 sailing vessels, of 28,241 tons.

Communications.—The length of railroads in operation in 1895 was 8,766 miles. The capital expenditure up to 1896 was \$466,016,879. The gross earnings in 1895 were \$26,394,306, and expenses \$13,846,464. Of the total capital outlay, \$42,426,297 were expended by the Federal Government on the Government lines, \$111,393,069 by companies on guaranteed lines, \$229,159,165 by companies

without guarantees, and \$83,038,348 on provincial lines.

The telegraphs have a length of 20,415 miles. The post office forwarded 142,436,240 internal and 22,906,267 international letters and packets in 1895. There was earned a net revenue of \$3,595,125.

Politics and Legislation.—Financial questions continued in 1897 to occupy the attention of Argentine legislative bodies. The Senate in January adopted a scheme for the issue of \$10,000,000 of new cedulas for the purpose of advancing loans for the promotion of agriculture. The municipality of Buenos Ayres was authorized to raise a loan of \$5,000,000.

Gold in the beginning of February rose to a premium of 201, when the Government took steps to check the rise. German holders of Argentine obligations negotiated a settlement with the Government. The United States minister protested against a discriminating overcharge made by the River Plate Telegraph Company, an English corporation, in connection with the Western and Brazilian Telegraph Company, also English, on American messages; whereupon the Argentine Government compelled the company to take messages at the published rates under threat of closing their office. The railroad companies, which have hitherto collected the prices of telegraph messages in gold, were ordered in June to transmit messages over their telegraph lines at the same currency rates as prevail over the national lines. A new system of docks, including two dry docks, was inaugurated with public ceremony on June 24 in Buenos Ayres. These docks have been ten years in progress, and cost \$35,000,000.

The Argentine minister at Santiago entered into fresh negotiations with the Chilean Government for the determination of the boundary line over the Andes. The chief difficulty lay in the disputed surveys at Puna Atama and through Patagonia. In case of final disagreement the line will be fixed, according to treaty, by the arbitration of the Queen of England. Criticisms in official quarters on the administration of the army led the Minister of War and the chief of the general staff in February to offer their resignations, which, after a public vindication, they were induced to recall. In May, unemployed laborers committed riotous acts in San Luis provinces, and were disarmed by Federal troops.

The Argentine Congress began the session of 1897 on May 7. In his message President Uriburu dwelt on the proposed modifications in the United States tariff, and threatened retaliation against the high duties placed on the leading products of the Argentine Republic, but he hoped the interests of the two countries would render extreme measures of retaliation unnecessary. In consequence of the duties imposed by the United States Government on hides, wool, and other Argentine products, a bill was framed in October embodying a retaliatory tariff, affecting particularly petroleum, white-pine and spruce lumber, and agricultural implements and machinery. On the subject of the debt the President said in his message that the Government would give effect to the law for promoting full payment of its external obligations, and would meet the extraordinary expenditure for armaments without resorting to new issues or loans. Attention was called to the necessity of commencing the redemption of the paper money and forming a cash reserve.

Locusts caused a failure of the wheat crop. The exports of this cereal for the first three months of 1897 were little more than a fifth of the quantity shipped during the corresponding months in 1896. In some provinces the harvest was so poor that the Government distributed seed wheat to colonists.

Congress was asked to appropriate \$1,000,000 for the purpose of destroying the swarms of locusts. The English Government bought a large number of horses for its cavalry in the Argentine Republic, and shipped many of them to South Africa.

The Minister of Finance had a plan for consolidating the provincial debts, which he thought could be settled for \$80,000,000 in gold, but his colleagues disapproved of assuming so heavy a burden. The National Government made an arrangement to assume the external debt of the province of Buenos Ayres, giving the provincial creditors \$34,000,000 in 4-per-cent. gold bonds. The provincial government agreed to pay the sums required for the service of the bonds to the National Government from the proceeds of the ordinary revenue. The receipts of the port of La Plata were pledged as a guarantee. The English creditors hesitated to accept the settlement offered, but the Minister of Finance informed them that the province could not pay more. Congress was asked to establish a tobacco monopoly, the proceeds to be applied toward paying the foreign debt. There was a deficit of \$70,000,000, of which \$50,000,000 was brought down from former years, and \$20,000,000 was the shortage of 1897. These floating liabilities, consisting of guarantees and other obligations at home and abroad, caused great difficulty in the preparation of the budget, and the Government sought to discover a way of covering the deficit by a financial operation. The tobacco monopoly was expected to yield a revenue of \$12,000,000. The National party, which controls a majority of the voters, held its convention on July 10, with Dr. Pelligrini in the chair, and nominated Gen. Roca for President without opposition. Dr. Quirno Costa was named as the candidate for Vice-President. He resigned his portfolio as Minister of the Interior on July 14 on account of the nomination, and Dr. Bermejo at the same time resigned his as Minister of Justice in order to oppose the election of Gen. Roca as President. There is a strong disposition on the part of the provinces to assert their power over the capital, in which a very large proportion of the total wealth of the country is concentrated, and Gen. Roca is a champion of this sentiment. The platform of the country party, besides putting to the fore the provincial economic interests, favors the introduction of foreign capital, greater stability of the currency, and more attention to credit abroad. The budget for 1898 proposed economies that Congress would not accept, and new taxes and monopolies of tobacco and alcohol that were exceedingly unpopular.

ARIZONA, a Territory of the United States, organized Feb. 14, 1863; area, 113,020 square miles. The population, according to each decennial census, was 9,658 in 1870; 40,440 in 1880; 59,620 in 1890; and estimated at 101,000 in 1897. Capital, Phenix.

Government.—The following were the Territorial officers during the year: Governor, Myron H. McCord, appointed in May to succeed Benjamin J. Franklin; Secretary, Charles H. Akers, appointed in May to succeed C. M. Bruce; Treasurer, F. E. Farish; Auditor, C. P. Leitch; Adjutant General, Edward Schwartz; Attorney-General, J. W. Wilson; Superintendent of Instruction, T. E. Dalton; Chief Justice of the Supreme Court, Albert C. Baker; Associate Justices, John J. Hawkins, Owen T. Rouse, and James D. Bethune; Clerk, Joseph L. Alexander—all Democrats.

Finances.—The bonded debt of Arizona is \$739,100; the floating debt, \$237,115; the actual debt, exclusive of interest on outstanding warrants, \$948,947. There were funded into Territorial bonds for account of Pima County, \$210,240.05; Mohave County, \$105,363.29; Yuma County, \$88,791.11; Maricopa County, \$267,636.43; Pinal County, \$136,138.08;

Yavapai County, \$52,163.78; Apache County, \$43,439.86; Coconino County, \$159,000.99; Graham County, \$147,364.70; Gila County, \$44,781.66; making liabilities for counties, \$1,254,959.95. On account of municipalities—city of Prescott, \$90,167.24; Tucson, \$16,000; Tombstone, \$12,812.68; total, \$119,979.62. The total liability on account of counties and municipalities is \$1,374,899.57. The Auditor's report showed the total expenses of Territorial government to be \$341,705, a reduction of \$3,600 over the previous year.

Valuations.—The following figures show the present valuation of taxable property, as reported by the Territorial Board of Equalization: Land, \$5,593,577.10; improvements, \$1,393,285.78; town and city lots, \$3,513,069; improvements on same, \$3,289,880.05; horses, \$754,542; mules, \$31,476; asses, \$3,180.50; cattle, \$3,413,001.20; sheep, \$461,785; goats, \$12,629; swine, \$29,160; railroads, \$5,333,082.25; all other property, \$4,212,514.52; total, \$28,047,176.40—over \$500,000 increase on the preceding year. The Governor said in his message to the Legislature that he considered the report of the Board of Equalization as representing only about one third the actual property value of the Territory, and recommended that corporations be compelled to make proper returns; also that a more exact and equitable system of taxation be adopted.

A report of valuations in the capital county of the Territory showed: Lands, 259,847 acres, value \$3,128,351, value of improvements \$300,515, total value \$3,428,866; town and city lots, value \$2,354,227, improvements \$1,117,910, total \$3,472,137; horses, 3,970 head, \$80,966; mules, 198 head, \$3,683; asses, 15 head, \$110; cattle, 18,528 head, \$177,943; sheep, 49,713 head, \$74,701; goats, 257 head, \$310; swine, 8,002 head, \$12,178; all other property, \$1,186,181; railroads, 94.59 miles, \$463,940.17. Total value of all property in Maricopa County, \$8,901,015.17.

Education.—The school census showed 16,936 children of school age for 1896, an increase of 1,027 over the previous year. Seventy-six per cent. of these were enrolled in the public schools. The number of school districts in the Territory is 223, and there are 293 grammar and primary schools. Average teachers' salaries are \$72.90 per month for males, and \$66.26 for females. Total school expenditures for the year were \$214,450.88. In May the citizens of Phoenix voted \$30,000 of bonds for additional school facilities. The sum of \$33,264 has been expended on the reform-school building, not yet finished.

Territorial Prison.—The superintendent reported that up to January, 1897, 233 prisoners had been received and 184 discharged. The gross expenses of 1896 amounted to \$33,731.82, and the gross receipts to \$3,989.82, leaving a net *per diem* cost of \$92.20, and a net *per capita per diem* cost of \$476—a reduction on the net *per diem* cost of \$15.17, and of the net *per capita per diem* cost of \$152. The total value of the prison property is estimated at \$148,909. The prison has a library of over 2,000 volumes. The library is maintained by charging visitors to the prison a fee of 25 cents.

Irrigation.—The effort to secure water by artesian wells in some of the valleys of the Territory is proving highly successful. About 20 flowing wells have been developed between Fairbank and Benson, in the San Pedro valley. The last well bored gave water at a depth of 140 feet, and a large volume has been flowing steadily.

Agriculture.—It has been suggested that Arizona ought to be a good region for the raising of cotton, and the "Phoenix Herald" has the following to say on the subject: "Cotton-growing is not unknown in the Salt River valley. In 1883 most

successful crops of cotton were grown in this valley, and a huge bale of it, 400 pounds, was on exhibition at the New Orleans Exposition, and it was pronounced by experts to be of the finest, the fiber being equal to the famed sea island cotton. This bale was part of a crop of ten acres which yielded not only a splendid fiber but an enormous crop. The principal trouble with the business was that, owing to the cost of labor here and railroad tariffs, cotton-growers could not compete with States farther east that had water transportation and cheap and abundant labor; and that is principally the difficulty that remains to-day to prevent the growing of cotton in central Arizona. There is no question as to the facility with which it can be raised, the fine, long fiber it will produce, or the great quantity it will produce per acre."

The experiment station of the Territory was supplied with German sugar-beet seed for distribution, and all residents were duly notified that seed might be secured upon request. Tobacco has been grown in considerable quantities along the Rillito, in Pima County, and experiments are being made with it in other sections. Australian salt-bush has been grown upon the experiment station grounds at Tucson without water for over two years. The location of the plants is upon the *mesa* north of the city, where it is exceedingly dry. This is held to indicate that this forage plant is valuable for arid regions. The station at Tucson has distributed seed gratis throughout the Territory for the purpose of having the plant thoroughly tested. The director of the Tucson Experiment Station announced that he had received offers from foreign capitalists to enter into contracts for ramie fiber in the rough at from \$40 to \$50 a ton, and stated that from results obtained in experimenting with ramie it might be grown with ease in the Territory and ought to prove a paying crop. The date industry is receiving much attention, and experiments have proved successful beyond question.

Distilling.—Distilling is carried on in Arizona at only 2 places—Mesa, Maricopa County, and Pima, Graham County. At the former is a grape distillery and at the latter one fruit and one grain distillery. Distilling in Maricopa is carried on mainly for the purpose of supplying brandy for the fortification of sweet wines, the county having produced 13,000 gallons of such wine in 1896. Except brandy used for this purpose only 37 gallons were reported. Brandy used in the making of wine is by law exempt from the 90-cent tax.

Mining.—Arizona is reported as rapidly coming to the front as a great copper-producing region. With the completion of the Gila, Globe and Northern road to Globe the fourth great copper camp of the Territory will be opened and operated. Those already in operation—Bisbee, Clifton, and United Verde—are said to be immense producers, though none is being worked to its full capacity. At Lee's Ferry gold and silver are found associated with copper, the former showing good values. The White Hills camp, in Mohave County, is reported to have yielded about \$2,000,000 in gold and silver ores since its discovery, in 1892.

ARKANSAS, a Southern State, admitted to the Union June 15, 1836: area, 53,850 square miles. The population, according to each decennial census since admission, was 97,574 in 1840; 209,897 in 1850; 435,450 in 1860; 484,471 in 1870; 802,525 in 1880; and 1,128,179 in 1890. By estimates based on the school census of 1895 it was 1,248,056 in that year. Capital, Little Rock.

Government.—The following were the State officers during the year: Governor, Daniel W. Jones; Secretary of State, Alexander C. Hull; Treasurer, Ransom Gulley; Auditor, Clay Sloan; Attorney-

General, E. B. Kinsworthy; Superintendent of Education, Junius Jordan; State Land Commissioner, J. F. Ritchie; Commissioner of Agriculture, W. G. Vincenheller; Adjutant General, A. B. Grace; Chief Justice of the Supreme Court, Henry G. Bunn; Associate Justices, S. P. Hughes, C. D. Wood, B. B. Battle, J. E. Riddick. All are Democrats.

Finances.—The Treasurer's latest biennial report comes down to Oct. 1, 1896. Following is the summary: Cash in treasury Sept. 30, 1894, \$424,685.75; receipts to Jan. 17, 1895, inclusive (expiration of former Treasurer's term of office), \$40,679.24; payments, \$189,713.11; balance in treasury Jan. 18, 1895, \$275,651.88; receipts from that time to Sept. 30, 1896, \$1,946,779.90; payments, \$1,664,490.35; balance in the treasury Oct. 1, 1896, \$557,941.47.

In the case of the State against S. H. Buchanan, former Treasurer of the Board of Trustees of the State Insane Asylum, and his bondsmen, it is found that he gave no valid bond for his fifth term and part of the sixth, the time of the greater part of the shortage; so that judgment was rendered against him alone for \$11,617.48, the sureties being found responsible for only the remaining shortage of \$1,712.12, which was incurred during the fourth term.

The appropriation made by the Legislature for pensions to Confederate veterans enabled the board to pay 96 per cent. of the claims it had allowed.

Valuations.—The compilation of assessments shows the following values: Real estate—whole number of acres of land taxed, 21,738,267; total value of land, \$72,080,139; total value of city or town lots, \$30,679,058; total value of railroad tracks, etc., assessed by State board as real estate, \$14,402,053; total value of real estate, \$117,161,250. Persons and personal property—persons liable to pay a poll tax, 261,402; value of railroad property assessed by State board as rolling stock, \$6,409,562; total value of personal property, \$58,236,182; total value of real and personal property, \$175,397,432.

The assessed valuation of personal property for 1895 was \$54,652,706; realty, \$119,106,058.

The Land Commissioner reported that \$100,000 had been paid into the treasury from his office during the biennial period. About 800,000 acres of State lands are still left for disposal.

Education.—The school enumeration for 1895-'96 was 456,736, of whom 124,957 were colored. The total enrollment in the public schools was 296,575, and that in private and denominational schools 4,699. The whole number of teachers in public schools was 6,673. The value of school property amounts to \$1,929,206.40. The receipts were \$1,675,991.13, and the expenditures \$1,232,986.08.

Of the county normal schools the Superintendent says: "The Peabody appropriation has been spent in supplementing the appropriation by the Legislature for the establishment of the normal in each of the 75 counties of the State. In half of the counties the attendance was so encouraging that the sessions were extended five and six weeks. The result shows that we had 5,225 white teachers enrolled in the State, 5,148 were in attendance at the normals, and there are three counties to hold their normals in September and October. By Peabody aid I have increased the number of colored normals from 26 in 1896 to 33 in 1897, and there is a three-months' normal for the colored teachers of eastern Arkansas yet to be held.

The report of the State University shows the receipts for two years to have been \$201,976.39, and the expenditures \$168,765.07. The twenty-fifth graduating class in June numbered 14. The medical department graduated 25 in April.

Charities.—The appropriation for the Asylum for the Insane for the two years ending April 1, 1899, was \$184,400, which included \$8,000 for re-

pairs. The average number of patients is about 500. The report of an investigating committee of the Legislature was in general favorable, but said: "In regard to the mortality of said institution for the past two years, we find the death rate to be about 11½ per cent. per annum, and from the average death rate from similar institutions in other States we find from expert testimony that it should not exceed 7 or 8 per cent. The cost of maintenance *per capita* in 1896 was about \$6.62½ a month.

In the School for the Blind the average was \$12.37 per annum for traveling expenses, and \$58.51 per pupil while in school. The total enrollment was 172, and the actual attendance 145.

The Children's Home Society has placed about 165 children in homes during the two years of its existence.

The Penitentiary.—The value of the buildings, grounds, and caucups is given at \$181,336.33. Of the 700 convicts, about 250 are under twenty years of age. The share-crop system of working the inmates has proved profitable, and a farm is to be bought by the State.

Insurance.—The Auditor's report gives the figures below for 1895-'96: The fire insurance companies have written risks in this term for \$66,704,316; collected premiums amounting to \$1,412,760; paid losses amounting to \$808,266. The life insurance companies have written in risks \$21,730,288; received premiums, \$1,597,809; paid losses of \$529,620. They have paid taxes and fees amounting to \$38,173.94, an increase of \$9,426.09 over the preceding two years.

Railways.—Steps have been taken toward the construction of a road to be made by convict labor and owned by the State, as provided for by the Legislature, running from the capital to the Missouri line; and others are proposed.

By a decision of the Supreme Court a railroad company was held not to be responsible as a common carrier for baggage which was burned at a station at 1 A. M. after having been left there two hours after the passenger's arrival; and he could recover damages only by showing such negligence as would make the company liable as a warehouseman.

Coal and Cotton.—The State produced in 1896 coal to the amount of 494,000 tons, and in 1897 the cotton crop was given at 700,000 bales.

Discoveries of Pearls.—Great excitement has been caused by the reported finding of fine pearls in great numbers in the Saline, St. Francis, Ouachita, and White rivers and other streams.

Lawlessness.—Two deputy marshals were killed, and others of their party were wounded, when on a raid to stop illicit distilling in the mountains of Pope County in August. The same month a white man was killed and another brutally beaten at a negro picnic near Kendall Mills; as a result, two negroes were lynched and another was shot, in an affray growing out of the affair.

Damage by Flood.—Great loss and suffering were caused in the spring by the heavy floods. The lowlands in eastern Arkansas were covered with water, houses were swept away, many animals were drowned, and some human lives were lost. Relief was sent from various sources, and the Legislature appointed a committee to investigate, and passed a law extending the time for payment of taxes.

Court Decisions.—The Wells-Fargo Express Company brought suit against a county collector, attacking the validity of an act by which the company was taxed, on the ground that the rule of assessment laid down in the act was unfair. Among other things, the act provides that the board in assessing the taxable property of such a corporation shall ascertain the value of the entire capital stock of such company, and shall therefore fix the sum

at which the property of any such express company shall be assessed in this State, by taking the same proportion of the aggregate value of the capital stock of such company as the number of miles of railway within this State over which it carries on its business bears to the aggregate number of miles of railway within as well as without the State over which such company does business. The company contended that this was unjust, because, while it carries on its business in this State exclusively on railways, in other States it carries it on over water ways as well, and has realty in other States, but none in this; and claims the value of its capital stock is based in part upon such realty and its business over water ways. The decision upheld the validity of the law.

By another Supreme Court decision it was declared that railroad companies are liable for the killing of dogs by trains through negligence.

In a case turning upon the liability of a corporation for negotiable paper issued by one of its officers, the decision held the corporation responsible.

Legislative Session.—The thirty-first biennial session of the Legislature began Jan. 13 and ended March 11.

W. L. Moose was elected president of the Senate, and J. C. Tappan Speaker of the House.

The total number of bills introduced in both branches was 558, of which 247 were in the Senate and 311 in the House. Of these 55 were passed.

Bills were introduced providing for a railroad commission, and much time was spent on them in debate, with the result only that a concurrent resolution was adopted proposing a constitutional amendment to be submitted to popular vote, authorizing the creation of a permanent railroad commission. Another constitutional amendment to be submitted authorizes the levy of a road tax not to exceed three mills.

An antitrust bill was passed, declaring all combinations made with a view to lessen, or tending to lessen, free competition, or to reduce or control prices, to be unlawful and void; and making the penalty the loss of charters for corporations, and for any person convicted of engaging in such business a fine of not less than \$500, or more than \$2,000, and imprisonment in the Penitentiary not less than one or more than ten years, or in the judgment of the court by either such fines or such imprisonment; the provisions of the act are not to apply to agricultural products or live stock while in the possession of the producer or raiser. It is further provided that any one injured or damaged by such a combination "may sue for and recover in any court of competent jurisdiction in this State of any person or persons or corporations operating such trusts or combination to the full consideration or sum paid by him or them for any goods, wares, merchandise, or articles, the sale of which is controlled by such combination or trust."

Another act provides that "hereafter it shall be unlawful for any keeper of a saloon or wholesale liquor dealer in Arkansas to keep, exhibit, use or suffer to be used in his saloon or place of business, or in any adjoining house subject to his direction or control, any musical instrument of any kind whatever, for the purpose of performing upon or having the same performed upon; neither shall he permit any fencing, sparring, boxing, wrestling, or other exhibition or contest of dexterity or strength; that it shall be unlawful for such persons to permit to be used in and about his saloon by any other person, to use or run in connection with such saloon in any manner or form whatever, any billiard table, pool table, or other table commonly used for gaming, bowling, tenpin alley, or any cards, dice, or other devices commonly used for gaming or playing

any game of chance. The penalty for violation of the law is a fine of from \$25 to \$100, forfeiture of license, and prohibition of renewed license for three years.

A quarantine law against Missouri horses and mules went into effect Feb. 6. It is like the Missouri law against Arkansas cattle, and is a retaliatory measure. Power is given by the act to the Commissioner of Mines, Manufactures, and Agriculture to extend or limit the operation of the act according as, in his judgment, the agricultural interests of the State require.

Other acts passed were:

For the construction of good roads.

To prevent disorderly conduct on legalized primary election days.

To protect conductors and other railroad employees: providing that any one who shall falsely report the men to their superior officers shall be deemed guilty of a misdemeanor, and fined not less than \$100 nor more than \$500, and be imprisoned in jail for six months.

To require railroads to carry bicycles as baggage.

To allow disabled and indigent ex-Confederate soldiers \$75 annually, whether they have families or not.

To amend the legalized primary election law.

Appropriating \$20,000 for county normal schools.

To tax barrel whisky houses in cities.

Allowing farmers to organize mutual fire insurance companies.

For the protection of railway passengers against imposition, fraud, and annoyance, providing a penalty of \$25 to \$50 for each offense.

Hon. James K. Jones was re-elected to the United States Senate. J. R. Sovereign was the candidate of the Populists, and Powell Clayton of the Republicans. The vote stood: Jones, 114; Sovereign, 9; Clayton, 3.

One incident of the session was the rejection of a resolution, offered Jan. 20, to restore a portrait of Washington to its former place over the Speaker's stand in the Hall of Representatives, from which it was taken six years ago to give place to a portrait of Jefferson Davis, and to place the latter on the left in the space now occupied by Washington's. Another was an excitement caused in the House, March 6; by the offering of a resolution to displace the portrait of Davis temporarily, and to substitute for it that of William J. Bryan during the latter's visit to Little Rock. There were loud cries of "No!" "Never!" "We'll never take Jeff Davis down!" and the like, and a motion to table the resolution prevailed without debate.

An important matter that came before the Legislature was that of the settlement of the debt of the State to the National Government. The origin and status of the claim are explained by Gov. Clarke as follows:

"For more than twenty years there has existed a troublesome and complicated dispute between the United States and the State of Arkansas, growing out of the ownership by the former of certain coupon bonds of the latter, and against which the latter asserted the right to offset an unliquidated claim for a failure upon the part of the former to patent to her a large quantity of land to which she became entitled under the act of Congress of Sept. 3, 1850, known as the swamp land grant, and various other acts. Under authority of acts of the General Assembly of 1889, and of the act of Congress of Aug. 4, 1894, the Governor, acting for the State of Arkansas, and the Secretaries of the Treasury and of the Interior, acting for the General Government, proceeded to consider these matters of difference, and on Feb. 23, 1895, concluded a settlement by which a balance of \$160,572 was, as

a final result, found to be due to the United States by the State of Arkansas.

"A bill to ratify the settlement was introduced into the Senate and House shortly after the agreement was signed, but consideration could not be obtained at the pending short session. At the regular session following bills for the same purpose were again promptly introduced. About this time Congress was flooded with anonymous circulars attacking the good name of the State and assailing in detail the fairness of the settlement so far as the interest of the United States was concerned. The leading newspapers of the country were also filled with a carefully prepared alleged *exposé* of a deliberate scheme upon the part of the State of Arkansas to rob the Smithsonian Institution of part of the funds provided by its founder to maintain it. After full debate, the Senate, by a large majority, passed the bill. After it reached the House it was, in the regular course, referred to the Committee on Public Lands. There the representatives of the Iron Mountain Railroad Company appeared to resist its passage. Their real purpose was, by exerting a pressure against the accomplishment of a thing very greatly desired by every interest of the State, to compel her, as the price of the forbearance of the lobby, to convey to the Iron Mountain Railroad Company and other railway companies title to 273,000 acres of land granted to the State by the swamp land grant of 1850. A majority of the committee recommended favorable action on the bill by the House only on condition that an amendment be adopted to the purport that the confirmation should not be effective unless the State should, within one year, release to the railway companies or their assigns all title or claim to the said 273,000 acres of land."

The compromise plan of settlement, including the amendments which, it is charged above, were obtained by the influence of the railroad, was agreed to by both houses of the Legislature, although Gov. Jones had given notice that he would veto the resolution if it were passed. The General Assembly adjourned without having passed any appropriation bills except those for payment of the legislative expenses, and for the county normal schools. The Senate rejected a resolution passed by the House extending the session to April 14. This made it necessary for the Governor to call an extraordinary session, which he did, naming April 26 as the date of opening.

The special session ended June 16. Fifty-one acts and three concurrent resolutions were passed. Among these were appropriations for expenses of the State government and for State institutions, and provisions for improvements of the levees. In view of the damage to property by drought and flood, the time for payment of taxes was extended, and the time for redemption of property forfeited for nonpayment was also extended one year. A joint committee was appointed to investigate the condition of sufferers by drought and flood. A $\frac{1}{4}$ -mill tax was provided for the payment of the interest on State bonds held by the permanent school fund.

Another attempt to secure a railroad commission was defeated. Three important acts concerning railroads were passed. One grants 500,000 acres of swamp lands to the Springfield, Little Rock and Gulf Company, on condition that it build 500 miles of road. The route is to be from Springfield, Mo., across Arkansas by way of Dardanelle and Little Rock, to Alexandria, La., and eventually to the Gulf. By another act, 40,000 acres of State lands are granted in aid of railroad construction westward from the Mississippi by way of Hamburg to Texarkana. The third measure is for the construc-

tion of State railroad and telegraph lines by convict labor. A State board is increased, which is to outline routes for roads and advertise for offers of money and other property. Whenever the sum of \$100,000 or its equivalent is subscribed for any one of the roads projected, the board may begin the construction, employing convicts.

Other measures were:

Concerning insolvency.

Providing for the purchase of a State convict farm.

Providing for improvement of public roads.

Appropriating \$55,000 for Confederate pensions.

Allowing State convicts to work on roads adjacent to convict camps.

Authorizing improvement district boards of cities and incorporated towns to mortgage waterworks and electric-light plants to secure payment of money borrowed, etc.

Amending the fish law.

Regulating the sale of native wine, and providing for a vote on the wine question in the counties.

To provide for payment of interest on the public debt.

ASSOCIATIONS FOR THE ADVANCEMENT OF SCIENCE. *American.*—The forty-sixth meeting of the American Association for the Advancement of Science was held in Detroit, Mich., during Aug. 9-14, 1897. The officers were: President, Oliver Wolcott Gibbs, Newport, R. I. Vice-presidents of the sections: A, Wooster W. Beman, Ann Arbor, Mich.; B, Carl Barus, Providence, R. I.;



OLIVER WOLCOTT GIBBS.

C, William P. Mason, Troy, N. Y.; D, John Galbraith, Toronto, Canada; E, Edward W. Claypole, Akron, Ohio; F, Leland O. Howard, Washington city; G, George F. Atkinson, Ithaca, N. Y.; H, W. J. McGee, Washington city; I, Richard T. Colburn, Elizabeth, N. J. Permanent secretary, Frederick W. Putnam, Cambridge, Mass. (office, Salem, Mass.). General secretary, Asaph Hall, Jr., Ann Arbor, Mich. Secretary of the council, David S. Kellcott, Columbus, Ohio. Secretaries of the sections: A, James McMahon, Ithaca, N. Y.; B, Frederick Bedell, Ithaca, N. Y.; C, Paul C. Freer, Ann Arbor, Mich.; D, John J. Flather, Lafayette, Ind.; E, C. H. Smyth, Jr., Clinton, N. Y.; F, Charles C. Nutting, Iowa City, Iowa; G, Frederick C. Newcomb, Ann Arbor, Mich.; H, Anita Newcomb McGee, Wash-

ington city; I, Archibald Blue, Toronto, Canada. Treasurer, Robert S. Woodward, New York city.

Opening Proceedings.—The usual regular preliminary meeting of the council with which the association begins its sessions was held in the Hotel Cadillac, which was the headquarters of the association, on Aug. 7, at noon. At this session the final details pertaining to the arrangements of the meetings were settled, and the reports of the local committees acted on. The names of 52 applicants for membership were then favorably considered. The general session with which the public meetings began was held in the auditorium of the Central High School at 10 A. M., Aug. 9. The meeting was called to order by Secretary Putnam, who, after referring to the death of President Cope, presented his successor, Prof. Gill, who promptly declared the meeting open, and then called to the chair the senior vice-president of the association present, Mr. W J McGee, who acted as presiding officer in the place of President Gibbs, who was unable to attend on account of illness. A short prayer was made by the Rev. Frank J. Van Antwerp, and then a tenor solo, "A Song of Thanksgiving," by Marshall Pease, followed. The Hon. William C. Maybury, Mayor of Detroit, then welcomed the association in a short but pleasant address, in the course of which he said: "We are a scientific city. There was formed here years ago a society by that good man Bela Hubbard out of which grew your organization which is now in session here. We are founded on science, and in this building for a place of meeting we offer you a temple of science which affords you an environment that must have its influence upon your work within its halls." He was followed by Hon. Thomas W. Palmer, former United States Senator for Michigan, who spoke more at length and offered for the consideration of the association the following apt definition of science. He referred to it as "a classification of phenomena so arranged that general principles may be reduced upon which rules of action may be established in particular cases." Mr. McGee replied to both addresses in fitting words, after which a duet, "Contentment," was rendered by Miss Mary L. Denison and Mr. Pease. The usual announcements then followed by the permanent, the general, and the local secretaries, and then Miss Denison sang "The Danza," at the close of which the meeting adjourned.

Address of the Retiring President.—Owing to the death of Edward D. Cope, the retiring president, on April 13, 1897, the council of the American Association designated the senior vice-president, Theodore N. Gill, of Washington city, to succeed to the presidency at the Detroit meeting. Prof. Gill was invited to present an address that should be descriptive of the work of Cope. As the scientific careers of Gill and Cope began simultaneously—that is, their first published contributions to science were accepted for publication on April 29, 1859, by the Academy of Natural Sciences in Philadelphia—and as they had been friends ever since, no more appropriate subject could have been chosen by Prof. Gill. The association convened to hear this address in the auditorium of the Central High School at 8 P. M. on Aug. 9. The title given to his address by Prof. Gill was "Edward Drinker Cope, Naturalist: A Chapter in the History of Science." After relating his own long friendship with Cope, as indicated above, he gave a brief biographical sketch of the more important events in the life of the deceased naturalist, and then considered successively his contributions to herpetology, ichthyology, mammalogy, and palæontology, after which he examined his philosophical views, especially those relating to evolution, closing with an attempt to forecast the position he is destined to enjoy in

the history of science. Of the first named he said: Cope, "found herpetology an art; he left it a science; he found it a device mainly for the naming of specimens; he left it the expression of the co-ordination of all structural features. The reforms he effected in the classification of the anurous amphibians and the saurian reptiles were especially notable." The ichthyological labors of Cope he described as "unusually valuable contributions to science, and the progress of ichthyology has been much accelerated, not only by these labors,



THEODORE N. GILL.

but by the investigations they challenge." Concerning his work on mammals, he said that "he always considered the old and new—the extinct and recent—forms together. He refused to be bound by consistency or by precedent, either set by himself or others. Fresh discoveries opened new vistas to him, and he modified his views from time to time, and as often as he received new evidence." Most of Cope's contributions to the science of palæontology were discussed by Prof. Gill in the various branches, as above enumerated, to which the fossils properly belonged, but he made reference to his publications on palæontology, and closed that section with these words: "The evolution of the various animal, and especially mammalian types, was also continually the subject of Cope's researches, and he attempted to trace the passage from those of the most ancient periods to those of later ones." Concerning his philosophical views, Prof. Gill said: "The transmission of acquired characters was one of the accepted and most cherished dogmas of Cope, and the belief in transmissibility of such characters is an essential of the creed of so many who have become his followers in America, that a special school came into existence known as the Neo-Lamarckian and also as the American school."

In closing, he compared Cope with Cuvier, Owen, and Huxley, and said: "Cope covered a field as extensive as any of the three. His knowledge of structural details of all the classes of vertebrates was probably more symmetrical than that of any of those with whom he is compared; his command of material was greater than that of any of the others; his industry was equal to Owen's; in the clearness of his conceptions he was equaled by Huxley alone; in the skill with which he weighed discovered facts, in the aptness of his presentation of those facts, and in the lucid methods by which the labor of the

student was saved, and the conception of the numerous propositions facilitated, he was unequalled. His logical ability may have been less than that of Huxley and possibly of Cuvier. He has been much blamed on account of the constant changes of his views, and because he was inconsistent. Unquestionably he did change his views very often. Doubtless some of those changes were necessitated by too great haste in formulation and too great rashness in publication. The freedom to change which he exercised, and which was exercised too little by at least one of his predecessors, was an offset to his rashness. He exercised a proper scientific spirit in refusing to be always consistent at the expense of truth."

Proceedings of the Sections.—The association is divided into 9 sections, each of which is presided over by an officer having the rank of vice-president of the association. Subsequent to the opening proceedings, each section meets by itself and effects its organization by electing a fellow to represent it in the council, a sectional committee of 3 fellows, a fellow or member to the nominating committee, and a committee of 3 members or fellows to nominate officers of the section for the next meeting. As soon as this organization is effected the secretary of the section reports to the general secretary, who then provides him with a list of papers that, having been considered suitable by the council, may be read and discussed before the section. A press secretary, whose duties are to prepare abstracts of the papers read, and to give them to reporters of newspapers, is also commonly chosen.

A. Mathematics and Astronomy.—This section was presided over by Prof. Wooster W. Beman, who fills the chair of Mathematics in the University of Michigan, Ann Arbor. The subject of his address was "A Chapter in the History of Mathematics." It was a sketch of the development of the geometric treatment of the imaginary, particularly in the latter part of the eighteenth and the first part of the nineteenth centuries. The speaker referred, in opening, to the fact that the square root of a negative quantity appeared for the first time in the "Stereometria" of Heron of Alexandria, B.C. 100. From this date the development of the use of the square root applied to a negative number was briefly traced through several centuries, accompanied by quotations and arguments from the various writers who attempted the problem. He devoted much attention to the memoir by Caspar Wessel, entitled, "An Essay on the Analytic Representation of Direction, with Applications in Particular to the Determination of Plane and Spherical Polygons," which was published in 1797, claiming for it that it was the first clear, accurate, and scientific treatment of directed lines in the same plane. He referred to the later works of Buée, Argand, and Warren, and closed with: "Such were the beginnings of the study of the geometric representation of the imaginary, which has led in modern times to the establishment of such great bodies of doctrine as the theory of functions on the one side and quaternions on the other, with the *Ausdehnungslehre* occupying a position between. Who can tell what the next century may bring forth?"

The following-named papers were read and discussed before the section: "A Problem in Substitution Groups," by George A. Miller; "Continuous Groups of Spherical Transformations in Space," by Henry B. Newson; "Commutative Matrices," by James B. Shaw; "On the Theory of the Quadratic Equation," by Alexander Macfarlane; "Condition that the Line common to $n-1$ Planes in an n -Space may lie on a Given Quadraic Surface in the Same Space," by Virgil Snyder; "The Psychology of the Personal Equation," by Truman H. Safford; "Com-

pound Determinants," by William H. Metzler; "Waters within the Earth," by William S. Auchincloss; "On the Secular Motion of the Earth's Magnetic Axis" and "Simple Expressions for the Diurnal Range of the Magnetic Declination and of the Magnetic Inclination," by Louis A. Bauer; "The Theory of Perturbations and Lie's Theory of Contact Transformations," by E. O. Lovett; "On Rational Right Triangles, No. I," by Artemus Martin; "Some Results in Integration expressed by the Elliptic Integrals," by James McMahon; "Modification of the Eulerian Cycle due to Inequality of the Equatorial Moments of Inertia of the Earth" and "Integration of the Equations of Rotation of a Nonrigid Mass for the Case of Equal Principal Moments of Inertia," by Robert S. Woodward; "General Theorems concerning a Certain Class of Functions deduced from the Properties of the Newtonian Potential Function," by James W. Glover; "The Importance of adopting Standard Systems of Notation and Co-ordinates in Mathematics and Physics," by Frank H. Bigelow; "Stereoscopic Views of Spherical Catenaries and Gyroscopic Curves," by Alfred G. Greenhill; and "A Remarkable Complete Quadrilateral among the Pascal Lines of an Inscribed Six-Point of a Conic," by R. Daniel Bohannan.

On Aug. 12 a joint meeting of Sections A and B was held, at which the following papers were read: "On the Electrostatic Capacity of a Two-Wire Cable," by George W. Patterson, Jr.; "Screening Effects of Induced Currents in Solid Magnetic Bodies in an Alternating Field," by Charles P. Steinmetz; "The Treatment of Differential Equations by Approximate Methods," by William F. Durand; and "A New Method of solving Certain Differential Equations that occur in Mathematical Physics," by Alexander Macfarlane.

B. Physics.—The presiding officer of this section was Prof. Carl Barus, who fills the chair of Physics in Brown University. His inaugural address was on "Long-Range Temperature and Pressure Variables in Physics." He began by giving a history of the various attempts to provide suitable apparatus for high-temperature measurement. Fusion first played an important part in the manufacture of thermoscopes, and later those instruments based on specific heat showed an advantage over the fusion instruments. The gas thermometer was referred to as the only fruitful method of absolute pyrometry. The speaker dwelt at length on high-temperature work, the first thorough-going instance of which was by Prinsep in 1829. Then the experiments down to 1887 were considered in detail, and the conclusion reached that the data furnished by the Reichsanstalt will eventually be standard. "For the present," he said, "I should be more impressed by some sterling novelty either in the direction of a larger range of measurement or of method. Conceding that an accuracy of 5° at $1,000^\circ$ has been reached, all results above $1,500^\circ$ remain none the less subject to increasingly hazardous surmise." Turning to the applications of pyrometry, he referred to the variation of metallic ebullition with pressure. Results already attained show an effect of pressure regularly more marked as the normal boiling point is higher. Igneous fusion was considered in its relation to pressure and with regard to the solidity of the earth, and the inference was drawn that the interior solidity of the earth, now generally admitted, is due only to superincumbent pressure, withholding fusion. The question of heat conduction was next taken up, and the results deduced by various writers as to the age of the earth discussed. High-pressure measurement was lengthily dealt with. Passing from this subject, the entropy of liquids was considered. "This subject is only in its infancy," he said, "and

only a year ago were any results of a satisfactory nature obtained." The paper ended with a reference to isothermals and several kindred subjects.

The following-named papers were read and discussed before the section: "The Design, Construction, and Test of a 1,250 Watt Transformer," by Henry S. Carhart; "Electrolytic Action in a Condenser," by Karl E. Guthe; "The Magnetic Survey of Maryland," by Louis A. Bauer; "The Transmission of Radiant Heat by Gases at Varying Pressures" and "The Measurements of Small Gaseous Pressures," by Charles F. Brush; "On the Rate at which Hot Glass absorbs Superheated Water" and "A Method of obtaining Capillary Canals of Specific Diameter," by Carl Barus; "A New Method of determining the Specific Heats of Liquids," by Robert L. Litch; "On the Coefficient of Expansion of Certain Gases," by Edward W. Morley and Dayton C. Miller; "The Effect of Heat on the Elastic Limit and Ultimate Strength of Copper Wire," by Frank P. Whitman and Mary C. Noyes; "Kites and their Use by the Weather Bureau in Explorations of the Upper Air," by Charles F. Marvin; "Experiments upon the Acetylene-Oxygen Standard of Light," by Clayton H. Sharp; "Arc Spectra," by Arthur L. Foley; "On the Brightness of Pigmented Surfaces under Various Sources of Illumination," by Frank P. Whitman; "Note on the Construction of a Sensitive Radiometer," by Ernest F. Nichols; "Photographs of Manometric Flames," by Edward L. Nichols and Ernest Merritt; "The Discharge of Electrified Bodies by X-Rays," by Clement D. Child; "A Final Determination of the Relative Lengths of the Imperial Yard of Great Britain and the Meter of the Archives," by William A. Rogers; "An Electrical Thermostat," by Willis R. Whitney; "An Apparatus for Testing the Law of Conservation of Energy in the Human Body," by Wilbur O. Atwater and Edward B. Rosa; "The Electric Conductivity of Certain Specimens of Sheet Glass, with Reference to their Fitness for Use in Static Generators," by Dayton C. Miller; "Graphical Treatment of Alternating Currents in Branch Circuits in Case of Variable Frequency," by Henry T. Eddy; "On Simple Nonalternating Currents," by Alexander Macfarlane; "Exhibition of Instruments for determining the Frequency of an Alternating Current," by George S. Moler and Frederick Bedell; "The Predetermination of Transformer Regulation," by Frederick Bedell, Richard E. Chandler, and R. H. Sherwood, Jr.; "The Effect of Pressure on the Wave Lengths of the Lines of the Emission Spectra of the Elements," by W. J. Humphreys; "A New Form of Coal Calorimeter," by Charles L. Norton; "Notes on the Recent History of Musical Pitch in the United States," by Charles R. Cross; "A New Form of Harmonic Analyzer," by Frank A. Laws; "The Determination of the Surface Tension of Water and of Certain Aqueous Solutions by Means of the Method of Ripples," by N. Ernest Dorsey; "The Series of International Cloud Observations made by the United States Weather Bureau and their Relation to Meteorological Problems," by Frank H. Bigelow; "The Effects of Tension and Quality of the Metal upon the Changes in Length produced in Iron Wires by Magnetization," by Byron B. Brackett; "Electrical Resonance and Dielectric Hysteresis," by Edward B. Rosa and Arthur W. Smith; "A Method of the Determination of the Period of Electrical Oscillations and Other Applications of the same," by Margaret E. Moltby; "The Influence of Time and Temperature upon the Absolute Rigidity of Quartz Fibers," by Samuel J. Barnett; and "On the Methods of Measuring Mean Horizontal Candle Power," by C. P. Matthews.

C. *Chemistry*.—Prof. William P. Mason, who occupies the chair of Chemistry in the Rensselaer

Polytechnic Institute of Troy, N. Y., presided over this section. His subject was on "Expert Testimony." This address not only covered the entire ground from the standpoint of practical experience, looking at the question both through the eyes of the lawyer and the expert, but was also a compact syllabus, pointing out the province of the expert, reviewing errors that he might be subject to, and suggesting the solution for numerous difficulties. Concerning the duties of an expert, he said: "It is a fatal error to know too much, and a pit into which the expert may fall is prepared for him by questions leading him to venture an opinion upon matters outside of his specialty. Terse, clear answers, well within the narrow path leading to the point in question is the only safe way, and when the line of inquiry crosses into regions where the witness feels himself unsafe his proper course is to refuse to answer. Unfortunately, the expert is often invited to take these collateral flights by the side employing him, as well as by the opposition. An expert, especially in early cases, is sure to have authorities quoted against him, so it behooves him to be familiar with the literature of the subject, so as to be able to point out that such and such a writer is not up to date, or that, if the entire passage is quoted in full, it would not carry the adverse construction that its partial presentation carries." In conclusion, he said: "The expert witness should be absolutely truthful; of course that is assumed, but beyond that he should be clear and terse in his statements, homely and apt in his illustrations, incapable of being led beyond the field in which he is truly an expert, and as fearless of legitimate ignorance as he is fearful of illegitimate knowledge. Mounting the witness stand with these principles as his guide, he may be assured of stepping down again with credit to himself and to the profession he represents."

This section met in conjunction with the American Chemical Society, many of whose members were also members of the chemical section of the American Association. The papers presented to either organization were grouped under seven heads and were presented before subsections as follows: Organic chemistry, presided over by Albert B. Prescott; inorganic chemistry, presided over by William A. Noyes; analytical chemistry, presided over by Louis M. Dennis; agricultural chemistry, presided over by Harvey W. Wiley; industrial chemistry, presided over by William McMurtrie; physical chemistry, presided over by Arthur A. Noyes; and physiological chemistry, presided over by Harvey W. Wiley.

The following-named papers were read and discussed before the section: "Alkyl Bismuth Iodides" and "Kola Tannin," by Albert B. Prescott; "The Chemistry of Methylene," by John U. Nef; "On the Action of Sodium on Methylpropylketone and on Acetophenone" and "On the Constitution of some Hydrazones," by Paul C. Freer; "The Decomposition of Heptane and Octane at High Temperatures," by Arthur W. Burwell; "Derivatives of Eugenol," by F. J. Pond and F. F. Beers; "Determination of the Volatility of Phosphorus Pentoxide," by Edward W. Morley; "Recent Progress in Analytical Chemistry" and "A New Form of Discharger for Spark Spectra of Solutions," by Louis M. Dennis; "Qualitative Analysis: A Point in Teaching that was not a Full Success," by Arthur L. Green; "A New Color Standard for Use in Water Analysis" and "Contributions from the Laboratory of Water Analysis, Massachusetts Institute of Technology," by Ellen H. Richards; "A Comparison of Methods for determining Carbon Dioxide and Carbon Monoxide," by Louis M. Dennis and C. G. Edgar; "A Preliminary Thermo-Chem-

ical Study of Iron and Steel," by Edward D. Campbell and Firman Thompson; "Further Study on the Influence of Heat Treatment and Carbon upon the Solubility of Phosphorus in Steel," by Edward D. Campbell and S. C. Babcock; "The Chemical Composition of Cement Plaster," by Edgar H. S. Bailey; "The Decomposition of Halogen-Substituted Acetic Acids by Water," by E. A. De Bar; "On the Determination of Fat and Casein in Feces," by Herman Poole; "On Reactions between Mercury and Concentrated Sulphuric Acid," by Charles Baskerville and F. W. Miller; "Apparatus for Photometric Determination of Humic and Sulphuric Acids," by J. I. D. Hinds; "Position in the Periodic Law of the Important Elements found in Plant and Animal Bodies," by Harry Snyder; "On Solutions of Silicates of the Alkalies," by Louis Kahlenberg and A. T. Lincoln; "The Electrical Conductivity and Electrolysis of Certain Substances dissolved in Liquid Ammonia," by Hamilton P. Cady and Edgar H. S. Bailey; "The Rate of Solution of Solid Substances in their own Solutions," by Arthur A. Noyes and Willis R. Whitney; "The Stereometric Measurement of the Velocity of a Reaction," by Willis R. Whitney; "Some Contributions to Methods of Testing Flour," by Robert C. Kedzie; "Distillation in General," by Leon Labonde; "An Electrical Laboratory Stove," by M. D. Sohn; "Recent Progress in Agricultural Chemistry," by Harvey W. Wiley; "Calculations of Calorimetric Equivalents of Agricultural Products from Chemical Analysis," by Harvey W. Wiley and Willard D. Bigelow; "On the Solubility of Pentosans," by William H. Krug and Harvey W. Wiley; "Detection of Foreign Fats in Butter and Lard," by C. B. Cochran; "The Action of Certain Bodies on the Digestive Ferments," by Frank D. Simons; "The Bacteriological Products of Hog Cholera and Swine Plague," by Emil A. De Schweinitz; "Recent Progress in Industrial Chemistry," by William McMurtrie; "Annual Report on Indexing Chemical Literature," by Henry C. Bolton; and "A Continuously Revised Compendium of Chemistry," by Ervin E. Ewell.

D. *Mechanical Science and Engineering.*—Over this section Prof. John Galbraith, of Toronto, Canada, presided, and he discussed "The Groundwork of Dynamics" in his address. In opening he said that "the subject of dynamics is too often treated as if it were a department of applied mathematics rather than of mechanical science. It is necessary that the student of dynamics should know something of mathematics. It is not required of him to be an expert in refined mathematical analysis, but he should possess in some degree the mechanical instinct." The speaker then gave a history of dynamics from the day when the experiments were carried on with the rudest machinery down to the present time. His closing remarks were descriptive of the status of the science of dynamics as it is understood at the present time. He said it "includes among its fundamental principles, in addition to the law of motion, the principle of the equivalence of work and energy and the principle of the conservation of energy, energy being measured, however, only in terms of force and displacement, or momentum and velocity. The only actions known in dynamics are force and its integrals—impulse and work. To identify with these all the other actions involving the transfer and transformation of energy—such as the conduction of heat, chemical reactions, induction of electric currents, etc.—forms to-day the severest task of mathematical physics."

The following-named papers were read and discussed before the section: "Development of Engineering Industries by Scientific Research," by

William S. Aldrich; "The Cement Laboratory as a Field for Investigation," by Frank P. Spalding; "The Effect of Spark Losses on the Efficiency of Locomotives," by William F. M. Goss; "A New Apparatus for Testing Indicator Springs," by Mortimer E. Cooley; "Flue Gas Analysis in Boiler Tests," by Daniel S. Jacobus; "Effect of Temperature on the Strength of Steel" and "The Properties of Aluminium Alloys," by Rolla C. Carpenter; "Analysis of Composite, Concrete, and Iron Beams" and "Definition of Elastic Limit for Practical Purposes," by John P. Johnson; "Theories of Some Planimeters without the Aid of Calculus," by Forrest R. Jones; "The Production of X-Rays by Means of the Planté Accumulator, in which Voltage is chiefly concerned, the Effect of Current being largely eliminated," by William A. Rogers; "A Universal Alternator for Laboratory Purposes," by Henry S. Carhart; "Calculation of the Energy Loss in Armature Cores," by W. E. Goldsborough; "A New Formula for determining the Width of Leather Belting" and "A Graphical Solution of Belting Problems," by John J. Flather; "On Engineering Conditions connected with the mounting of Instruments used on Eclipse Expeditions," by David P. Todd; and "On a Machine for measuring Friction under Heavy Pressures," by T. Gray.

E. *Geology and Geography.*—The presiding officer elected for this section was Prof. Israel C. White, of the University of West Virginia, who was absent from the country, having gone to Russia to attend the International Congress of Geologists, and therefore Prof. Edward W. Claypole, of Buchtel College, Akron, Ohio, was nominated by the council to preside. The address of Prof. White, however, on "The Pittsburgh Coal Bed" was read before the section by Prof. Herman L. Fairfield. The age, area, and structure of this formation were carefully gone over, and the geological elements and features of the great Appalachian coal field elaborated in the hope, as the author said, "of emphasizing the necessity and importance of observing the smaller details of stratigraphy more closely." Prof. White criticised the United States Geological Survey for entertaining the theory that no coal bed can be certainly identified beyond the area of its continuous outcrop. This, he claimed, gives a local name to every isolated area, thus adding greatly to the burden of geological nomenclature, a fault of geologists everywhere. He urged a reform in the methods of work which led to such undesirable results.

During the sessions on Tuesday, Aug. 10, and Wednesday, Aug. 11, the Geological Society of America met with this section, during which time papers presented before that body only were read. Subsequently the following-named papers were read and discussed before the section: "Stylolites," by Thomas C. Hopkins; "A Suggestion in regard to the Theory of Volcanoes," by William N. Rice; "The Ores and Minerals of Cripple Creek, Colorado," by F. D. Smythe and H. P. Parmelee; "Observations on the Genus *Barrettia*," by Robert P. Whitfield; "An Account of the Researches relating to the Great Lakes," by John W. Spencer; "Lake Chicago and the Chicago Outlet," by Frank Leverett; "The Lower Abandoned Beaches of Southeastern Michigan" and "Some Features of the Recent Geology around Detroit," by Frank B. Taylor; "Recent Earth Movement in the Great Lake Region," by Grove K. Gilbert; "Preglacial Topography and Drainage of Central Western New York," by Herman L. Fairchild; "Progress of Hydrographic Investigations by the United States Geological Survey," by Frank H. Newell; "The Lower Carboniferous of Huron County, Michigan," by A. C. Lane; "The Geological Age and Fauna

of the Huerfano Basin in Southern Colorado," by Henry F. Osborn; "A Supplementary Hypothesis respecting the Origin of the American Loess," by Thomas C. Chamberlain; and "Ice Jams and what they accomplish in Geology," by Major A. Veeder.

F. Zoölogy.—This section was presided over by Dr. Leland O. Howard, entomologist of the Department of Agriculture, Washington city, who had been nominated by the council to fill the vacancy caused by the death of Dr. G. Brown Goode. Dr. Howard spoke on "The Spread of Species by the Agency of Man, with Special Reference to Insects." He showed that natural spread was for centuries the rule, but that with the improvement of commercial intercourse between nations the agency of man has become predominating. He spoke of the international introduction of useful plants from foreign countries, and of the occasional introduction of flowering species which escape from cultivation and became weeds. The intentional introduction of wild animals has generally been disastrous. He instanced the introduction of the English sparrow, of the Indian mongoose into Jamaica, of the flying foxes from Australia into California, of the gypsy moth from Europe into North America. Accidental introductions have been more powerful in extending the range of species and in changing the character of the plants and animals of given regions than intentional introductions. The era of accidental importations began with the beginning of commerce and has grown with the growth of commerce. The vast extensions of international trade of recent years, every improvement in rapidity of travel and in safety of carriage of goods of all kinds, have increased the opportunities of accidental introductions, until at the present time there is hardly a civilized country which has not firmly established and flourishing within its territory hundreds of species of animals and plants of foreign origin, the time and means of introduction of many of which can not be exactly traced, while of others even the original home can not be ascertained, so widespread has their distribution become.

The following-named papers were read and discussed before this section: "On the Relationships of the Nematognaths," by Theodore Gill; "On a Collection of Cephalopoda from the 'Albatross' Expedition," by William E. Hoyle; "On the Characters of the Brains of Nematognaths and Plectospondyls," by Benjamin T. Kingsbury; "The Insect Fauna of *Cereus giganteus*," by Henry G. Hubbard; "On the Sarcostyles of the Plumularidæ," by Charles C. Nutting; "A Study of the Development of *Drasteria erecta*" and "Brood XVI of *Cicada septendecim*," by Francis M. Webster; "Notes on the Embryology of the Pig" and "Harvard Embryological Collection," by Charles S. Minot; "Geological Distribution of the Golden Warblers," by Harry F. Oberholser; "On the Malodorous Carabid, *Nomius pygmæus*," by Walter B. Barrows; "Remarks on the Distribution of Scale Insect Parasites," "A Valuable Coccid," "Temperature Experiments as affecting the Received Ideas on the Hibernation of Injurious Insects," and "Additional Observations on the Parasites of *Orgyia leucostigma*," by Leland O. Howard; "Characters for distinguishing the North American Species of *Ceresa*," by William H. Ashmead; "The Peach Twig Borer (*Anarsia lineatella*)," by Charles L. Marlatt; "A Successful Lantern Trap" and "Vernacular Names of Insects," by Charles P. Gillett; "On the Preparation and Use of Arsenate of Lead as an Insecticide," by Philip H. Rolfs; "Insects of the Year," by Francis M. Webster and C. W. Malley; "Reconstruction of *Phenacodus primævus*, the Most Primitive Ungulate," "Homologies and

Nomenclature of the Elements of the Molar Teeth," "Modification and Variation, and the Limits of Organic Selection," and "Skeltons and Restorations of Tertiary Mammalia," by Henry F. Osborn. Also a joint session of Sections F and G was held on Aug. 11, when a discussion was held on "Organic Selection," in which Henry F. Osborn and Edward B. Poulton were the chief participants.

G. Botany.—The presiding officer of this section was Prof. George F. Atkinson, of Cornell University, Ithaca, N. Y. His address was on "Experimental Morphology." He discussed the various points of view held by different authorities during the last one hundred and fifty years, and claimed that the leading idea in the study of morphology held by these authorities during this period was the inductive method for the purpose of discerning fundamental principles and laws, not simply the establishment of individual facts, which was especially characteristic of the earlier period when the dogma of the constancy of species prevailed. Other points of view were considered and the speaker gradually worked his way up to the proposition as to whether a new period in the study of comparative morphology had not been entered on. Then passing direct to the subject of his address, he referred to experimental morphology as including in its broadest sense the domain of cellular morphology and the changes resulting from the directive or taxis forces accompanying growth, but it was rather to experimental morphology as applied to the interpretation of the modes of progress followed by members and organs in attaining their morphologic individuality in the tracing of homologies, in the relation of members associated by antagonistic or correlative forces, the dependence of diversity of function in homologous members on external and internal forces, as well as the course which determines the character of certain paternal or maternal structures, that he discussed, and perhaps even more restrictedly the experimental evidences touching the relation of the members of the plant, as expressed in the metamorphosis theory of the idealistic morphology, which subject the speaker then discussed very fully and elaborately, giving numerous illustrations to emphasize his ideas, taken from recent investigations by prominent botanists published within the last ten years.

The following-named papers were read and discussed before the section: "Changes during Winter in the Perithecia and Ascospores of Certain Erysipheæ" and "The Erysipheæ of North America: A Preliminary Account of the Distribution of the Species," by Benjamin T. Galloway; "Some Contributions to the Life History of *Hæmatococcus*," by Lewis R. Jones; "'Bacteriosis' of Carnations," by Albert F. Woods; "Wakker's Hyacinth Bacterium," "Description of *Bacillus phaseoli*, New Species, with Some Remarks on Related Species," and "On the Nature of Certain Pigments produced by Fungi and Bacteria, with Special Reference to that produced by *Bacillus solanacearum*," by Erwin F. Smith; "Notes on Jamaica," by Douglas H. Campbell; "Notes on Some New Genera of Fungi" and "Comparison of the Pollen of *Pinus*, *Taxus*, and *Peltandra*," by George F. Atkinson; "Reproductive Organs and Embryology of *Drosera*," by Clayton A. Peters; "Development of Some Seed Coats," by Julius O. Schlotterbeck; "Morphology of the Flower of *Asclepias Cornuti*," by Fanny E. Langdon; "Report upon the Progress of the Botanical Survey of Nebraska," "Are the Trees receding from the Nebraska Plains?" and "Some Characteristics of the Foothill Vegetation of Western Nebraska," by Charles E. Bessey; "On the Distribution of Starch in Woody Stems," by Bohumil Shimek; "Mechanism of Root Curva-

ture," by J. B. Pollock; "Trillium grandiflorum (Michx.) Salisb.: Its Variations, Normal and Teratological," by Charles A. Davis; "Contributions on Wild and Cultivated Roses of Wisconsin and Bordering States," by J. H. Schuette; "A Discussion of the Structural Characters of the Order Pezizineæ of Schroeter," by Elias J. Durand; "The Taxonomic Value of Fruit Characters in the Genus *Galium*," by Karl M. Wiegand; "The Toxic Action of Phenols on Plants," by Rodney H. True and C. G. Hunkel; "Cellulose Ferment," by Frederick C. Newcombe; "Is the Characteristic Acridity of Certain Species of the Arum Family a Mechanical or a Physiological Property or Effect?" by Charles P. Hart; "How Plants flee from their Enemies," by William J. Beal; "Movements of *Phyllanthus*," by Daniel T. MacDougal; "Stomata on the Bud Scales of *Abies pectinata*," "Comparative Anatomy of the Normal and Diseased Organs of *Abies Balsamea* (L) Miller, affected with *Æcidium elatinum* (Alb. et Schwein.)," and "On a New and Improved Self-Registering Balance," by Alexander P. Anderson; "The Correlation of Growth under the Influence of Injuries," by Charles O. Townsend; and "The Botanical Collection of the Cornell Arctic Expedition of 1896," by W. W. Rowlee and Karl M. Wiegand.

H. Anthropology.—The presiding officer of this section was Mr. W J McGee, of the Bureau of American Ethnology, Washington city. The secretary originally elected for this section was Harlan I. Smith, of New York city, but as he was unable to be present, Dr. Anita N. McGee was chosen to fill the vacancy. Mr. McGee addressed the section on "The Science of Humanity." After discussing the views of students and the definitions of lexieographers, humanity was defined as (1) attributes or characteristics confined to human beings, comprising (a) the condition or quality of being human—i. e., of acting, feeling, and thinking after the manner of human beings, (b) the character of being humane, and (c) the character of being well-bred; (2) mankind collectively; (3) secular learning and literature. "The supreme importance of humanity as thus defined is indicated by the fact that it is the foremost subject-matter of thought and speech and literature among all peoples, its prominence increasing from savagery through barbarism and civilization and culminating in enlightenment. Just as living things rise above the mineral world by the possession of vitality, and as animals rise above plants by the possession of motility, so do human beings rise above all other things by the possession of specific attributes rooting in mentality and maturing in the complex activities of collective life; or just as inorganic matter is the basis for the essentially distinct organic existence, so organic matter and processes form the basis for the essentially distinct superorganic activities of human existence." The development of knowledge in general was so set forth as to indicate the scientific method, and the growth of exact knowledge was indicated by a review in which it was shown that science has progressed from the rare to the common, from the remote to the near, from the abnormal to the normal, from the merely qualitative to the quantitative, from the material aspect to the physical aspect, and from primitive faith in fixity to living realization of causal succession. Turning specially to man, it was shown that scientific study began with abnormal aspects and conditions of the human body and developed into a science of the body frequently called somatology; that scientific study, shaped largely by the methods of biology, extended to the races of men or ethnology, and that during recent years research has been concentrated on the human brain and its operations through the mod-

ern science of psychology. Noting that these branches of knowledge pertain to the animal side of man, it was shown that human handiwork next received scientific scrutiny, that the science of archaeology was based on them, and that archaeology and ethnology were long regarded as constituting the whole of anthropology. "At first the products of ancient and alien handiwork were accepted at their token value, much like the chemie elements before Avogadro, the planetary movements before Newton, our sun and others before the doctrine of the persistence of motion, the organic species before Darwin; but within a generation or two it has come to be realized that they possess an innate value as exponents of intellectual activity—as ideals of human creation, collectively attesting the birth and growth of discovery and invention, design and motive, and all other human faculties. . . . When the anthropologist first saw in the implement of shell or stone an index to the mental operations of the implement maker hardly less definite than the written page to the thought of the writer, the science of man rose to a higher plane with a bound comparable to those marking great epochs in the development of the other sciences." Then the activities were classified, and serve to define five sciences of humanity—viz., the fine arts or aesthetics, giving basis for æstheticology; industries, forming the object matter of technology; organizations or institutions, affording foundation for sociology; language and literature, with their science of philology; and the great plasma of knowledge, forming the object matter of sophiology. These five sciences are sometimes combined under the term demonomy, in contradistinction from physical anthropology; and this system of organized knowledge concerning wholly human things is designated the greater science of humanity.

The following-named papers were read and discussed before the section: "Prehistoric Implements from Charlevoix, Michigan," by H. P. Parmelee; "An Archaeological Map of Ohio," by Warren K. Morehead; "The Right of Adoption as practiced by the Osage Tribe" and "The Import of the Totem: A Study of the Omaha Tribe," by Alice Fletcher; "Micmac Mortuary Customs," by Stansbury Hagar; "Recent Researches, by George Byron Gordon, on the Banks of the Ullva River in Honduras, for the Peabody Museum" and "The Jesup Expedition and the Asiatic-American Problem," by Frederic W. Putnam; "The Tagbanuas of the Philippines," and "The Mangyan of the Philippines," by Dean C. Worcester; "The Significance of John Eliot's Natick," by William W. Tooker; "A Description of an Ancient Skeleton found in Adobe Deposits in the Valley of Mexico" and "Anthropologic Work of New York State Pathological Institute," by A. Hrdlicka; "The Ethnologic Arrangement of Archaeologic Material" and "Popular Anthropology in Museums," by Harlan I. Smith; "An Experimental Analysis of the Relations of Rate of Movement to Certain Other Mental and Physical Processes," by Lightner Witmer; "A Statistical Study of Eminent Men," by J. McKeen Cattell; "A Case of Trepanning in Northwestern Mexico," by Carl Lumholtz; "Decoration of the Teeth in Ancient America," by Marshall H. Saville; "The Artificialization of Animals and Plants," by Otis T. Mason; "The Origin of Art as manifested in the Work of Prehistoric Man," by Thomas Wilson; "The Superstitions, Beliefs, and Practices of the Ancient Mexicans," by Zelia Nuttall; "The Study of Ceremony," by Washington Matthews; "Koreshanity: A Latter-day Cult," by Anita N. McGee; "The Serpent Symbol in Nicaragua and Yucatan" and "Comparison of Cherokee and European Symbolism," by Stephen D. Peet; "Origin of the Week and Holy Day among Primi-

tive Peoples," by Robert J. Floody; "Surveys of Ancient Cities in Mexico," by William H. Holmes; "An Ancient Figure of Terra Cotta from the Valley of Mexico," by Marshall H. Saville.

On the afternoon of Aug. 11 this section met in joint session with Section E, when the following papers were read and discussed: "The Geographical Distribution of a Certain Kind of Pottery in Mexico and Central America," by Marshall H. Saville; "Early Man of the Delaware Valley," by Frederick W. Putnam; "On the Implement-bearing Sand Deposits at Trenton, N. J.," by H. B. Kummel; "Discussion of the Relics from the Sand Deposits on the Lalor Farm," by George F. Wright; "Archæological Researches in the Trenton Gravels," by William H. Holmes; "Report of an Examination of the Trenches dug on the Lalor Farm, July 25-29," by Henry C. Mercer; "Investigation in the Land Deposits of the Lalor Field," by Thomas Wilson; "Geologic Age of the Relic-bearing Deposits at Trenton, N. J.," by Rollin D. Salisbury; and "Genesis of Implement Making," by Frank H. Cushing.

I. *Economic Science and Statistics.*—The presiding officer of this section was Richard T. Colburn, of Elizabeth, N. J., who chose as the subject of his address "Im provident Civilization." At the outset he said: "When we speak of value, equivalency, wealth, risk, trust, distrust, panic, prosperity, we are dealing not with concrete substances like gold pieces, but with states of mind; yet these ideas lie at the foundation of commercial exchanges and monetary science. Have any of you ever imagined what would happen if some modern Rosierucian should succeed in the turning of base metals cheaply into gold? No one can maintain that this is impossible." Then describing the conditions that would be likely to ensue and making the fact very clear that the present monetary standard was by no manner of means a fixed one, he asked the question, "Shall we have to wait for such an accident for the settlement of a monetary system?" "Our present civilization," he said, "is apt to be lopsided; its contour is asymmetrical; it is not abreast of the knowledge of the time, and is not yielding to mankind nearly the amount of comfort and well-being it might be made to do. From a great number of social ills and shortcomings, due chiefly to this overlapping of the race upon its adult stages, I select a few of the more serious, which will require many centuries to correct themselves in order to raise the inquiry among you whether it is not within the compass of human endeavor to accelerate a better state, not merely to gratify an altruistic impulse, nor yet in fulfillment of ethical ideals, but as a deliberate choice of diverging policies." The waste of war and constant preparation for war was cited as "a malign heritage that has haunted mankind as far back as can be traced." Continuing, he said: "The abstraction of numbers by warfare and privations of army life do not account for the decline and degradation of the great empires of the past. Is there a natural term of life for races, as for individuals—a cycle of growth, maturity, and senility?" He contended that there was a well-founded suspicion that what is now happening to France will, in due time, happen to other nations from the same causes. "Is the fate of Rome, Carthage, Venice, Thebes to be repeated?" The subjects of pernicious competition, spendthrift, luxury, the blight of parasitism, and the rôle of superstitions were discussed at length. In closing, he said: "The decay of faith and the crumbling of dogma, already giving anxiety to thoughtful men within the ecclesiastical pale, is giving rise to the question, 'What is to become of morality when its supernatural sanction is lost?'"

The following-named papers were read and discussed before the section: "Civil-Service Reform: (1) Conflict with the Spoil System in the State of New York; (2) Relation of the System to the Question of the State and Municipal Ownership of Quasi-Public Works," by William H. Hale; "The Economic Position of Women" and "The Competition of Gratuitous Workers," by Mary Forster; "Labor Restrictions as Potent Factors in Social Evolution," by Charles P. Hart; "Racial Determination: The Increase of Suicide," by Lawrence Irwell; "Wheat Consumption in the United States," by Henry Farquhar; "The True Meaning of the Sugar Schedule of the New Tariff," by Harvey W. Wiley; "The United States Idea of Laying out the Public Lands and the Evils resulting therefrom," by Bolton W. DeCourcy; "Contributions to the Development of Meteorology by the Smithsonian Institution," by Marcus Benjamin; "The Promotion of Agricultural Science," by I. P. Roberts; "Weights of Bees, and the Loads they carry," by Charles P. Gillette; "Annual Growth of Forest Trees," by William R. Lazenby; "The Municipal System of Ontario," by Charles C. James; and "A Note on the Silver Question," by Archibald Blue.

Popular Features.—Subsequent to the delivery of the presidential address on the evening of Aug. 9, an informal reception was given by the citizens of Detroit in the rooms of the Central High School, and on Aug. 13 a social reunion and reception was given by the Ladies' Reception Committee. Special excursions were made by the chemical section to the works of Frederick Stearns & Co. and Parke, Davis & Co., on Aug. 11, and by the botanical section to the hothouses of Thomas Berry at Grosse Pointe on Aug. 12, while also on Aug. 12 a large delegation of the association visited the water-works in response to a special invitation sent them by the commissioners. For each of these excursions special cars were provided and the visitors were entertained with refreshments. The great excursion of the meeting was made on Aug. 14, when the local committee provided a steamboat and conducted the association on a water trip through the United States Ship Canal in Lake St. Clair Flats, and through the many islets which have been reclaimed from the shallows of that body of water.

Affiliated Organizations.—Other scientific associations, taking advantage of the gathering of so many members at the meeting of the American Association, have adopted the practice of holding meetings at the same place, and contemporaneous with the American Association, but at such hours as not to interfere with the regular sessions of the larger body. The fifteenth general meeting of the American Chemical Society was held in Detroit on Aug. 9 and 10 under the presidency of Charles B. Dudley, of Altoona, Pa., and with Albert C. Hale, of Brooklyn, N. Y., as secretary. Its meetings were held in joint session with the chemical section of the American Association, and during the days mentioned its president presided, while later the president of the chemical section filled the chair. The regular annual meeting of the Society for the Promotion of Agricultural Science was held on Aug. 10 and 11. Its president was William R. Lazenby, of Columbus, Ohio, and he was succeeded by Byron Halstead, of New Brunswick, N. J., while Charles S. Plumb, of Lafayette, Ind., was continued as secretary. The ninth summer meeting of the Geological Society of America was held on Aug. 10 and 11, under the presidency of Edward Orton, of Columbus, Ohio, and with Herman L. Fairchild, of Rochester, N. Y., as secretary. Like the Chemical Society, it met in joint session with Section E of the association. The Association of Economic Entomologists held its ninth annual meeting in the

Central High School on Aug. 12 and 13, under the presidency of Francis M. Webster, of Worcester, Ohio, and with Charles L. Marlatt, of Washington city, as its secretary. Herbert Osborn, of Ames, Iowa, was elected to the presidency for the ensuing year, and Mr. Marlatt continued in his office as secretary-treasurer. The Society for the Promotion of Engineering Education and the American Mathematical Society met in Toronto during the meeting of the British Association. As usual, during the meeting the Botanical Club of the association held regular meetings, with Samuel M. Tracy, of Agricultural College, Miss., as president and Edward S. Burgess, of New York city, as secretary.

Final Sessions.—The final sessions of the association were held on Aug. 13. At the morning session the time and place of the next meeting as proposed by the council, together with the list of officers nominated by the council, were duly accepted by the association, while at the evening session the usual "thanksgiving" meeting was held, at which the votes of recognition to the local authorities and others were passed. The more important business transacted consisted of a series of amendments to the constitution by means of which the power of the council was considerably extended and also the selection of officers with the naming of the place of meeting was given over entirely to the nominating committee. Section H, on anthropology, was granted permission to hold a winter meeting, and the council recommended to the association the movement to raise funds for a statue of Galileo Ferraris. A grant of \$100 from the research fund was made to the marine biological laboratory, Woods Holl. Committees to extend the influence of the association into the secondary schools and to secure uniform nomenclature in scientific terms used in commerce, were appointed.

The meeting was a small one as far as members were concerned, only 291 persons registering, but the success of the event was largely enhanced by the presence of numerous scientists who came to attend the meeting of the British Association. There were 136 persons elected to membership and 50 persons advanced to the grade of fellowship.

The Next Meeting.—The association will celebrate in 1897 the fiftieth anniversary of its foundation, and it was recommended by the council to meet on that occasion in Boston, as that city was the place where in 1847 it was decided to reorganize the American Association of Geologists and Naturalists as the American Association for the Advancement of Science at the meeting to be held in 1848. The date named for the meeting is Aug. 22, 1898. The following officers were chosen: President, Frederic W. Putnam, Harvard University, Cambridge, Mass. Vice-presidents of sections: A, Mathematics and Astronomy, Edward E. Barnard, Yerkes Observatory, Chicago, Ill.; B, Physics, Frank P. Whitman, Adelbert College, Cleveland, Ohio; C, Chemistry, Edgar F. Smith, University of Pennsylvania, Philadelphia, Pa.; D, Mechanical Science and Engineering, Mortimer E. Cooley, University of Michigan, Ann Arbor, Mich.; E, Geology and Geography, Herman L. Fairchild, University of Rochester, Rochester, N. Y.; F, Zoölogy, Alpheus S. Packard, Brown University, Providence, R. I.; G, Botany, William G. Farlow, Harvard University, Cambridge, Mass.; H, Anthropology, J. McKeen Cattell, Columbia University, New York city; I, Economic Science and Statistics, Archibald Blue, Director of Bureau of Mines, Toronto, Canada. Permanent secretary, Leland O. Howard, Department of Agriculture, Washington city. General secretary, David S. Kellicott, Ohio State University, Columbus, Ohio. Secretary of the council, Frederick Bedell, Cornell University, Ithaca, N. Y. Secretaries of the sec-

tions: A, Alexander Ziwet, University of Michigan, Ann Arbor, Mich.; B, Edward B. Rosa, Wesleyan University, Middletown, Conn.; C, Charles Baskerville, University of North Carolina, Chapel Hill, N. C.; D, William S. Aldrich, University of West Virginia, Morgantown, W. Va.; E, Warren Upham, St. Paul, Minn.; F, Charles W. Stiles, Department of Agriculture, Washington city; G, Erwin F. Smith, Department of Agriculture, Washington city; H, Marshall H. Saville, American Museum of Natural History, New York city; I, Marcus Benjamin, United States Natural Museum, Washington city. Treasurer, Robert S. Woodward, Columbia University, New York city.

British.—The sixty-seventh annual meeting of the British Association for the Advancement of Science was held in Toronto, Canada, Aug. 18-25. The officers of the association were: President, Sir John Evans. Presidents of sections: A, Mathematics and Physics, A. R. Forsyth; B, Chemistry, William Ramsay; C, Geology, George M. Dawson; D, Zoölogy, Louis C. Miall; E, Geography, J. Scott



SIR JOHN EVANS.

Keltie; F, Economic Science and Statistics, E. C. K. Connors; G, Mechanical Science, George F. Deacon; H, Anthropology, Sir William Turner; I, Physiology, Michael Foster; K, Botany, H. Marshall Ward. General secretaries, A. G. Vernon Harcourt and E. A. Schaefer, but owing to the absence of the latter W. C. Roberts-Austen filled his place. General treasurer, Arthur W. Rucker.

General Meeting.—The association began its proceedings with a meeting of the general committee on Aug. 18. In the absence of Lord Lister, the chair was taken by Sir John Evans, the president-elect. The report of the council was presented by Prof. W. C. Roberts-Austen, who acted as general secretary. It contained a recommendation nominating Sir Donald Smith, High Commissioner for the Dominion of Canada, the Hon. Arthur Sturgis Hardy, Premier of the Province of Ontario, and the Mayor of Toronto, vice-presidents of the association. The council was informed by Mr. Vernon Harcourt that he did not intend to offer himself for re-election as general secretary. He had held the office of general secretary for fourteen years, and the council expressed their sense of the invaluable services which he had constantly rendered to the association during that period, and recom-

mended that Prof. Roberts-Austen be appointed in succession to Mr. Harcourt. Prof. Schaefer having informed the council that it would be inconvenient for him to attend the meeting at Toronto, they requested Prof. Roberts-Austen to undertake the duties of general secretary during the meeting in his place.

The council elected the following foreign men of science, who have attended meetings of the association, to be corresponding members: Dr. F. Kohlrausch, of Berlin; Dr. van Rijkevorsel, of Rotterdam; and Prof. E. Zackaries, of Hamburg.

It was reported that in accordance with the instructions of the council, a committee waited upon Lord Salisbury and brought before him the question of the establishment of a national physical laboratory. Recently it had been learned that the treasury had appointed a committee to consider and report upon the desirability of establishing a national physical laboratory for the testing and verification of instruments for physical investigation, for the construction and preservation of standards of measurements, and for the systematic determination of physical constants and numerical "data" useful for scientific and industrial purposes, and to report whether the work of such an institution, if established, could be associated with any testing or standardizing work already performed wholly or partly at the public cost.

The following resolution was referred to the council: That it is of urgent importance to press upon the Government the necessity of establishing a bureau of ethnology for Greater Britain, which, by collecting information with regard to the native races within and on the borders of the empire, will prove of immense value to science and to the Government itself. The question was referred to a committee, who reported at some length upon it, and the council then resolved to ask the trustees of the British Museum to allow the proposed bureau to be established in connection with the museum.

The treasurer reported that the receipts of the years 1896-'97 had been £5,341, and the payments £2,945. The amount in the hands of the general treasurer was £2,396. He explained that the balance in his hands was larger than usual, owing to the fact that the meeting in Liverpool last year was a large and successful one. The expenses of the Liverpool meeting were slightly above those of the previous year, being £157, as against £148 for 1895-'96.

In the evening the association met in Massey Hall to hear the inaugural address. Lord Lister presented his successor, with the following words:

"My task on the present occasion is to hand over the presidential position of this association to one eminently deserving of it; a man who has won world-wide distinction as a geologist and an antiquarian, while his many-sided gifts and his genial nature have aroused the admiration and affection of all who have the privilege of his acquaintance."

Inaugural Address of the President.—Sir John Evans chose as the subject of his address "The Antiquity of Man." In opening he said: "Once more has the Dominion of Canada invited the British Association for the Advancement of Science to hold one of the annual meetings of its members within the Canadian territory, and for a second time has the association had the honor and pleasure of accepting the proffered hospitality. In doing so, the association has felt that if by any possibility the scientific welfare of a locality is promoted by its being the scene of such a meeting, the claims should be fully recognized of those who, though not dwelling in the British Isles, are still inhabitants of that Greater Britain whose prosperity is so intimately connected with the fortunes

of the mother country." He referred to the presence of the scientists from the United States as follows: "Our gathering this year presents a feature of entire novelty and extreme interest, inasmuch as the sister association of the United States of America—still mourning the loss of her illustrious president, Prof. Cope—and some other learned societies, have made special arrangements to allow of their members coming here to join us. I need hardly say how welcome their presence is, nor how gladly we look forward to their taking part in our discussions and aiding us by interchange of thought. To such a meeting the term 'international' seems almost misapplied. It may rather be described as a family gathering, in which our relatives more or less distant in blood, but still intimately connected with us by language, literature, and habits of thought, have spontaneously arranged to take part." Then, turning to the subject of his address, he said: "It appears to me, therefore, that my election to this important post may, in the main, be regarded as a recognition by this association of the value of archaeology as a science. It will perhaps be expected of me that I should on the present occasion bring under review the state of our present knowledge with regard to the antiquity of man; and probably no fitter place could be found for the discussion of such a topic than the adopted home of my venerated friend, the late Sir Daniel Wilson, who first introduced the word 'prehistoric' into the English language." Concerning palæolithic man, he said: "When we return to palæolithic man, it is satisfactory to feel that we are treading on comparatively secure ground, and that the discoveries of the last forty years in Britain alone enable us to a great extent to reconstitute his history. We may not know the exact geological period when first he settled in the British area, but we have good evidence that he occupied it at a time when the configuration of the surface was entirely different from what it is at present: when the river valleys had not been cut down to anything like their existing depth, when the fauna of the country was of a totally different character from that of the present day, when the extension of the southern part of the island seaward was in places such that the land was continuous with that of the continent, and when in all probability a far more rainy climate prevailed. We have proofs of the occupation of the country by man during the long lapse of time that was necessary for the excavation of the river valleys. We have found the old floors on which his habitations were fixed; we have been able to trace him at work on the manufacture of flint instruments, and by building up the one upon the other the flakes struck off by the primeval workman in those remote times we have been able to reconstruct the blocks of flint which served as his material." After discussing the arguments concerning the existence of palæolithic man in Great Britain, he referred to the discoveries in France, and then crossed the European Continent and spoke of the finds in the valley of the Euphrates, saying: "May we not from these data attempt in some degree to build up and reconstruct the early history of the human family? There, in eastern Asia, in a tropical climate, with the means of subsistence readily at hand, may we not picture to ourselves our earliest ancestors gradually developing from a lowly origin, acquiring a taste for hunting, if not, indeed, being driven to protect themselves from the beasts around them, and evolving the more complicated forms of tools or weapons from the simpler flakes which had previously served them as knives? May we not imagine that, when once the stage of civilization denoted by these palæolithic implements had been reached, the game for the hunter became

scarcer, and that his life in consequence assumed a more nomad character? Then, and possibly not till then, may a series of migrations to 'fresh woods and pastures new' not unnaturally have ensued, and these following the usual course of 'westward toward the setting sun' might eventually lead to a palaeolithic population finding its way to the extreme borders of western Europe, where we find such enormous traces of its presence."

Proceedings of the Sections. A. Mathematics and Physics.—This section was presided over by Prof. A. R. Forsyth, who fills the Salerian chair of Pure Mathematics in the University of Cambridge. His address consisted of a plea for the unrestricted cultivation of pure mathematics as a science, which he contended was desirable in itself and for its own sake. At the outset the speaker referred to the steps that had been taken by the British Government toward the establishment of a national physical laboratory. He summed up his arguments as follows: "I have tried to show that, in order to secure the greatest benefit for those practical or pure sciences which use mathematical results or methods, a deeper source of possible advantage can be obtained by developing the subject independently than by keeping the attention fixed chiefly upon the applications that may be made. Even if no more were said, it might be conceded that the unrestricted study of mathematics would thereby be justified. But there is another side to this discussion, and it is my wish now to speak very briefly from the point of view of the subject itself, steadily growing and full of increasing vitality. Unless some account be taken of this position, an adequate estimate of the subject can not be framed; in fact, nearly the greater part of it will thus be omitted from consideration. For it is not too much to say that, while many of the most important developments have not been brought into practical application, yet they are as truly real contributions to human knowledge as are the disinterested developments of any other of the branches included in the scope of pure science. It will readily be conceded for the present purpose that knowledge is good in and by itself, and that the pursuit of pure knowledge is an occupation worthy of the greatest efforts which the human intellect can make. A refusal to concede so much would, in effect, be a condemnation of one of the cherished ideals of our race. But the mere pursuit or the mere assiduous accumulation of knowledge is not the chief object; the chief object is to possess it sifted and rationalized—in fact, organized into truth. To achieve this end, instruments are requisite that may deal with the respective well-defined groups of knowledge, and for one particular group we use the various sciences. There is no doubt that in this sense mathematics is a great instrument."

This section, owing to the large number of papers presented before it, divided itself at times into subsections, as follow: On meteorology, on electricity, and on general physics.

Among the more important papers presented before this section were the following: "On the Unification of Time," by J. A. Patterson; "On a Photographic Record of Objective Combination Tones," by Arthur W. Rucker, R. Forsyth, and R. Sowter; "On the Determination of the Surface Tensions of Water and of Certain Dilute Aqueous Solutions by Means of the Method of Ripples," by N. E. Dorsey; "On a New Method of determining the Specific Heat of a Liquid in Terms of the International Electric Units," by H. L. Callendar; "On the Behavior of Argon in X-Ray Tubes," by H. L. Callendar and N. N. Evans; "On the Fuel Supply and Air Supply of the World," by Lord

Kelvin; "A Canadian and Imperial Hydrographic Survey," by A. Johnson; "On the Specific Heat of Superheated Steam," by Prof. Ewing and Stanley Dunkerley; "New Varieties of Cathode Rays," "An Experiment with a Bundle of Glass Plates," and "A Tangent Photometer," by S. P. Thompson; "On the Spectra of Oxygen, Sulphur, and Selenium," by C. Runge and F. Paschen; "The Influence of Pressure on Spectral Lines," by J. Larmor; "Changes in the Wave Frequencies of the Lines of Emission Spectra of Elements," by W. J. Humphreys; "On the Constitution of the Electric Spark," by Arthur Schuster; "A Reduction of Rowland's Value of the Mechanical Equivalent of Heat to the Paris Hydrogen Scale," by W. S. Day; "A Comparison of Rowland's Mercury Thermometer with a Griffiths's Platinum Thermometer," by F. Mallory and C. W. Waidner; "Monthly and Annual Rainfalls in the British Empire, 1877 to 1896," by John Hopkinson; "On the Temperature of Europe," by Van Rijkevorsel; "The Climatology of Canada," by R. F. Stupart; "The Great Lakes as a Sensitive Barometer," by F. Napier Denison; "Slow Refrigeration of the Chinese Climate," by J. Edkins; "Progress of the Exploration of the Air with Kites," by A. L. Rotch; "Meteorites, Solid and Gelatinous," by Otto Huhn; "November Meteors and November Flood Traditions," by R. G. Haliburton; "On the Solution of the Cubic Equation," by Alexander Macfarlane; "The Historical Development of the Abelian Functions," by Harris Hancock; "On a Notation in Vector Analysis," by O. Henrici; "New Harmonic Analyses," by Albert A. Michelson and S. W. Stratton; "The Multipartite Partitions of Numbers which possess Symmetrical Graphs in Three Dimensions," by P. A. MacMahon; "Kites for Meteorological Uses," by C. F. Marvin; "The Quinquection of the Cyclotomic Equation," by J. Larmor; "Increase of Segmental Vibrations in Aluminium Violins," by Alfred Springer; "Demonstrations on the Form of Alternating Currents," by Prof. Braun; "Note on an Electrical Oscillator," by Nicola Tesla; "An Electric Curve Tracer," by Edward B. Rosa; "On the Use of the Interferometer in the Study of Electric Waves," by G. F. Hull; "Oscillographs," by W. D. B. Duddell; "On the Calculation of the Coefficient of Mutual Induction of a Circle and a Co-axial Helix," by J. V. Jones; "On a Determination of the Ohm made in testing the Lorenz Apparatus of the McGill University," by W. E. Ayrton and J. V. Jones; "The Relations between Arc Curves and Crater Ratios with Cored Positive Carbons," by Mrs. Ayrton; "On the Source of Luminosity in the Electric Arc," by Henry Crew and O. H. Basquin; "On Some New Forms of Gas Batteries and a New Carbon-Consuming Battery," by Willard E. Case; "On the Determination of the State of Ionization in Dilute Aqueous Solutions containing Two Electrolytes," by J. G. MacGregor; "An Apparatus for verifying the Law of Conservation of Energy in the Human Body," by Wilbur O. Atwater and Edward B. Rosa; "The Rate of Decrease of the Intensity of Shril Sounds with Time," by A. W. Duff; "A New Instrument for measuring the Intensity of Sound," by A. G. Webster and B. F. Sharpe; "Atmosphere in its Effects on Astronomical Observation," by Percival Lowell; "Automatic Operations of Eclipse Instruments," by David P. Todd; "The Cause of the Semiannual Inversions of the Type Solar Curve in the Terrestrial Magnetic Field" and "Observations at Toronto with Magnet Watch Integrator," by Frank H. Bigelow; "The Yerkes Observatory," by George E. Hale; "The Effects of Tension and Quality of the Metal upon the Changes in Length produced in Iron Wires by Magnetization," by B.

B. Brackett; "On the Susceptibility of Diamagnetic and Weakly Magnetic Substances," by A. P. Wills; "On Magnetic Periodicity as connected with Solar Physics," by Arthur Harvey; "On the Refractivity of Mixtures of Gases," by William Ramsay; "On the Use of the Trifilar Suspension in Physical Apparatus," by Sylvanus P. Thompson; "On Zeeman's Discovery of the Effects of Magnetism on Spectral Lines," by Oliver Lodge; "On the Use of Constant Total Current Shunt with Ballistic Galvanometers," "The Sensibility of Galvanometers," "Short *versus* Long Period Galvanometers for very Sensitive Zero Tests," by W. E. Ayrton and J. Mather; "On a Research in Thermo-electricity by means of a Platinum Resistance Pyrometer," by H. M. Tory; "On a Simple Modification of the Board of Trade Form of the Standard Clark Cell," by H. L. Callendar and H. T. Barnes; "On the Cyclical Variation with Temperature of the E. M. F. of the H. Form of Clark's Cell," by F. S. Spiers, F. Twyman, and W. L. Waters; "On the Disruptive Discharge in Air and Dielectric Liquids," by J. W. Edmondson.

Also the following reports of committees were received and discussed. "On Seismological Observations," "On the Present State of our Knowledge in Electrolysis and Electric Chemistry," "On the Application of Photography to the Elucidation of Meteorological Phenomena," "On Tables of Certain Mathematical Functions," "On Observations at the Ben Nevis Observatory," and "On Electrical Standards."

B. Chemistry.—The opening address before this section was delivered by Prof. William Ramsay, one of the discoverers of the element argon and Professor of Chemistry in University College, London.

The subject of his address was "An Undiscovered Gas." He said: "I shall describe to you later its curious properties, but it would be unfair to put you at once in possession of the knowledge of its most remarkable property—it has not yet been discovered. As it is still unborn, it has not been named. The naming of a new element is no easy matter. For there are only 26 letters in our alphabet, and there are already over 70 elements. To select a name expressible by a symbol which has not already been claimed for one of the known elements is difficult, and the difficulty is enhanced when it is at the same time required to select a name which shall be descriptive of the properties (or want of properties) of the element." After describing how as long ago as 1817 Dobereiner showed that certain elements could be arranged in groups of 3, and also how later Mendeleeff showed similarly that the elements grouped themselves in certain well-arranged classes, Prof. Ramsay went on to say that subsequent to the discovery of argon and helium he was led to suspect the presence of another element. He pointed out several conditions in his experimental work on argon and helium that could be only explained by the presence of another element. "There should, therefore, be an undiscovered element between helium and argon, with an atomic weight 16 units higher than that of helium and 20 units lower than that of argon—namely, 20. And if this unknown element, like helium and argon, should prove to consist of monatomic molecules, then its density should be half its atomic weight, 10. And pushing the analogy still further, it is to be expected that this element should be as indifferent to union with other elements as the two allied elements."

Among the more important papers read before this section were the following: "Reform in the Teaching of Chemistry," by W. W. Andrews; "On Helium" and "Demonstration of the Spectra of

Helium and Argon," by William Ramsay; "Contributions to the Chemistry of the Rare Earth Metals" and "The Atomic Weight of Thorium," by B. Brauner; "The Atomic Weights of Cobalt and Nickel," by T. W. Richards; "The Occurrence of Hydrogen in Minerals," by M. Travers; "Spectroscopic Examination of Minerals and Metals," by W. N. Hartley and H. Ramage; "Demonstration of the Preparation and Properties of Fluorine," by M. Meslans; "The Properties of Liquid Fluorine," by M. Moissan and J. Dewar; "The Permeability of Elements of Low Atomic Weight to the Röntgen Rays" and "Notes on Concentrated Solutions of Lithium and Other Salts," by J. Waddell; "Continuation of Experiments on Chemical Constitution and the Absorption of X-Rays," by J. H. Gladstone and W. Hibbert; "On the Action exerted by Certain Metals on a Photographic Plate," by W. J. Russell; "Photographs of Explosion Flames," by Harold B. Dixon; "Titanic Oxide" and "Deliquescence and Efflorescence of Certain Salts," by F. P. Dunnington; "The Formation of Crystals," by W. L. T. Addison; "A Compound of Ozone and Mercury," by E. C. C. Baly; "The Interaction of Hydrobromic and Bromic Acids," by J. W. Walker; "The Composition of Canadian Virgin Soils," by F. T. Shutt; "Analysis of Some Pre-Carboniferous Coals," by W. H. Ellis; "The Constitution of Aliphatic Ketones," by Paul C. Freer; "The Chemistry of Methylene," by John U. Nef; "Formation of a Benzene Ring by Reduction," by A. Lehmann; "Condensation Products of Aldehydes and Amides," by C. A. Kohn; "A New Form of Bunsen Burner," by Hugh Marshall; "Molecular Movement in Metals," by W. C. Roberts-Austen; "The Causes of Loss incurred in roasting Gold Ores containing Tellurium," by T. K. Rose; "The Behavior of Lead and of Some Lead Compounds toward Sulphur Dioxide," by H. C. Jenkins; "The Vapor Tensions of Liquid Mixtures," by W. L. Miller and T. R. Rosebrough; "The Electrolytic Determination of Copper and Iron in Oysters," by C. A. Kohn; "The Nitro-alcohols," by A. Henri; "The Plaster-of-Paris Method in Blowpipe Analysis," by W. W. Andrews; "Some Experiments with Chlorine," by R. Ransford.

Also the following reports of committees were received and discussed: "On the Teaching of Science in Elementary Schools," "On preparing a New Series of Wave-Length Tables of the Spectra of the Elements," "On the Proximate Chemical Constituents of the Various Kinds of Coal," "On the Isometric Naphthalene Derivatives," "On the Action of Light on Dyed Colors," "On the Electrolytic Methods of Quantitative Analysis," "Isometric Naphthalene Derivatives," "The Direct Formation of Haloids from Pure Materials," "The Bibliography of Spectroscopy," "The Carbohydrates of Barley Straw."

C. Geology.—Dr. George M. Dawson, who is director of the Geological Survey of Canada, presided over this section. His address was on the "Pre-Cambrian Rocks of History." He said: "The nature and relations of the more ancient rocks of North America are problems particularly Canadian, for these rocks in their typical and most easily read development either constitute or border upon the continental protaxis of the north. The questions involved are, however, at the same time perhaps more intimately connected with a certain class of world-wide geological phenomena than any of those relating to later formations, in which a greater degree of differentiation occurred as time advanced. A reasonably satisfactory classification of the crystalline rocks beneath those designated as Palaeozoic was first worked out in the Canadian region by Logan and his colleagues—a classification of which the validity was soon after generally recognized.

The greatest known connected area of such rocks is embraced within the borders of Canada, and, if I mistake not, the further understanding of the origin and character of these rocks is likely to depend very largely upon work now in progress or remaining to be accomplished." In order to bring out what may be regarded as established respecting these older rocks, and in what direction the most hopeful outlook exists, Dr. Dawson adopted the historical method of treatment, and recapitulated briefly the first steps made in the classification of the crystalline schists in Canada, reviewing the work and reports of Logan and his colleagues in the Ottawa valley and the north shores of Lake Superior and Lake Huron. He also described with care the modern and chemical methods of research that have been applied to the ancient crystalline schists of Canada, and which have resulted in establishing the fact that a greater part of the Huronian is essentially composed of contemporaneous volcanic material, effusive or fragmental. He discussed the use of the name Archæan, and contended that its application was "to include all rocks below the hiatus of which evidence was first found in the Lake Superior region." Of the Laurentian he said that, "It is still appropriately made to include both the Fundamental Gneiss and the Grenville series." He referred to the uncertainty of the beginning of the Palæozoic rocks, contending that "the base of the Cambrian was a question almost entirely palæontological." In conclusion, he said: "If all the sedimentary rocks below the Olenellus zone are to pass under one name, let us cling to the venerable name Greywacke. It can do no mischief, while it describes things indefinite, simply because it is without meaning."

Among the more important papers read before this section were the following: "Some Typical Sections in Southwestern Nova Scotia," by L. W. Bailey; "Problems in Quebec Geology," by R. W. Ellis; "The Stratigraphic Succession in Jamaica," by Robert T. Hill; "Preliminary Notice of Some Experiments on the Flow of Rocks," by F. D. Adams and J. T. Nicholson; "The Former Extension of the Appalachians across Mississippi, Louisiana, and Texas," by John C. Branner; "A Group of Hypotheses bearing on Climatic Changes" and "Distribution and Succession of the Pleistocene Ice Sheets of the Northern United States," by Thomas C. Chamberlain; "The Glacial Deposits of the Alps," by A. Penck; "On the Asar of Finland," by Prince Krapotkin; "The Chalky Boulder Clay and the Glacial Phenomena of the Western Midland Counties of England," by H. B. Woodward; "Glacial and Interglacial Deposits at Toronto," by A. P. Coleman; "On the Continental Elevation of the Glacial Epoch," by John W. Spencer; "The Champlain Submergence and Uplift and their Relations to the Great Lakes and Niagara Falls," by F. B. Taylor; "Remarks introductory to the Excursion to Niagara Falls and Gorge," by Grove K. Gilbert; "Drift Phenomena of Puget Sound and their Interpretation," by Bailey Willis; "The Southern Lobe of the Laurentian Ice Sheet," by Charles H. Hitchcock; "On the Origin of Drumlins," by Nathaniel S. Shaler; "The Preglacial Decay of Rocks in Eastern Canada," by R. Chalmers; "Note on Certain Pre-Cambrian and Cambrian Fossils supposed to be related to Eozoön," by William Dawson; "Note on a Dendrodont Fish Tooth from Silurian Rocks of Nova Scotia," by J. F. Whiteaves; "On Some New or hitherto Little-known Palæozoic Formations in Northeastern America," by H. M. Ami; "Palæozoic Geography of the Eastern States," by Edward W. Claypole; "Some Characteristic Genera of the Cambrian," by G. F. Matthew; "Influence d'un éboulement sur le régime d'une rivière," by J. C. K. La-

flamme; "On the Relations and Structure of Certain Granites and Associated Arkoses on Lake Temiscaming, Canada," by A. E. Barlow and W. F. Ferrier; "On Some Nickeliferous Magnetites," by W. G. Miller; "Differentiation in Igneous Magmas as a Result of Progressive Crystallization," by J. J. H. Teall; "The Glaciation of North Central Canada," by J. B. Tyrrell; "The Geological Horizon of Some Nova Scotia Minerals," by E. Gilpin, Jr.; "On the Possible Identity of Bennettites, Williamsonia, and Zamites Gigas," by A. C. Seward; "Glacial Geology of Western New York," by H. LeRoy Fairchild; "Earth Strains and Structure," by O. H. Howarth; "On the Structure and Origin of Certain Rocks of the Laurentian System," by F. D. Adams.

Also the following reports of committees were received and discussed: "On Life Zones in the British Carboniferous Rocks," "For the Investigation of a Coral Reef," "On the Fossil Phyllopoda of the Palæozoic Rocks," "On the Secondary Fossils of Moresat, Aberdeenshire," "On the Coast Erosion of the East Kent and Dover Natural History Societies," "On the Fauna of Caves near Singapore," "On Seismological Investigation," "On collecting Photographs of Geological Interest."

On Aug. 25 a joint session was held with Section H, when a discussion was held on "The First Traces of Man in America."

D. Zoölogy.—This section was presided over by Prof. C. Miall, who fills the chair of Biology in the Yorkshire College, Leeds. Prof. Miall spoke on "The Transformation of Animals." At the outset he referred to the importance of the study of zoölogy as tending to enlarge our sense of the possibilities of life. Prof. Miall then took up the question of animal transformation and the reasons therefore, discussing at considerable length the history of the life of the eel, which for many years was involved in obscurity. His conclusions were that "the general rule which connects the presence or absence of transformation with habitat is well founded, but that it is apt to be modified, and even reversed by highly special circumstances. The effects of habitat may, for instance, be overruled by parasitism, parental care, a high degree of organization, or even by a particular trick in egg laying. The direct action of the medium is probably of little consequence. Thus the difference between fresh and salt water is chiefly important because it prevents most species from passing suddenly from one to the other. But the abyssal and the fluviatile faunas have much in common, and also have the littoral and the pelagic faunas. Relative density and continuity of population seem to be of vital importance, and it is chiefly these that act upon the life history." The balance of the address was devoted to a discussion of alternation of generations and kindred subjects, largely of a technical character. In conclusion he said: "This hasty review of animal transformation reminds me how great is the part of adaptation in Nature. To many naturalists the study of adaptation is the popular and superficial side of things; that which they take to be truly scientific is some kind of index making. But we should recognize that comparatively modern adaptations may be of vital importance to the species, and particularly luminous to the student, because at times they show us Nature at work."

Among the more important papers read before this section were the following: "The Naples Marine Station and its Work," by Anton Dohrn; "On a Proposed Lacustrine Biological Station," by R. Ramsay Wright; "The Origin of Vertebrata," by Charles S. Minot; "On a Restoration and Phenacodus Primævus," "On Skeletons and Restorations of Tertiary Mammalia," and "The Origin of Mammalia," by Henry F. Osborn; "Oysters and the

Oyster Question," by W. A. Herdman; "The Blind Fishes of America," by Carl H. Eigenmann; "Description of Specimens of Sea Trout, Capelin, and Sturgeon from Hudson Bay" and "The Esocidae of Canada, with Description of a New Species of Pike found in Ontario," by E. E. Prince; "Recent Additions to the Fish Fauna of New Brunswick," by Philip Cox; "Theories of Mimicry as illustrated by African Butterflies" and "Mimicry as Evidence of the Truth of Natural Selection," by E. B. Poulton; "On the Surface Plankton of the North Atlantic," by W. Garstang; "Remarks on Branchipus stagnalis," by A. Halkett; "Economic Entomology in America," by Leland O. Howard; "On New Sepiadae from the Lower Cretaceous of the South Saskatchewan," by J. F. Whiteaves; "On the Statistics of Bees," by F. Y. Edgeworth; "The Appearance of the Army Worm in Ontario during the Summer of 1896," by J. Hayes Panton; "On a Supposed New Insect Structure," by Louis C. Miall; "On Recapitulation in Development, as illustrated by the Life History of the Masked Crab (Corystes)," by M. W. Garstang; "On Musculo-glandular Cells in Annelids," by Gustave Gilson; "On the Plankton collected continuously during a Traverse of the Atlantic," by W. A. Herdman; "The Determinants for the Major Classification of Fishlike Vertebrates" and "On the Derivation of the Pectoral Member in Terrestrial Vertebrates," by Theodore Gill; "The Morphological Significance of the Comparative Study of Cardiac Nerves," by W. H. Gaskell; "Observations upon the Morphology of the Cerebral Commissures in the Vertebrata," by G. Elliot Smith; "Some Points in the Symmetry of Actinians," by J. P. McMurrich; "The Natural History of Instinct," by C. Lloyd Morgan; "On the Hæmatozoon Infections of Birds," by W. G. McCallum; "The Post-embryonic Development of Aspidogaster Conchicola," by J. Stafford; "On a particularly Large Set of Antlers of the Red Deer (*Cervus elaphus*), with Photographic Illustrations" and "On the Evolution of the Domestic Races of Cattle with Particular Reference to the History of the Durham Shorthorn," by G. P. Hughes.

Also the following reports of committees were received and discussed: "The Naples Zoological Station," "Marine Biological Laboratory, Plymouth," "Zoölogical Bibliography and Publication," "Index Generum et Specierum Animalium," "Zoölogy and Botany of the West Indian Islands," "Migration of Birds," "The African Lake Fauna," "The Zoölogy of the Sandwich Islands," and "The Biology of Oceanic Islands."

E. Geography.—This section was presided over by Dr. J. Scott Keltie, well known as the editor of the "Statesman's Yearbook," and as the secretary of the Royal Geographical Society. The subject of Dr. Keltie's address was on "Exploration and Geographical Research." He referred to the progress made in geography during the past sixty years, and said: "The great continent of Africa has practically been discovered, for sixty years ago almost all but its rim was a blank. In 1837 enormous areas in North America were unexplored, and much of the interior of South America was unknown. In all parts of Asia vast additions have been made to our knowledge; the maps of the interior of that continent were sixty years ago of the most diagrammatic character. The Australian interior was nearly as great a blank as that of Africa; New Zealand had not even been annexed. Need I remind you of the great progress which has been made during the period both in the north and south polar areas, culminating in the magnificent achievements of Dr. Nansen? It was just sixty years ago that the great antarctic expedition under Sir James Ross was being organized; since that, alas, little or nothing has been

done to follow up his work. Sixty years ago the science of oceanography, even the term, did not exist; it is the creation of the Victorian era, and may be said almost to have had its origin in the voyage of the "Challenger," which added a new domain to our science and opened up inexhaustible fields of research." Mr. Keltie then discussed the functions and field of geography, and indicated ways in which geographical research might be profitably carried on in Great Britain and on the European Continent. He also referred to what remained to be done in the way of explaining the unknown or little-known regions of the globe. Of Asia, he said, the most important *desiderata* so far as pioneer exploration is concerned, is southern and central Arabia and Tibet. The forbidden city of Lhasa was referred to as the goal of several adventurers. In Africa he called attention to the fact that to the south of Abyssinia and to the northwest of Lake Rudolf, on the upper Nile, is a region of considerable extent which is still practically unknown. After speaking of the excellent work done by the geological surveys of Canada and the United States, he referred to the fact that there "is ample scope for the study of many problems in physical geography—past and present glaciations and the work of glaciers, the origin and *régime* of lake basins, the erosion of river beds, the oscillation of coast lines." The unexplored regions of Central South America were mentioned, and of South America he said, "There is a wider and richer field for exploration than in any other continent." The conditions in Australia were referred to, and the present status of polar and antarctic exploration fully described. His closing paragraph consisted of a brief summary of the works done in recent years in the new science of oceanography.

Among the more important papers read before this section were the following: "Kafiristan and the Kafirs," by G. S. Robertson; "Novaia Zemlia and its Physical Geography," by E. Delmar Morgan; "Temperature Observations off Spitzbergen," by B. Leigh Smith; "Scientific Geography for Schools," by R. E. Dodge; "Forestry in India," by F. Bailey; "The Classification of Geography," by H. R. Mill; "The Distribution of Detritus by the Sea," by Vaughn Cornish; "On Certain Submarine Changes," by John Milne; "The Congo and the Cape of Good Hope, 1842 to 1888," by Ernest G. Ravenstein; "Institutions engaged in Geographical Work in the United States," by Marcus Baker; "The Hydrography of the United States," by Frank H. Newell; "The Geographical Work of the United States Coast and Geodetic Survey," by Thomas C. Mendenhall; "The Coastal Plain of Maine," by W. Morris Davis; "The Unification of Time at Sea," by C. E. Lumsden; "The Barren Lands of Canada," by J. B. Tyrrell; "The Daily Weather Survey of the United States," by Willis L. Moore; "The Geographical Work of the United States Geological Survey," by Charles D. Walcott; "The Topographical Work of the Canadian Geological Survey," by J. White; "The Economic Geography of Rhodesia," by F. C. Selous; "A Journey in Tripoli," by J. T. Myres; "On the Direction of Lines of Structure in Eurasia," by Prince Krapotkin; "Potamology as a Branch of Geography," by A. Penck; "Geographical Development of the Lower Mississippi," by E. L. Corthell; "Southeastern Alaska: Geography and the Camera," by Otto J. Klotz; "The First Ascent of Mount Lefroy and Mount Aberdeen," by Harold B. Dixon; "Mexico Felix and Mexico Deserta," by O. H. Howarth; "The Material Conditions and Growth of the United States," by Henry Gannett; "Geographical Pictures," by H. R. Mill; "Geographical Wall Pictures," by A. Penck; and "Geography as a University Subject," by W. M. Davis.

Also the following reports of committees were read and discussed upon this section: "On the Climate of Tropical Africa" and "On Geographical Education."

F. Economics and Statistics.—Prof. Edward C. K. Gonner, who is Professor of Political Economy in University College, Liverpool, had been chosen as president of this section; illness, however, prevented him from being present, but he prepared an address on "The Labor Question," which was read by Sir C. W. Fremantle, late deputy master of the mint and a vice-president of the section. In opening, he spoke of the confusion that had arisen in regard to the meaning of the word "labor," which at least in this address would be restricted to "manual labor." He touched upon the change in the method of employment common to all countries, owing to the growth of the system of great industry and the consequent demarcation of those engaged into the classes of employers and employed. After speaking of the purely economic influences which have added prominence to this important separation into the two classes of employers and employed, a very small class of employers and a very large class of employed, the address dwelt upon the other influences which have contributed to this result. Among these was the effect of the franchise, concerning which he said: "It is impossible to underrate its effect as subsidiary in the cause of a change already accomplished and capable of attracting more interest with each fresh access of attention bestowed upon it." To characterize an age is never easy, but at present there are some features so marked and so capable of identification "that one pauses to ask in amazement if the age of the Renaissance had not dawned upon us again in an altered guise." In response to our needs and our circumstances we are seeking a positive moral guidance in an enlarged conception of social duty and solidarity, and the position which employed labor occupies with regard to them is sufficient to insure it attention, and not attention only, but sympathetic attention. In England the imagination of the people has been struck and its feelings stirred with regard to this particular problem, which stands out before other matters sharply marked and conspicuous. Of trade organization he said: "Dependence on wages finds a corrective in the growth of benefit societies and the insurance clauses of trade associations; separation from management and capital has in some instances been stayed by schemes for co-operation and profit sharing, while the greatest defect of all, the weakness of employed labor in competition with the allied and resourceful forces of capital and management, has led to the marvelous organization of trade unions and kindred associations." In closing, he advocated an advance in economic study and the increase in knowledge of the conditions of labor. One of his illustrations in this connection was the following: "Incorrect theories as to taxation led to the separation between England and those colonies which now form the United States of America; unsound economic and social theories lit throughout Europe the cleansing if devouring fires of the French revolution; unsound economic theories threatened to sap the vigor of England in the third and fourth decades of the present century, and, to take a specific instance, embodied themselves in the opposition to factory reform."

Among the more important papers read before this section were the following: "The History and Policy of Trade Combination in Canada," by W. H. Moore; "Recent Aspects of Profit Sharing," by N. P. Gilman; "A Consideration of a European Monopoly as a Contribution to the Theory of State Industries," by S. M. Wickett; "Statistics of Deaf-

mutism in Canada," by G. Johnson; "Some Fallacies in the Theory of the Distribution of Wealth," by Arthur T. Hadley; "Canada and the Silver Question," by J. Davidson; "The Origin of the Dollar," by W. G. Sumner; "Silver and Copper in China," by J. Edkins; "Characteristics of Canadian Economic History," by A. Shortt; "Economic History of Canada," by J. Castell Hopkins; "National Policy and International Trade," by Edwin Cannan; "Public Finance, with Special Reference to Canada," by J. L. McDougall; "Crown Revenues in Canada, 1763-1847," by J. A. McLean; "The Evolution of the Metropolis and Problems of Municipal Government," by William H. Hale; "Local Difference in Discount Rates in the United States," by R. M. Breckenridge; "The Conception of Justice in Taxation," by C. C. Plehn; "The Economic Geography of Rhodesia," by F. C. Selous; "Economic Aspects of the Workman's Compensation Bill," by R. Macdonald; "The Relation of the Employment of Women and Children to that of Men," by Carroll D. Wright; "Recent Reaction from Economic Freedom in the United States," by R. R. Bowker; "The Theory of Economic Choices," by Franklin H. Giddings; "Some Economic Notes on Gold Mining in Canada," by Prof. Mavor; and "Theory of Railway Rates," by W. M. Acworth.

G. Mechanical Science.—The presiding officer of this section was George F. Deacon, a well-known civil engineer, who from 1877 to 1897 had charge of the task of supplying the city of Liverpool with a new water supply. His address treated largely of the methods that are and should be adopted in training men to be mechanical engineers. He said: "I shall make no attempt to review the large number of excellent courses which are now available for the teaching of applied science in relation to engineering. Experience of the results as judged by the students who have come directly under my notice, and examination of many calendars, has aroused various thoughts concerning them, and this thought is perhaps uppermost: Are we not in some cases attempting at too early a stage the teaching of subjects instead of principles? Complete subjects, I mean, including the practical working of details, which will become the regular study of the student in office or works of an engineer. It certainly seems to me to be so. I do not say that subject training of this kind at college may not be useful; but we have to consider whether it does not for the sake of some little anticipation of his office work divert the attention of the student from the better mastery of those principles which it is so essential for him to grasp at the earliest possible time, and which do not limit his choice in the battle of life to any branch whatever of the profession or business of an engineer, but which, on the contrary, qualify him better to pursue with success whatever branches his inclination or his opportunities or his means may suggest. There is some danger in the usual limitation of compulsory subjects in examinations for certificates and degrees. When an examination has to be passed subjects not made compulsory are too often entirely neglected, however important to the engineer they may be. At present it too often happens that, unless an engineering student is predestined to practice electrical work of some chemical industry, he begins life as an engineer with no knowledge of the principles of either the one or the other, and chiefly as a result of their neglect for the sake of certain subjects made compulsory for the test he has had to pass, which subjects are not always the more important and too often include perfected details which, I venture to think, can not be rightly mastered in schools. For these reasons it appears to me that a certain very moderate standard in all such sub-

jects should be made compulsory if a certificate of proficiency, whether by degree or otherwise, is to be given in engineering or even in physical science."

Among the more important papers read before this section were the following: "The Soulanges Canal, a Typical Link of the 14-Foot Inland Navigation of Canada between Lake Erie and Montreal," by T. Munro; "The Hydraulic Laboratory of McGill University" and "The Strength of Columns," by G. Lanza; "Experiments on the Strength of White Pine, Red Pine, Hemlock, and Spruce," by H. T. Bovey; "A New Apparatus for studying the Rate of Condensation of Steam on a Metal Surface at different Temperatures and Pressures," by H. L. Callendar and H. A. Nicolson; "Tests on the Triple-Expansion Engine at Massachusetts Institute of Technology," by Prof. Peabody; "Montreal Electric Tramway System," by G. C. Cunningham; "Present Tendencies of Electric Tramway Systems in England," by J. G. W. Aldridge; "A New Method of Measuring Hysteresis in Iron," by J. L. W. Gill; "A New Method of investigating the Variation of the Magnetic Qualities of Iron with Temperature," by F. H. Pitcher; "Some Tests on the Variation of the Constants of Electricity Supply Meters with Temperature and with Current," by G. W. D. Ricks; "Roller Bearings," by W. B. Marshall; "Analysis of Speed Trials of Ships," by W. G. Walker; "A Modern Power Gas Plant working a Textile Factory," by H. Allen; "Effect of Temperature in varying the Resistance to Impact, the Hardness, and the Tensile Strength of Metals," by A. Macphail.

Also the following reports were read and discussed before the section: "On Calibration of Instruments in Engineering Laboratories" and "On Small Screw Gauges."

H. *Anthropology*.—Sir William Turner, who is Professor of Anatomy in the University of Edinburgh, presided over this section. The subject of his address was "Some Distinctive Characters of Human Structure." The distinctive characteristics of man, such as his erect carriage, the peculiarities of his spinal column, and his specialized extremities, were discussed at length and contrasted with similar features in other animals, and especially the apes. The cranial cavity in man was shown to be larger than in any other vertebrate except in the elephant and in the large whales, in which the huge mass of the body demands the great sensory-motor centers in the brain to be large. His closing remarks were: "We know that an animal is guided by its instincts, through which it provides for its individual wants and fulfills its place in Nature. In man, on the other hand, the instinctive acts are under the influence of the reason and intelligence, and it is possible that the association centers, with the intermediate association fibers which connect them with the sensory and motor centers, may be the mechanism through which man is enabled to control his animal instincts, so far as they are dependent on motion and sensation. The higher we ascend in the scale of humanity, the more perfect does this control become, and the more do the instincts, emotions, passions, and appetites become subordinated to the self-conscious principle which regulates our judgments and beliefs. It will therefore now be a matter for scientific inquiry to determine, as far as the anatomical conditions will permit, the proportion which the association centers bear to the other centers both in mammals and in man, the period of development of the association fibers in comparison with that of the motor and sensory fibers in different animals, and, if possible, to obtain a comparison in these respects between the brains of savages and those of men of a high order of intelligence. The capability of erect-

ing the trunk, the power of extending and fixing the hip and knee joints when standing, the stability of the foot, the range and variety of movement of the joints of the upper limb, the balancing of the head on the summit of the spine, the mass and weight of the brain and the perfection of its internal mechanism are distinctively human characters. They are the factors concerned in adapting the body of man, under the guidance of reason, intelligence, the sense of responsibility, and power of self-control, for the discharge of varied and important duties in relation to himself, his Maker, his fellows, the animal world, and the earth on which he lives."

Among the papers read before this section were: "The Scalp Lock: A Study of Omaha Ritual" and "The Import of the Totem among the Omaha," by Alice C. Fletcher; "Sqaktktquacht, or the Benign-Faced, Oannes of the Ntlakapamuq, British Columbia," by C. Hill-Tout; "The Blackfoot Legend of Scar Face" and "Blackfoot Sun Offerings," by R. N. Wilson; "Star Lore of the Micmacs of Nova Scotia," by Stansbury Hagar; "The Lake Village of Glastonbury and its Place among the Lake Dwellings of Europe," by R. Munro; "Some Old-World Harvest Customs," by F. T. Elworthy; "A Demonstration of the Utility of the Spinal Curves in Man," by Anderson Stuart; "The Causes of Brachycephaly" and "Notes on the Brains of Some Australian Natives," by A. Macalister; "On Some Cases of Trepanning in Early American Skulls," by W. J. McGee; "A Case of Trepanning in N. W. Mexico," by Carl Lumholtz and A. Hrdlicka; "An Experimental Analysis of Certain Correlations of Mental and Physical Reactions," by Lightner Witmer; "The Growth of Toronto School Children," by Franz Boas; "The Physical Characteristics of European Colonists born in New Zealand," by H. O. Forbes; "The Seri Indians of the Gulf of California," by W. J. McGee; "Notes Historical and Philological on the Indians of British Columbia," by C. Hill-Tout; "The Kootenays of British Columbia and their Salishan Neighbors" and "Kootenay Indian Drawings," by A. F. Chamberlain; "A Rock Inscription on Great Central Lake, Vancouver Islands," by J. W. MacKay; "Blackfoot Womanhood," by J. Maclean; "On the Hut Burial of the American Aborigines," by E. Sidney Hartland; "The Origin of the French Canadians," by B. Sulte; "The Evolution of the Cart and Irish Car," by A. C. Haddon; "The Jesup Expedition to the North Pacific," by Frederick W. Putnam; "Why Progress is in Leaps," by George Iles; "The Kafirs of Kafristan," by George Robertson; "The Mangyans and Tagbanas of the Philippine Islands," by Dean C. Worcester; "Exhibition of Lance-Headed Implements of Glass from Northwest Australia," by Sir William Turner; "The Genesis of Implement Making," by Frank H. Cushing; "Adze Making in the Andaman Islands," by A. C. Haddon.

On Aug. 24 there was a discussion before this section on the "Evidences of American Asiatic Contact," and on Aug. 25 a joint session was held with Section C (geology) on "The First Traces of Man in the New World," at which the following papers were read: "The Trenton Gravels," by Frederick W. Putnam, and "Human Relics in the Drift of Ohio," by Edward W. Claypole.

The following reports were read and discussed: "On the North Dravidian and Kolarian Races of Central India," "On the Silchester Excavations," "On the Mental and Physical Deviations in Children from the Normal," "On Anthropometric Measurements in Schools," "On the Northwest Tribes of Canada," "On the Ethnographic Survey of Canada," "On the Ethnographic Survey of the

United Kingdom," and "On the Necessity of the Immediate Investigations of the Anthropology of Oceanic Islands."

I. Physiology.—This section was presided over by Prof. Michael Foster, who since 1883 has been Professor of Physiology in Cambridge, and is well known as the author of several text-books on physiology. His address dealt with the events in physiology for the thirteen years that had elapsed since the association met in Montreal. After alluding to certain conspicuous events that had occurred, he said of some of the older problems, such as muscular contraction: "Progress, if not exciting, has been real; we are some steps measurably nearer an understanding what is the exact nature of the fundamental changes which bring about contraction and what are the relations of those changes to the structure of muscular fiber. In respect to another old problem, too, the beat of the heart, we have continued to creep nearer and nearer to the full light. Problems again, the method of attacking which is of more recent origin, such as the nature of secretion, and the allied problem of the nature of transudation, have engaged attention and brought about that stirring of the waters of controversy which, whatever be its effects in other departments of life, is never in science wholly a waste of time, if indeed it be a waste of time at all, since in matters of science the tribunal to which the combatants of both sides appeal is always sure to give a true judgment in the end." Of physiological chemistry he said: "The old physiological chemistry is passing away; nowhere, perhaps, is the outlook more promising than in this direction, and we may at any time receive the news that the stubborn old fortress of the proteids has succumbed to the new attack." He discussed as a marked feature of the period "the increasing attention given to the study of the lower forms of life, using their simpler structures and more diffuse phenomena to elucidate the more general properties of living matter." The advances made in the study of the internal secretion, the central nervous system, and the workings of the brain were fully rehearsed and discussed.

Among the more important papers read before this section were the following: "The Rhythm of Smooth Muscles," by Henry P. Bowditch; "The Innervation of Motor Tissues, with Especial Reference to Nerve Endings in the Sensory Muscle Spindles," by Carl Huber; "The Muscle Spindles in Pathological Conditions," by O. F. Grunbaum; "The Ear and the Lateral Line in Fishes," by F. S. Lee; "On the Effect of Frequency of Excitation on the Contractility of Muscle," by W. P. Lombard; "A Dynamometric Study of the Strength of the Several Groups of Muscles and the Relation of Homologous Muscles in Man" and "A Dynamometer for Clinical Use," by J. H. Kellogg; "The Output of the Mammalian Heart examined by a New Method," by G. N. Stewart; "Observations on the Mammalian Heart," by W. T. Porter; "Ueber die naechsten Probleme der Haemodynamik," by Karl Huerthle; "The Comparative Physiology of the Cardiac Branches of the Vagus Nerve," by W. H. Gaskell; "On Rhythmic Variations in the Strength of the Contractions of the Mammalian Heart," by Prof. Cushny; "The Physiological Effects of Peptone," by W. H. Thompson; "The Absorption of Serum in the Intestines," by E. Waymouth Reid; "The Function of the Canal of Stilling in the Vitreous Humor" and "Description of some Pieces of Physiological Apparatus," by Anderson Stuart; "On the Phosphorus Metabolism of the Salmon in Fresh Water," by Noel Paton; "Electrostatical Experiments on Nerve simulating the Effects of Electric Rays," by Jacques Loeb; "Gastric Inversion of Cane Sugar

by Hydrochloric Acid," by Graham Lusk; "Study of the Comparative Physiology of the Cells of the Sympathetic Nervous System," by Carl Huber; "On the Micro-Chemistry of Nerve Cells," by J. J. Mackenzie; "Changes in the Ganglion Cells of Cord after Section of Nerve Roots," by Dr. Warrington; "Action of Reagents on Nerve," by A. Waller; "Action of Anaesthetics on Nerve," by F. S. Lloyd; "Action of Anaesthetics on Cardiac Muscle," by Miss Welby; "The Refractory Period of Nerve," by Charles Richet; "On a Cheap Chronograph," by W. P. Lombard; "Demonstration of the Pendulum Chronoscope for Accurate Movements of Time, together with Some Accessory Apparatus" and "The Tricolor Lantern as applied in teaching the Physiology and Psychology of Color Vision," by E. W. Scripture; "Visual Contrast and Flicker Experiments," by Prof. Sherrington; "Microscopic Specimens illustrating the Distribution of Iron in Cells," by A. B. Macallum; "Microscopic Specimens illustrating the Presence of Copper in Cells," and "On the Presence of Copper in Animal Cells," by R. Royce and W. A. Herdman; "On Intestinal Absorption of Haemoglobin and Ferratin," by F. W. G. Mackay; "On Secretion in Gland Cells" and "The Morphology and Physiology of Gastric Cells," by R. R. Bensley; "Visual Reaction to Intermittent Stimulation," by O. Grunbaum; "Functional Development of the Cerebral Cortex in Different Groups of Animals: The Psychic Development of Young Animals," by Wesley Mills; "The Physiology of Instinct," by Lloyd Morgan; "The Nature and Physical Basis of Pain," by L. Witmer; "On the Action of Glycerin upon the Growth of the Tubercle Bacillus," by S. M. Copeman; "Inhibition as a Factor in Muscular Co-ordination," by C. S. Sherrington; "A Movement produced by the Electric Current," by F. Braun.

On Aug. 24 a joint meeting was held with Section K (botany), at which the "Chemistry and Structure of the Cell" was discussed, and in connection with which the following papers were read: "On the Rationale of Chemical Synthesis," by R. Meldola; "On the Existence in Yeast of an Alcohol-Producing Enzyme," by J. R. Green; and "New Views on the Significance of Intracellular Structures and Organs," by A. B. Macallum.

K. Botany.—Prof. H. Marshall Ward, who since 1895 has been Professor of Botany in the University of Cambridge, presided over this section. His address was devoted chiefly to a review of the advances in our knowledge of the fungi. In opening he alluded to the progress made in the various departments of botany, which were tending toward the specialization of this science—a fact now tacitly, but soon to be openly, recognized. Already the establishment of bacteriological laboratories and a huge special literature; of zymotechnical laboratories and courses on the study of yeasts and mold fungi; of agricultural stations, forestry and dairy schools, and so on, were signs of the inexorable results of progress. After referring to the growth of specialism in botanical study and its reward in the form of a wealth of additional discovery, Prof. Ward entered upon a review of the advances in the knowledge of fungi during the last three decades, dealing particularly with the agency of fungi in alcoholic fermentations. Of the destruction of bacteria he said: "There is one connection in which recent observations on enzymes in the plant cell promises to be of importance in explaining the remarkable destructive action of certain rays of the solar light on bacteria. The English observers Downes and Blunt showed long ago that if bacteria in a nutrient liquid are exposed to sunlight they are rapidly killed. Further researches gradually brought out the facts that it is really the light

rays and not high temperatures which exert this bactericidal action. That these matters are of importance in limiting the life of bacteria in our streets and rivers, and that the sun is our most powerful scavenger, has been shown." The speaker emphasized the need of recognizing that bacteriology only touches animal pathology at a few points, and of the public learning that, so far from bacteria being synonymous with disease, the majority of these organisms appeared to be beneficial rather than inimical to man. Cases were cited as pointing to the conviction that a school of bacteriology which had nothing to do with medical questions, but investigated problems raised by the forester, agriculturist, and gardener, the dairyman, brewer, dyer, and tanner, etc., would yet be established in connection with some great botanical center. The speaker then went exhaustively into the discoveries regarding the exact relation of bacteria to the various methods of cheese and butter manufacturers, and pointed out the value of the researches of many well-known scientists in this subject. Prof. Ward next dealt with the action of fungi upon the roots of forest trees, and then explained the nature of researches and the nitrifying organisms found in manure and soils. With respect to these it was shown that there now exists a sketch of the whole of the down grade of the cycle of organic nitrogen in Nature; it only needs supplementing by the history of the fixation of free nitrogen from the atmosphere by leguminous plants and certain soil organisms to complete the sketch. In conclusion, he dealt with wheat rust and the use of manure.

Among the more important papers read before this section were the following: "On the Mycelium of a Witches' Broom Fungus," by P. Magnus; "Stereum Hirsutum: A Wood-Destroying Fungus," by H. Marshall Ward; "The Nucleus of the Yeast Plant," by H. Wager; "A Disease of the Tomatoes," by W. G. P. Ellis; "The Chimney-shaped Stomata of *Holocantha Emeryi*: Some Consideration on the Functions of Stomata" and "Distribution of Nebraska Trees," by Charles E. Bessey; "On the Species of *Picea* in Northeastern America," by D. P. Penhallow; "Contribution to the Life History of *Ranunculus*," by John M. Coulter; "Vegetation of the Region of the Prairie Province," by Roscoe Pound and F. E. Clements; "The Zonal Constitution and Distribution of Plant Formations" and "The Transition Region of the Caryophyllales," by F. E. Clements; "Note on *Pleurococcus*," by Dorothea F. M. Pertz; "Spermatozoids of *Zamia Integrifolia*," by H. J. Weber; "Diagrams illustrating the Result of Fifty Years' Experimenting on the Growth of Wheat at Rothamsted, England," by H. E. Armstrong; "Preliminary Account of a New Method of Investigating Stomata," by Francis Darwin; "Notes on *Lilæa*," by D. H. Campbell; "Lecture on Fossil Plants," by A. C. Seward; "On the Existence of Motile Antherozoids the Dictyotaceæ," by J. L. Williams; "Insemination in Ferns" and "On more than One Plant from the Same Prothallium," by E. J. Lowe; "Results of Some Experiments in Cross Fertilization," by W. Saunders; "On a Hybrid Fern, with Remarks on Hybridity," by J. B. Farmer; "Morphology of the Stele in Vascular Plants" and "The Gametophyte of *Botrychium virginianum*," by E. C. Jeffrey; "Remarks on Changes in Number of Sporangia in Vascular Plants," by F. O. Bower; "Notes on Fossil Equisetaceæ," by A. C. Seward; "On *Streptothrix actinomyctica* and Allied Species of *Streptothrix*," by E. M. Crookshank; "Observations on the Cyanophyceæ," by H. B. Macallum.

Also the following reports were presented before

the section: "On the Preservation of Plants for Exhibition" and "On the Fertilization of the Phæophyceæ." On Aug. 24, as previously noted, this section met in joint session with Section I.

Popular Features.—On Aug. 19 their Excellencies the Governor General of Canada and the Countess of Aberdeen gave an evening reception to the officers, members, and associates of the association in the legislative building. The first evening lecture, on "Canada's Metals," by Prof. W. C. Roberts-Austen, was delivered on Aug. 20. On the evening of Aug. 21 a lecture for the workmen of Toronto, on "British New Guinea: The Country, its People, and the Problems which the Region offers to Naturalists and Geographers," was given by Dr. H. O. Forbes. Special sermons were preached on Aug. 22 in St. James's Cathedral by Bishop Sullivan; in St. James's Square Presbyterian Church by President Patton, of Princeton University; and in St. Michael's Cathedral by the Rev. P. A. Halpin and the Rev. Father Ryan. The usual devotional service of the association was held in the university on Sunday under the direction of the Rev. Principal Sheraton. The second evening lecture was on "Earthquakes and Volcanoes," and was delivered on Aug. 23 by Prof. John Milne. The usual *conversazione* was given by the local executive committee in the university building on Aug. 24. On Aug. 25 a dinner was given in honor of Lord Kelvin, Lord Lister, and Sir John Evans in the pavilion of the Horticultural Gardens. Two interesting ceremonies during the week were the convocations of the University of Toronto on Aug. 20, when the honorary degree of LL. D. was conferred on Lord Kelvin, Lord Lister, and Sir John Evans, and that of the University of Trinity College, on Aug. 24, when the honorary degree of D. C. L. was conferred on Sir John Evans, Lord Kelvin, Lord Lister, Sir William Turner, James H. Bryce, and Sir George S. Robertson. The afternoon entertainments included garden parties, several of which were held on each afternoon during the week. In addition to the foregoing, a series of four special excursions—as follow: To Niagara river, Niagara Falls, and return; to Muskoka and return; to Penetanguishene and return; and to Hamilton, Niagara Falls, and return—were arranged for Aug. 21; and subsequent to the meeting the following excursions were provided for: To Toronto, Ottawa, Ottawa river, Montreal, and return; Toronto, Kingston, St. Lawrence river, Montreal, and return; and Toronto, Parry Sound, Algonquin Park, Ottawa, Montreal, and return.

Attendance and Grants.—At the concluding meeting, held on Aug. 25, it was reported to the association that those in attendance at the meeting comprised 120 old life members, 8 new life members, 286 old annual members and members of the American association, 125 new members, 682 associates, 100 ladies, and 41 corresponding honorary members. Total in attendance at the association's meeting, 1,362.

A report from the Committee on Recommendation, setting apart grants to the amount of £1,350 for scientific investigations, was adopted. The grants were as follow: To establish a meteorological observatory on Mount Royal, £50; to further investigate the fauna and flora of the Pleistocene beds in Canada, £20; the collection, preservation, and systematic registration of Canadian photographs of geological interest; the biology of the lakes of Ontario, £75; the northwestern tribes of Canada, £75; to organize an ethnological survey of Canada, £75; the establishment of a biological station in the Gulf of St. Lawrence.

Next Meeting.—The association will meet in 1898 in Bristol on Sept. 5–17, and for the presi-

deney Sir William Crookes, eminent for his researches in chemistry and in physics and the editor of the "Chemical News," has been advocated.

ASTRONOMICAL PROGRESS IN 1897. The number and importance of the astronomical discoveries during the year, though not equal to those of some others, are in the main satisfactory. Excepting the discovery of a few asteroids and a new comet of short period, no new member has been added to the solar system.

The Sun.—Our knowledge of the cause of the Sun's heat and light, and of his spots, pores, and faculae, but especially of his mysterious appendage, the corona, has made little or no advance since our last report. To settle some points in dispute much was expected from observations of the total solar eclipse of Aug. 9, 1896; but on the return of the parties sent out by different countries to observe it—mostly to Norway, Sweden, and Japan—astronomers were disappointed at the meager results achieved, caused by cloudy skies at every station. Another effort, on a still more extensive scale, will be made to observe telescopically, spectroscopically, and photographically the eclipse that will take place Jan. 21, 1898. The line of totality will pass through Central Africa, India, and China, to the southern boundary of Siberia. The width of the total belt will be but 57 miles, and the duration of totality but 2^m 19^s. Yet, owing to improved methods of observation, more can be accomplished in that short time than could have been done at any former eclipse of twice its duration. One of the California parties will be prepared to test the utility of an invention of Mr. Burkhalter, of Oakland, Cal., which was prevented by clouds in Japan in 1896. This consists of a device to proportion the time of exposure of a photographic plate to the intensity of the light in different parts of the field, thus preventing over-exposure of the inner corona, and under exposure of the outer coronal streamers, which heretofore has been an impossibility. Astronomers anticipate valuable results from the trial test, which will enable the corona and its streamers to be studied at leisure and compared with photographs taken at future eclipses.

On Jan. 3, 1897, a spot of enormous dimensions appeared on the Sun's eastern limb. It was distinctly visible to the naked eye. With the telescope vast cyclonic movements in the Sun's photosphere were conspicuously visible, on a scale of magnitude of which nothing on our planet furnishes a standard for comparison. It subtended an angle of 100" in diameter, and as a second of arc at the Sun's distance equals 450 miles, it follows that the diameter of the spot was $450 \times 100 = 45,000$ miles wide, or 1,580,000,000 square miles. This, appearing near the epoch of minimum spot activity, was a great surprise to astronomers. On Jan. 10 it reached its maximum magnitude, and then began rapidly to decrease, and when it was at half of its greatest size disintegration began, resulting in a trail of spots resembling a long train of ears. In the preceding November a spot appeared of 80" in diameter, which remained intact during two rotations of the Sun, or for fifty-two days, affording a rare opportunity to decide whether, after all, the spots are not elevations instead of depressions according to Wilson's theory. Astronomers are now pretty well agreed that the latter, which for one hundred and twenty years has held sway, must be abandoned. His theory was that the Sun is a dark body surrounded by a luminous atmosphere (the photosphere), and that the spots are immense depressions, opening to view the Sun's dark body (umbra), and that the penumbra is the sloping sides of the hole, hundreds if not thousands of miles in depth. The theory appeared so reasonable, and

accounted so clearly for their appearance through the telescope, that it met with general acceptance by astronomers. If it is true, the Sun has two atmospheres, the outer (chromosphere), 5,000 miles in thickness; the inner (photosphere), of unknown depth.

The Sun's corona, which near it is a continuous luminous halo, but beyond consisting of streamers several million miles in length, the spectroscope decides to be reflected sunlight. It is never seen but during the few precious minutes of totality. Of the source and nature of the reflecting material we know nothing. The inner corona may be, and probably is, another atmosphere outside the chromosphere, extending to a great height, too thin to be noticed except during totality.

Recent observations of the prominences, which can now be seen with the spectroscope without an eclipse, fully confirm the truth that they belong to the Sun and not to the Moon, as was once thought might be the case. Their source is the chromosphere; but the intensity of the central force that can throw them to a height in one instance 58,000 miles farther than the Moon's distance from the earth is inconceivable, and affords an overwhelming argument against the truth of the Wilsonian hypothesis that the Sun is a dark, cold body.

Lewis Jewell, of Johns Hopkins University, has been measuring a large number of lines in the photographs of the solar spectrum, and has found that there is a difference of several days in the rotation periods of the outer and inner portions of the Sun's atmosphere, the period increasing as the photosphere is approached. He is now engaged upon the reduction of the measures, and the result will be awaited with great interest, as he has perhaps made an important discovery in solar physics.

Evolution of Stellar Systems.—Spiral nebulae, according to Dr. Isaac Roberts, the distinguished stellar photographer, afford almost positive evidence of evolution of the nebulae into suns and stellar systems. Photographs of these objects—notably those in Pisces, Ursa Major, and Canes Venatici—afford abundant proof when compared with star clusters already evolved. The photographs show the nebulous matter broken up into stars and starlike loci. The brighter stars are well defined, but the fainter ones have nebulous margins, as have those whose brightness differs but little from the nebulosity in which they are immersed. He says that every spiral nebula photographed by him has a stellar nucleus surrounded by dense nebulosity, around which the nebulous convolutions and involved stars are symmetrically arranged, and this is strong evidence that these features are the result of known physical causes and not of fortuitous arrangement. He considers that collisions between solid bodies or streams of meteors are sufficient to account for the vortical motions as seen in spiral nebulae. *Nova Auriga* and *Nova Andromeda* and many other temporary stars are evidences of collisions. Photography, therefore, shows us nebulae in all stages of development from diffused masses of matter, like the great nebula in Orion, through spiral nebulae, to clusters of stars.

Celestial Spectroscopy.—Spectroscopic analysis of the light from self-luminous heavenly bodies continues with unabated enthusiasm. Some observatories make it a special and exclusive study. Zeta Puppis presents an abnormal spectrum, giving, in addition to the usual hydrogen lines, a second series of rhythmical lines. Some of these are also to be seen in 29 Canis Majoris and Y. Velorum, some being bright and others dark.

There has been a suspicion that helium is a mixture of two elementary gases, as by a process of diffusion it is possible two get to gases of widely

different densities. Samples of heavy and light gas were examined with a concave grating of 15,000 lines to the inch, and in no case was any difference found in the spectra of various samples. The helium line was discovered in the yellow of the solar spectrum twenty-five years ago, but until lately no representative could be found on the earth. As it was always seen close to the D^2 line of sodium, it is also known as D^3 . The spectroscope reveals the existence in the sun of 23 substances that we are familiar with here, but no oxygen or gold.

Prof. Pickering's recent report announces the safe arrival at the Harvard station, Arequipa, Peru, of the great Bruce photographic telescope, which is under the skillful management of Prof. Solon I. Bailey. It is devoted to photographing the spectra of faint stars, with the large prism placed before the object glass. A large number of objects having peculiar spectra have been detected, including 21 new variables, two new stars, *Nova Carinæ* and *Nova Norma*, also a new variable of the Algol type, W. Delphini, having a variation of 2.71 magnitudes. A new star has also been discovered in Centaurus by Mrs. Fleming on examining some of the Draper Memorial photographs taken at Arequipa. No trace of it could be seen on the 55 plates taken from May 21, 1884, to June 14, 1895. But on plates taken on July 8 and 10, 1895, its magnitude was 7.2. In December following it had sunk to the eleventh magnitude. It was discovered from the peculiarity of its spectrum as taken on July 18, which resembles that of the nebula surrounding 30 Doradus, and also of the star Argentina, General Catalogue 20937. Its spectrum, examined visually on Dec. 19, was monochromatic, like nebula, New General Catalogue 5253.

At Harvard College Observatory an immense amount of work has been done, as the following breviary will show: During 1896 20,000 photometric light comparisons were made, 4,192 to determine the form of the light curve of the Algol-type variable W. Delphini, 3,436 of U. Cephei, 1,616 of Z. Herculis, 748 of T. Andromeda, 752 comparisons of Omicron Ceti, and many others, including 26 eclipses of Jupiter's moons. A study was made of parallel lines, similar to the assumed double canals of Mars, with the result that is unfavorable to their duplicity. In addition, 2,508 photographs have been taken with the Draper telescope, and 2,770 at Arequipa with the Bache photographic telescope. Many peculiar spectra have been found on the plate, 21 of them having the hydrogen lines bright. All these photographic plates are dated, numbered, and preserved in a fireproof building.

Motion of Stars.—The spectroscope, in its improved form, is being used to determine the velocity of approach or recession of stars to or from our system. In "Monthly Notices of the Royal Astronomical Society of England" for June, 1897, is the result of measures by H. F. Newell with the Bruce spectroscope attached to his 25-inch refractor at the Cambridge Observatory, England, with the following results: Recession Alpha Tauri (Aldebaran), 30 miles a second; Alpha Orionis, 10.6 miles. Approach Gamma Leonis, 37.5 miles; Arcturus, 6.8 miles.

Broadening of Lines.—Dr. Zuman has discovered that the spectral lines in a magnetic field are broadened. This fact is considered of special importance in connection with astrophysical science. Prof. Lodge has succeeded in showing that the lines not only broaden, but are split up into twos and threes and even more. Dr. Zuman's discovery is considered the most important that has been made during the present year.

Nova Auriga.—This remarkable temporary star, which in less than two months in the beginning of

1892 changed from the fourth to the fourteenth magnitude, and then increased to the 9.7th, and so remained for three years, finally changing into a nebula, has recently decreased again to the eleventh magnitude. Nothing has been more puzzling to astronomers than the behavior of this extraordinary temporary star.

New Double Stars.—The discovery of double and triple stars has reached enormous proportions, which raises the question whether single stars like our sun, which is also a star, are not the exception instead of the rule. "The Monthly Notices" for May, 1897, contains a list of 146 discovered at the Cape of Good Hope Observatory. The position angles, distances, and magnitudes of the components and their places for 1900.0 are given. The closest pair is 0.6". Recent observations of the southern sky by Dr. T. J. J. See, while at Mr. Lowell's temporary observatory at the city of Mexico, discovered several new pairs, and several double and wide pairs which he resolved into triple systems. One which deserves particular mention is Mu Velorum, of nearly the third magnitude, and its companion, of the eleventh. This pair was previously discovered by Russell, of Sydney, Australia. Dr. See, in the "Astronomical Journal," No. 399, says: "Assuming that there is no typographical error in the angle given, it is clear that we have here a case of rapid, direct motion; a change of 57.2° in 16.72 years implies a period not far from a century." He finds that Alpha Phenices and Eta Centauri are binaries, and many others discovered subsequently.

Prof. S. W. Burnham, of the Yerkes Observatory, the distinguished double-star discoverer and observer, condemns many of the pseudo orbits of alleged binaries. Among those recently criticised are Lambda Cygni and Xi² Aquarii. He gives in several astronomical publications diagrams of the supposed orbits, and shows in the case of Lambda Cygni that a straight line satisfies the observed positions of the components better than Prof. Glasenapp's ellipse with its 93.4-year period, and that in the case of Xi² Aquarii it may have any period between three hundred and fifty years and 1,578.33 years. All this, he says, is the result of a premature attempt to fit orbits to such stars after they have been observed through but a small part of their orbits. These facts are strikingly exhibited in his drawings and comments thereon.

Spectroscopic Binaries.—Prof. Pickering announces the spectroscopic duplicity of Mu¹ Scorpii from an examination of the Draper Memorial photographs by Prof. Bailey, Arequipa. The spectrum is of the first type, and also contains lines characteristic of the Orion stars. The spectra of both Mu¹ and Mu² are close beside each other on the negative plate, and on some plates they present a very similar appearance. The lines in the spectrum of Mu² are always single and sharply defined, but those of Mu¹ sometimes grow broad and hazy, and then double. The same changes were noted by Mrs. Fleming on plates taken in 1892 (Oct. 2) and in 1894 (July 20 and 31), which leaves no doubt that one of the components is a single star; the other, Mu¹, a spectroscopic double. The period of Zeta Ursæ Majoris is fifty-two days, of Beta Aurigæ 3^d 2^h 46^m, while that of Mu¹ is only 3^d 4^h 42^m 30^s in a circular orbit. Another spectroscopic double having the same period as Beta Aurigæ is the star Lacaille 3105—right ascension 14^h 40^m 7^s; declination south $25^\circ 5' 18''$.

Prof. A. Belopolsky has found that Alpha¹ Geminorum, one of the companions of Castor, is also a spectroscopic binary. In January, 1896, he began the investigation of this star by spectrum photography, and he found as the result of 30 photographs

taken between January and April that the star is a close spectroscopic binary. With an exposure of one hour the spectrum showed H. lines and the stronger lines of iron. On reducing the several values obtained, it was found that there was a periodicity of 2.9 or three days. The velocities and the values for the period obtained during January and February, compared with the others, showed a discrepancy that can not yet be explained. This may be caused by a rapid motion of the line of the apsides in the direction of the orbital motion, or perhaps an odd number of half periods have been lost or gained between April and November. The photographs obtained at Cambridge, however, appear to support Belopolsky's important discovery. We have here, in the triple system of Castor, two periods—one of about one thousand years, the other of about three days.

A telescopic binary is a double star both components of which are visible with a telescope and are found to revolve around the common center of gravity. A photo-spectroscopic binary is also a double star, only one component of which is telescopic, the other being a star that no man has seen. If the orbital plane of a binary is coincident with the solar system, there must be a time at each revolution when one star will be approaching the earth and the other receding from it, and *vice versa*. As a spectroscope takes cognizance of the motion of a star toward or from us in the line of sight (which a telescope does not), and as each star gives a spectrum crossed by lines, it will periodically happen, while neither star is moving toward or from us, that all lines on the photographic plate will appear single. When one star begins to approach and the other to recede from us the lines will appear hazy, but when the approach and recession of the stars reach a maximum the lines in the approaching star will be displaced toward the violet, and those from the receding star toward the red end of the spectrum, causing the lines to appear double. These lines, being photographed at short intervals, produce an imperishable record for comparison to ascertain the period of revolution by the periodic doubling of the lines. But for the assistance of photography this feat never could have been accomplished. In the case of μ^1 Scorpii their velocities in all probability amount to several hundred miles a second.

Telescopic Binaries.—The discovery of suns revolving around suns, and the computation of their orbits and periodic times, has to many astronomers a resistless charm. New ones are constantly being added to the long list of over 1,000 known binary stars. In the time of Sir William Herschel but few were known, though he discovered 50. Xi Ursa Majoris was then found to be the shortest period binary known—sixty-one years; then came Eta Coronæ, with a period of forty-two years, and, later, Zeta Herculis was found to have a period of thirty-four years. Twenty years ago 42 Comæ Berenices was ascertained to have a period of twenty-five years, and in 1887 the components of Kappa Pegasi were found to revolve round each other in 11.5 years; and now comes a candidate for the shortest known, only 5.5 years. The star is Burnham's 883 = Laland 909. The shortness of its period brings us a long way over the gap that separates the telescopic from the spectroscopic binaries. The discovery of its periodic time was lately made by Dr. T. J. J. See. His opinion is fortified by a long series of measures, which leave no doubt that his conclusions are correct. The apparent orbit of this rapid binary is: Length of major axis, 0.67"; length of minor axis, 0.16"; angle of major axis, 19.5°; angle of periastron, 318°; distance of star from center, 0.07"; period, five years and a half.

Rediscovery and Orbit of Sirius.—This, the brightest star in the heavens, often called the dog star, was discovered to be double by Alvan G. Clark in 1862, for which he received the Royal Astronomical Society's gold medal. In consequence of the variation of its proper motion, it was long before assumed to be double, being swayed hither and thither by an unseen companion, and a period was computed for it of about forty-eight years. Of course the pair were watched with great care, but the observed path was too short from which to deduce even an approximate orbit, and this resulted in the computation of 12 orbits, varying in periods from 49.5 to 58.5 years. The last view of its companion was obtained by Burnham in 1890 with the 36-inch telescope at the Lick Observatory, and no telescope in the world could follow it later. For six years and a half it was beyond the reach of any telescope. In the latter part of 1896 Prof. Aitken, with the great Lick glass, rediscovered it. The arc passed over by the companion during its invisibility was 170°. Its position angle when discovered by Clark was $85^\circ + 170^\circ = 225^\circ$ of arcual motion, from which its period was computed by Burnham, who made it 51.8 years. The apparent orbit is given in "Monthly Notices" for April, 1897, as: Length of major axis, 14.48"; length of minor axis, 9.32"; star from center, 4.09"; angle of major axis, 54.4°; angle of periastron, 251.9°; period, 51.8 years.

Dr. See announces that the binary star Burnham 395 = 82 Ceti revolves in sixteen years. The companion is now near periastron, angle 278°, distance 0.22". This star has not heretofore been suspected to be a short-period binary, but it appears from Dr. See's investigations that $1\frac{1}{2}$ revolution has been completed since Burnham's discovery in 1875, making it one of the most interesting binary systems in the heavens.

Star Systems.—That the heavens afford many star systems besides the clusters is of universal belief, but Proctor's opinion that five of the seven stars comprising the bowl of the great dipper in Ursa Major are thus associated does not meet with general acceptance. In the first place, their proper motions are so small as to form a very slender thread on which to hang so strong a theory. It is, however, favorable to the idea of a physical connection between the five that they all present the same kind of spectrum (A). But Eta, admittedly not belonging to the system, also gives the spectrum A, while Alpha has the spectrum K, and has less than half the velocity in the line of sight of the other six.

Variable Stars.—The discovery of variable stars has been pushed with an energy heretofore unknown. As its prosecution requires no expensive instruments, it opens a fascinating field to amateurs. Dr. S. C. Chandler, editor of "Gould's Astronomical Journal," the best authority on variables, has published in the journal three extensive catalogues, which give full details of 8,622 members. It is the most extensive catalogue extant. The subject is too voluminous to be dealt with here. Only a few of the more remarkable can be noticed. Prof. E. C. Pickering, in "Astronomische Nachrichten," No. 3321, gives an account of the discovery by Prof. Bailey, at Arequipa, of numerous variable stars in certain globular clusters, and their entire absence in others, apparently belonging to the same class. Since then he has found many more, so that their total number now known, including a few found at Cambridge, is 310. The number in only two can be noticed. In the Omega Centauri cluster Prof. Bailey has detected 60, and in Messier 5 (New General Catalogue 5904) 63 have been discovered. In Messier 3 about one ninth of the stars are variable, while in the cluster in Hercules not one varies.

The number thus far discovered averages 22 to a cluster, which is out of all proportion to the average number of variables scattered over the heavens.

Discovery of Nebulæ.—Since the last report Dr. Lewis Swift has discovered and published the places and descriptions of 130 new nebulæ. They are mostly southern, beyond the reach of Sir William Herschel and of all northern observatories. Isaac Roberts, in photographing clusters and nebulæ, has found on his negative plates 17 new nebulæ not in any catalogue. One of them, in right ascension 1^h 39^m 39^s; declination north 26° 37' 42", is remarkable, being only 8' from that large well-known one in the triangles (New General Catalogue 672). He describes it as being nearly as large and bright as the well-known nebula. The central part consists of six faint stellar condensations, forming a straight line. It is certainly singular, as he says, that this nebula has so long escaped detection. The writer, however, can not subscribe to his opinion, that it has probably come into visibility during the past half century. If he is right in his bold conclusion, it raises a new and curious question of mighty import. Astronomers are familiar with new stars, but the advent of new nebulæ is a novelty needing investigation.

Rotations of Mercury, Venus, and Uranus.—Herr Leo Brenner, of the Manora Observatory, claims that he has determined the rotation periods of all these planets. He has forwarded 20 drawings of Mercury, which show not only evidence of change in the planet's markings, but also polar snow caps, which on one occasion were as bright as those on the poles of Mars, from which he argues that the observed markings prove that the slow rotation of the planet in eighty-eight days is an impossibility. The discussion of the rotation periods of Mercury and Venus has assumed vast proportions, with exhibition of some asperity. In "Monthly Notices" for January, 1897, Percival Lowell, from his private observatory at Flagstaff, Arizona, publishes some interesting observations made by him on Mercury and Venus. He finds the markings on Mercury to be conspicuous, and easier, in comparison, to see than any of the markings on Mars except the seas. They were visible at all times when the seeing was good. Those on Venus are long and narrow, and perfectly distinct. The disk is quite clear of clouds, and is brightened by a luminous atmosphere. There is no evidence of the existence of polar ice caps. From careful drawings, he concludes that the period of rotation is undoubtedly equal to her revolution—two hundred and twenty-five days. In a recent number of the "Publications of the Astronomical Society of the Pacific," Prof. Holden says that he has observed Venus from 1873 to 1890, with telescopes of 6, 16, 26, and 36 inches aperture, without seeing markings of the kind depicted by Mr. Lowell, and adds: "I have no hesitation in saying that such markings as he has shown did not exist on Venus before 1890, and it is my opinion that they do not now exist on the planet, but are illusions of some sort." Herr Brenner makes the rotation period of the planet Uranus about eight and a quarter hours.

Mars.—The long-disputed question of the value of the compression of Mars has at length been settled beyond further controversy. The eye, in measuring disks, is influenced by errors of estimation in different directions with respect to the vertical line. Since the use of small reversion prisms on the eyepiece of the heliometer has been adopted, in which the diameter of a planetary disk can be made to appear in any direction with respect to the vertical, it is possible to get free from these abnormal eye estimations. Prof. W. Sehnur, of the Royal Observatory, Göttingen, using the Repsold heliometer objective of 162 millimetres in diameter,

armed with a power of 174, from the mean of several comparisons made the equatorial diameter = 6.256", and the polar = 6.120", compression = $\frac{1}{47}$.

Observations made on the south polar spot on Mars by O. Lohse give ample reason for belief that the position of its center has not varied for more than one hundred years, and that after entire dissipation of the snow it would again form around the same point. During the opposition of Mars in 1896 the reappearance of the polar cap was watched with great interest after its disappearance in 1894. Mr. Crulli was the first to detect the newly formed cap in June, 1896, and from his micrometrical measures the following co-ordinates were deduced: Areographical longitude, 27.6°; polar distance, 5.9°. The Martian year consists of six hundred and sixty-eight Martian days, which for the northern hemisphere are distributed as follows: Spring, one hundred and ninety-four; summer, one hundred and seventy-six; autumn, one hundred and forty-two; and winter, one hundred and fifty-six. Confirmatory of the existence of canals and seas on Mars is the statement of Capt. P. B. Molesworth, of Ceylon, who, with a reflecting telescope of 9½ inches aperture, without any previous knowledge of Schiaparelli's drawings, has drawn the canals and seas, which differ but little from those of Schiaparelli. Lowell, and others. Other astronomers besides those mentioned above have filed claims to their discoveries, notably Herr Brenner, who claims to have seen as many as 31 canals not before recorded. During the last opposition the canals were seen double by several observers. An important point, if true, in connection with the doubling of the canals; is the liability of some of the dark spots, called lakes, to become double also, which raises the question whether the duplicity of the streaks is not after all an optical illusion caused by some defect in the eye or the telescope.

Asteroids.—The following asteroids, or planetoids, or minor planets, as they are variously called, have been discovered since the last report:

No.	Name.	Discoverer.	Date.
418.....	CV.....	Wolf.....	Sept. 7, 1896.
419.....	CW.....	Wolf.....	Sept. 7, "
	CX.....	Wolf.....	Sept. 7, "
420.....	CY.....	Wolf.....	Sept. 7, "
421.....	CZ.....	Wolf.....	Sept. 7, "
422.....	DA.....	Witt.....	Oct. 8, "
	DB.....	Charlois.....	Dec. 7, "
425.....	DC.....	Charlois.....	Dec. 28, "
	DD.....	Charlois.....	Dec. 31, "
	DE.....	Charlois.....	Dec. 31, "
	DF.....	Charlois.....	Dec. 31, "
	DG.....	Charlois.....	Aug. 28, 1897.
	DH.....	Charlois.....	Aug. 25, "
	DJ.....	Charlois.....	Aug. 27, "

The following have received names:

324	Bamberga.	348	May.	416	Vaticani.
342	Endymion.	350	Ornamenta.	420	Bertholda.
345	Terceania.	354	Eleonora.	421	Zührlingia.
346	Hermontaria.	412	Elizabetha.	422	Berolina.
347	Pariana.	413	Edburga.		

Jupiter.—The rapid changes in Jupiter's north equatorial belt are attracting much attention, especially its great increase in width, which is now nearly equal to that of the southern. This is more remarkable as following a period of quiescence. The cause of these changes in his atmosphere, the sudden appearance of spots (white, black, and tinted), and of his immense belts and their occasional doubling, and projecting of marginal spurs from them, often fantastic, and numerous other phenomena must ever furnish fruitful questions for speculation. Many of these details were seen on Feb. 23, 1897, the faintest of which were seen only by glimpses and vanished before they could be

sketched. The great brick-red oval spot, first seen in 1878, is still faintly visible. It is 30,000 miles in length and 7,000 miles in breadth. Its persistence of form is not the least remarkable feature. For years it had a translatory motion of its own, which has now ceased. It is doubtful if photography will ever avail, as much, as the image of the entire planet on the negative plate would be only one sixteenth of an inch in diameter, and of course details would be microscopic. Jupiter's fifth satellite was measured on Feb. 27, 1897, by Prof. J. M. Schaeberle at the Lick Observatory, the places agreeing with Marth's ephemeris fairly well. From long-continued observation of Jupiter with the Göttingen heliometer, Prof. Schur has determined the values for the equatorial and polar diameters of the planet to be 37.42" and 35.13" respectively. The apparent diameters generally adopted by astronomers are 49.9" in opposition and 30.4" in conjunction, or 40.15" at mean distance. His diameter is usually given as 87,900 miles, and his spheroidity about $\frac{1}{15}$ or 5,500 miles, surpassing in this respect all the planets except Saturn.

Comets.—Swift's periodic comet was not found on its return in January, 1897. As its period is five and a half years it, like nearly all others having a fractional year period, can only be seen at alternate returns to perihelion, as the half year brings the Sun in the neighborhood of the comet.

Comet f 1896 (Perrine's).—This periodic short-period comet is another addition to the long list of Jupiter comets. It was discovered by Perrine at the Lick Observatory on Dec. 8, 1896. It had a star-like nucleus and a tail 30' in length. Like all short-period comets, except Eneke's, it was not visible to the naked eye. Its elements, except in one particular, bear a close resemblance to those of the long-lost divided Biela's comet. The elements of both are placed side by side for comparison:

PERRINE'S COMET.	BIELA'S COMET.
Perihelion passage, Nov. 24-6537 Berlin mean time.	Longitude of perihelion..... 109° 8'
Node to perihelion..... 163° 33' 30.0"	Longitude of node..... 245° 52'
Longitude of node..... 246° 34' 35.9"	Inclination..... 12° 33'
Inclination..... 13° 40' 25.9"	Perihelion distance..... 0.8606
Period..... 6.441 years.	Period..... 6.62 years.

Comet 1897 I (Perrine's).—This comet's orbit is a parabola, and therefore it appeared for the first and last time, as only comets moving in elliptical orbits can ever visit our system the second time. Its elements are as below. It was discovered Nov. 2, but reckoned in the order of perihelion passage, instead of date of discovery, it becomes Comet I 1897. Perihelion passage, 1897, Feb. 8.1762, Berlin mean time; node to perihelion, 172° 20' 59.7"; longitude of node, 86° 17' 51.1"; inclination, 146° 8' 24.9"; perihelion distance Earth = 1, 1.062254.

D'Arrest's Comet.—This long-known short-period comet was found at the Lick Observatory by Perrine on June 28, 1897, in right ascension 30° 11' 9", polar distance 83° 46' 29". This is its seventh return since its discovery by D'Arrest in 1851. It is the faintest of all the short-period comets and often escapes detection, though always carefully and systematically searched for.

The "Bulletin Astronomique" for March, 1897, contains a thorough investigation by L. Schulhof of the orbit of Comet Swift 1895 II previous to 1884. He had previously suggested the probable identity of the comet with that of Lexell, and requested astronomers to obtain as long a series of observation of it as possible, in order to obtain its elliptical elements with the utmost accuracy. Those made at the Lick Observatory extended over five months and enabled the elements to be ascertained

with considerable accuracy. The daily motion is 490.51" and the period 7.2043 years. The probable error of daily motion is only half a second of arc, making an error in the period of only three days, but, small as it is, it prevents the accurate computation of the perturbations by Jupiter back to the year of Lexell's discovery in 1779, since which time it has been lost. Even in 1838 it is impossible to say within forty days when the comet was at any assigned point of its orbit. Until this comet has been observed at another return it can only be assumed that the identity of the comet with Lexell's is very probable. It may be again visible in 1902, but it will be very faint and in considerable south declination. If it then escapes detection there is no hope of seeing it before 1931.

Gegenschein.—This is an exceedingly faint circular patch of evenly diffused light seen by the naked eye only, always in the zodiac and opposite the Sun or 180°. Its diameter varies somewhat, being generally about 20° in diameter, and sometimes as much as 25°. Dr. E. E. Barnard sees a zodiacal band 3° or 4° in width extending from it to both the morning and evening zodiacal light. He has been assiduous in its observation for many years, as has also Prof. Searle, of Harvard College Observatory. Barnard has recently described in "Gould's Astronomical Journal," No. 403, May, 1897, its various appearances as follows: "When first seen in autumn it is unaccompanied by a zodiacal band, but later, when its right ascension is 0^h 0^m, it becomes elliptical and the band appears extending to the apexes of the evening and morning zodiacal light. There appears at different times an oscillation east and west of about 1°, with a tendency to a less longitude than 180°. It is impossible to explain on any hypothesis the cause of this light or counter glow, as it is often called.

The writer of these notes, after much reflection resulting from his own observations, suggests the following as the cause of the *Gegenschein*—viz., that it is caused by refracted and reflected sunlight precisely in the same manner as the red Moon when totally eclipsed. The sunlight passing tangentially through the Earth's atmosphere, which forms the boundary between sunlight and darkness, is refracted down upon the Moon and then feebly reflected to the Earth, rendering her visible, although totally immersed in the Earth's shadow. In this case it is the Moon that is the reflector, but in the case of the *Gegenschein* it is cosmic dust that is the reflector. That our atmosphere, and indeed all space, is impregnated with dust, is conceded by all astronomers. That the light is always opposite the Sun is a significant point in favor of this hypothesis. The subject is attracting increased attention, and there is hope that the cause of this strange phenomenon may be satisfactorily explained.

Zodiacal Light.—Another phenomenon, equally inexplicable and perhaps indirectly allied to the *Gegenschein*, is the zodiacal light, visible as a broad conical luminous beam in the west after sunset during the autumn and winter months and in the east before sunrise during the spring months. The spectroscope has recently shown that the light is sunlight reflected from some kind of noncoherent matter in the solid form. It has been seen circling the sky from the western to the eastern horizon, and must be treated, therefore, as a luminous ring circling the Earth instead of the Sun.

Unification of Time.—The international unification of time has been adopted in nearly every country except France, Spain, and Portugal. England, Belgium, Holland, and Luxemburg use western European time. Central time is adopted by Italy, Switzerland, Germany, Denmark, Norway, and Sweden. Russia, Roumania, Bulgaria, and Euro-

pean Turkey use eastern time. In Natal, Australia, New Zealand, and Japan the time zones used are eight, nine, ten, and eleven hours fast of Greenwich. Canada and the United States use four time zones, four, five, six, seven, and eight hours slow of Greenwich time. Since May, 1897, Belgium has reckoned time continuously from 0^h to 24^h—that is, the next hour after noon will be thirteen o'clock.

Largest Spectroscope.—The largest spectroscope in the world has just been completed by John A. Brashear, of Allegheny, Pa., for Dr. Hans Hauswaldt's Astronomical and Physical Observatory, Magdeburg, Germany. It is 21 feet long and requires for working it a room 28 feet square. The size of the grating is 6 inches, and it is ruled with 18,333 lines to the inch, between which there is no difference greater than three millionths of an inch. It reveals in the solar spectrum over 2,000 lines belonging to iron. In the infancy of spectroscopy the sodium line (Fraunhofer's D) was considered single, which the spectroscope of to-day doubles, called D². This mammoth instrument shows each to be double and so wide apart are the pairs that 15 lines are revealed between them. Some of, them, and perhaps all, may turn out to belong to our atmosphere. It also doubles the famous helium line, or D³. The spectrum of the Sun has been photographed by it to 60 feet in length, crowded with lines from end to end. It is so arranged that, no matter what part of the spectrum is desired to be photographed, the negative plate is always in focus. The following method of photographing the solar spectrum and that of other heavenly bodies can not fail to settle many disputed points and may originate as many new ones as it settles. Suppose it is desired to ascertain whether any terrestrial substance, say calcium, is in the condition of a gas in the Sun's atmosphere: The sunlight is turned into the slit of the spectroscope, narrowly closed for sharpness of the lines to be photographed, and photograph the center of the Sun on the center only of the negative plate. An opaque bar is now placed over this part of the plate. The electric arc light, in which has been placed in the concavity of the lower carbon pencil a small piece of calcium, is turned on the slit and the spectrum of calcium is photographed on each side of the opaque bar. When the plate is developed there is a picture on which the calcium spectrum with its lines is shown, and if there be any in the Sun's spectrum they can in a moment be identified by their coincidence. If this be the case we know that calcium exists in the state of vapor in the Sun's atmosphere.

Yerkes Observatory.—The largest and most powerful refracting telescope in the world has recently been successfully mounted in the Yerkes Observatory, at William's Bay, Wisconsin, near the shore of Lake Geneva, 75 miles north of Chicago. The glass, 40 inches of clear aperture, has been by experts pronounced of superior excellence and has been received by the trustees. Much is expected of this gigantic telescope, which, from some discoveries already made and reported, will not disappoint the generous donor, Charles T. Yerkes, of Chicago. The following data will give the reader something of an idea what the making and mounting such a telescope in time, skill, labor, patience, and money means. The amount of the latter, including the observatory, was more than \$1,000,000. The two disks of crown and flint glass, 41½ inches in diameter, each free from striae, bubbles, and inequality of density, cost in Paris, in the rough, about the shape of two large, thin grindstones, \$40,000. Four years were spent by the late Alvan G. Clark, at Cambridgeport, Mass., in grinding them to the right curves and polishing them. The clear available aperture is 40 inches, and so perfect are the figures

of the four surfaces that every ray of light from a star falling on the great disks is refracted and dispersed by the crown disk and again oppositely refracted by the flint to a very small point. The price of the completed objective, as an object glass is called, with its cast-iron cell, was \$100,000. It weighs 1,000 pounds. The outer crown lens is 2½ inches thick at the center and ¾ inch at the edge, and weighs 200 pounds. The heavy flint-glass disk is 2 inches thick at the edge and 1½ inch at the center, and weighs over 300 pounds. The two glasses in their cell are 8¾ inches apart. The resulting focus of the combined lenses is 66 feet. The tube is of sheet steel, 64 feet long and 52 inches in diameter at the middle, tapering toward the ends, and weighs 6 tons. The pedestal and head, which are of cast iron, rise to a height of 43 feet, and weigh 50 tons. A winding staircase ascends to the driving-clock room and reading circles and to the balcony surrounding the head. The polar axis is of steel, 15 inches in diameter, 13½ feet long, and weighs 3½ tons. The declination axis is also of steel, 12 inches in diameter, 11½ feet long, and weighs 1½ ton. The driving clock weighs 1½ ton, and is wound automatically by an electric motor. A double conical pendulum controls the driving clock, and is geared to the main driving wheel, 8 feet in diameter, which, together with the tube, weigh 20 tons, driven in exact sidereal time. The circular floor, 75 feet in diameter, is raised and depressed 25 feet by an electric motor by simply touching a button, so that a high observing chair is not required. The center of motion of the telescope is 70 feet from the floor. The dome is the largest in the world, and weighs 70 tons.

Publications.—Harvard College Observatory has lately published two volumes of its annals, one concluding the zone observations, which has extended through Vols. XV, XVI, XXV, XXXV, and the one just issued, XXXVI. The other is devoted to a description of the spectrum of bright stars photographed with the 11-inch Draper telescope, and discovered by Miss A. C. Maury. Two hundred and fifty pages of Vol. XXV are devoted to discussion of the proper motions of the stars, deducible from the observations. In a series of preliminary notes she has discussed the relation of the spectra of the Orion stars to that of helium.

Prizes.—The following prizes have been awarded to astronomers since the last report: The Laland prize of 540 francs was awarded to M. Puitsenx for his selenographical work. The Valz prize was bestowed on M. Possert for the reduction of old observations previously inaccessible. The Janssen prize was given to M. Deslandres for his studies and investigations in spectroscopy. The Mrs. Jackson-Gwilt medal, of the Royal Astronomical Society of England, was awarded for the first time to Dr. Lewis Swift, of the Lowe Observatory, Echo Mountain, California, for his numerous discoveries of comets and nebulae. It consisted of a large bronze medal and \$125.52 in cash. The prizes of the Paris Academy of Sciences have been awarded as follows: The extraordinary prize of 6,000 francs has been divided between M. Darrions and to M. Banle, for the application of the gyroscope to determine the altitude of the stars at sea. M. Faye, the distinguished astronomer of France, has been awarded a gold medal by the Paris Academy, in honor of his jubilee, he having been elected a member in 1847. The Royal Astronomical Society of England bestowed its gold medal on Dr. E. E. Barnard for the discovery of the fifth satellite to Jupiter, and other important discoveries in astronomy. The German astronomer Prof. Dr. Arthur Auwers, has received from the German Emperor a gold medal for his services to science, especially to astronomy.

M. Alfred Nobel, the inventor of dynamite, has in his will left \$10,000,000, the yearly interest of which is to be divided annually into five equal portions, two of which will embrace astronomical progress. All the five parts are open to the world. On the basis of 4 per cent. interest each prize will amount to \$80,000. The French Academy are administrators of M. Pierre Lasserre's legacy of 580,000 francs. It is divided into three parts, and the interest of one of them applies to astronomy. Mr. H. Welde, of France, has given 27,000 francs to provide a fund to be devoted to the purpose of founding an annual prize. The award is to be made for the discovery or work in astronomy and physics which in the opinion of the Academy of Sciences shall be the most deserving. Miss Catharine W. Bruce, of New York, has given a sum to the Astronomical Society of the Pacific for the foundation of a gold medal, to be awarded annually, as a recognition of services to astronomy, and to be given to the one judged most worthy, without restriction of race, nationality, or sex. No person shall be twice a recipient.

The Belgian Government has offered a sum of 300,000 francs, without distinction of nationality, to the authors of the best solutions of certain specified problems. Of these, five are in connection with practical astronomy, three prizes being offered for each; nine for problems in theoretical astronomy and physics, for each of which two prizes are offered. A complete list of these problems is given in "Nature" for Feb. 18, 1897.

Lunar Photography.—One of Prof. Dr. Weineke's great enlargements of the lunar crater Maginus has been issued as a specimen plate, giving an idea of what the entire series will be when the work is completed. The scale is that of 10 feet for the entire Moon's diameter in the case of the Lick negatives, and 13 feet in those taken at the Paris and Arequipa observatories.

Solar Eclipses on Jupiter.—An elaborate calculation of these phenomena reveals the fact that in a given point on Jupiter's equator there may be three total eclipses in one day, one in the morning, one at noon, and another in the afternoon, each of the former and latter lasting 21^m 29^s, and the noon eclipse lasting 40^m 58^s. Before and after the noon eclipse occurs two periods of sunshine, each lasting 53^m 45^s. On leaving the equator, the intervals of sunshine diminish, until latitude 16° 40' 33" is reached, when the three eclipses meet, but do not overlap, where the morning and afternoon eclipses will last 43^m 4^s. It is remarkable that for a certain period three fifths of the Jovian day will be turned into night, or, including natural night and totality, nearly all the time shrouded in darkness.

AUSTRALASIA, one of the grand divisions of the globe, consisting of the continent of Australia and island colonies of Great Britain, with intervening islands. With the exception of the Dutch and German portions of New Guinea, the German protectorates of Bismarck Archipelago and the northern Solomon Islands, the French colony of New Caledonia, and the New Hebrides and smaller islands under native rule, all the islands of Australasia are British colonies or dependencies. The five colonies in Australia and New Zealand and Tasmania are self-governing, having each its representative legislature and responsible ministry, disposing of its own revenues, and making all its laws under a charter granted by the British Parliament, subject to a certain reserved veto power of the Imperial Government and the appellate jurisdiction of the Judicial Committee of the British House of Lords in matters of imperial concern. The Crown is represented by a governor in each colony, who as the executive head of the colonial Government acts on

the advice of the responsible ministers, selected from the party or combination that forms the majority in the Legislative Assembly. Fiji is a Crown colony, in which the natives are governed partly by their own chiefs in accordance with their traditional customs.

Area and Population.—The area in square miles of the British Australasian colonies, according to the most recent estimates, and their estimated population on Dec. 31, 1895, are given in the following table:

COLONIES.	Area.	Population.
New South Wales.....	310,700	1,277,870
Victoria.....	87,884	* 1,171,441
Queensland.....	668,497	460,550
South Australia.....	903,690	352,653
Western Australia.....	975,920	* 132,050
Tasmania.....	26,385	† 146,667
New Zealand.....	104,471	‡ 703,360
Fiji and Rotuma.....	8,045	121,867
Total.....	3,085,592	4,372,461

* June 30, 1896. † Census of 1891. ‡ Census of 1896.

The movement of population for the several colonies in 1895 was as follows:

COLONIES.	Marriages.	Births.	Deaths.	Excess of births.	Net immigration.
New South Wales..	8,030	38,775	14,914	23,861	9,717
Victoria.....	7,146	33,706	15,636	18,070	* 7,687
Queensland.....	2,821	14,874	5,152	9,722	5,673
South Australia...	2,048	10,537	3,921	6,616	* 3,727
Western Australia.	633	2,373	1,604	769	18,394
Tasmania.....	847	4,790	1,811	2,979	1,599
New Zealand.....	4,110	18,546	6,863	11,683	895
Fiji and Rotuma†.	.....	4,258	4,945	† 687	.....

* Net emigration. † 1894. ‡ Excess of deaths.

During ten years the increase in the population of New South Wales was 288,530, over 82 per cent. of which was the natural increment of the population. The population of New South Wales comprised 685,160 males and 592,710 females. The population of Sydney, the capital, was estimated at 408,500, including suburbs. The arrivals by sea into the colony during 1895 numbered 76,051, and the departures 66,334. The number of Chinamen arriving was 94, while 413 left the colony. Every Chinese immigrant must pay a poll tax of £100. There were 2,563 state schools in 1895, with 4,477 teachers, 216,396 children enrolled, and 139,978 in average attendance. Of 882 private schools, with 51,563 pupils, 286 were Roman Catholic, with 35,162 pupils.

About 55 per cent. of the population of Victoria is urban. Besides Melbourne, the capital, which had 447,565 inhabitants in 1895, there are the towns of Ballarat, with 45,336, Bendigo, or Sandhurst, with 42,381, Geelong, with 24,575, and numerous smaller places. The number of marriages in 1895 was 7,146; of births, 33,706; of deaths, 15,636; excess of births, 18,070. The number of arrivals by sea in 1895 was 81,199; of departures, 88,886. Of the immigrants 55,481 were males and 25,718 females. The excess of emigrants over immigrants, due to departures for Western Australia and other younger colonies, has continued four years, amounting to 6,263 in 1892, 6,413 in 1893, 5,849 in 1894, and 7,687 in 1895. State education is secular and compulsory between the ages of six and thirteen. There were 1,922 state schools in 1895, with 4,483 teachers and 232,052 enrolled pupils, with 134,572 in average attendance. There were besides 867 private schools, with 38,062 scholars. The total cost of public primary education in 1895 was £620,988. The schools are entirely supported by the state.

Of a total population of 393,718 in Queensland

at the census of 1891 the northern district contained 78,077, the central district 46,857, and the southern district 268,784. Of the total 176,971 were born in Queensland, 17,023 in New South Wales, 7,462 in Victoria, 3,851 in other Australian colonies, 77,187 in England, 43,036 in Ireland, 22,400 in Scotland, and 14,910 in Germany. The number of immigrants in 1895 was 30,066, and of emigrants 24,393. The arrivals of Chinese were 561, and departures 505; arrivals of Polynesians numbered 1,312, and departures 773. The number of marriages in 1895 was 2,821; of births, 14,874; of deaths, 5,152; excess of births, 9,722. There were 738 elementary schools in 1895, with 1,535 teachers and an average attendance of 48,270 pupils, besides which there were 183 private schools, with an average attendance of 10,146 pupils. The cost of the state schools in 1895 was £172,934. Education is made compulsory by statute, but the law is not enforced.

The population of South Australia consisted of 181,161 males and 171,492 females. In the northern territory there was a population of 4,752, of whom 382 were females. Adelaide, the capital, had 144,352 inhabitants. The number of marriages in 1895 was 2,048; of births, 10,537; of deaths, 3,921; excess of births, 6,616. The number of immigrants in 1895 was 36,762, and of emigrants 40,489. Education is free, secular, and compulsory. Public lands are set apart for the support of the schools, of which there were 634, with 59,093 pupils, including 352 provisional schools, in 1895.

The population of Western Australia increased from 29,708 in 1881 to 49,782 in 1891, which was at the rate of 6·75 per cent. a year. In the next five years the increase was 165 per cent. Of the population in 1896 the males numbered 93,704, and the females 38,346. These figures do not include the aborigines, whose numbers can not be estimated, as they live mostly in regions not yet explored. There were 5,670 of them in service with the whites in 1891. The population of Perth, the capital of Western Australia, was estimated at 19,533 in 1895. Of the white population 13·2 per cent. could not read nor write in 1891. Education is compulsory and gratuitous. There were 133 Government schools in 1895, with 4,685 pupils in attendance, and 19 assisted schools, with 1,708 pupils.

The population of Tasmania increased between 1881 and 1891 at the rate of 3·84 per cent. per annum. At the latter date 107,901 of the population were natives of this colony, while 26,975 had come from the British Islands and 7,328 from Australia, and there were 918 Germans and 943 Chinese. Since then about 3,000 more persons have been born every year than have died, but for a part of the time the emigration has exceeded the immigration. Education is compulsory, but still 25 per cent. of the population in 1891 could not read and write. There were 258 elementary schools in 1895, with 19,907 pupils enrolled, and 172 private schools, with 7,073 pupils. The Government expended in that year £35,501 on education.

The population of New Zealand on April 12, 1896, was composed of 371,415 males and 331,945 females. The increase over the preceding year was 2·3 per cent. The district of Auckland, with an area of 25,746 square miles, had 153,564 inhabitants; Taranaki, 3,308 square miles, 31,175; Wellington, 11,003 square miles, 121,854; Hawke's Bay, 4,410 square miles, 34,038; Marlborough, 4,753 square miles, 12,483; Nelson, 10,269 square miles, 35,734; Westland, 4,641 square miles, 14,469; Canterbury, 14,040 square miles, 135,858; Otago, 25,487 square miles, 163,944. The population of the North island was 340,631; of the South island, 362,236; of Stewart's island, 252; of Chatham Islands, 234; of Kermadec

Islands, 7. Including Maoris, the total population shown by the census of 1896 was 743,165. There were 3,711 Chinese, of whom 26 were females. Of the Maoris 21,515 were males and 18,290 females. Their number includes 3,501 half-castes living as members of the tribes and 229 Maori wives of European husbands. Of the white population 391,735 resided in the rural districts, 307,294 in boroughs, 950 on adjacent islands, and 3,381 were on board ships. Wellington, the capital, contained 41,758 inhabitants in 1896, including suburbs; Auckland, 57,616; Christchurch, 51,330; and Dunedin, 47,280. The number of immigrants in 1895 was 21,862; of emigrants, 20,967. There were 1,464 primary public schools in 1896, with 3,386 teachers and 129,856 enrolled pupils, of whom 107,222 were in average attendance. Education is free, secular, and in the settled districts compulsory. The Maori schools numbered 69, with 127 teachers, and an average attendance of 2,084 scholars. The private schools, 298 in number, had 770 teachers and 14,659 pupils.

Finances.—The budgets of the several colonies for 1895 and the state of their debts for the fiscal year ending June 30, 1896, in New South Wales, Victoria, Queensland, and South Australia; on March 31, 1895, in Western Australia and Tasmania; on March 31, 1896, in New Zealand; and on Dec. 31, 1895, in Fiji, are shown in the following table:

COLONIES.	Revenue.	Expenditure.	Debt.
New South Wales.....	£9,251,845	£9,886,277	£62,263,473
Victoria.....	6,461,142	6,573,647	46,886,211
Queensland.....	3,641,583	3,567,947	31,873,934
South Australia.....	2,521,409	2,509,498	22,556,025
Western Australia.....	1,438,717	1,212,314	3,988,597
Tasmania.....	761,971	748,946	8,180,925
New Zealand.....	4,107,078	4,370,481	42,271,889
Fiji.....	78,240	76,204	221,037

Of the revenue of New South Wales £1,825,240 came from customs, £271,805 from excise, £318,301 from stamps, £27,658 from the income tax, and £123,109 from licenses, making £2,566,113 derived from taxation, while £2,018,196 came from land, £4,354,821 from services, and £312,715 from miscellaneous sources. Under the head of services is included the revenue from railroads, tramways, and the post office and telegraphs. The expenditure for railroads and tramways, exclusive of expenditure from loans, was £1,884,700; for posts and telegraphs, £746,208; for interest on debt and extinction of loans, £2,525,707; for education, £794,893; for immigration, £547; for other public works and services, £3,934,222. The average rate of interest paid on the debt, including the loan of £4,000,000 raised in October, 1895, was 3·71 per cent. Of the total debt 82 per cent. has been expended on railroads, tramways, telegraphs, water supply, and sewerage, which produce a net return of 3·15 per cent. on the capital outlay. Further loans were authorized for such purposes to the amount of £10,711,148.

Of the revenue of Victoria £2,712,313 were raised by taxation, including £1,809,140 from customs, duties, etc., £308,975 from excise, £120,093 from land tax, £139,084 from duties on estates of deceased persons, £20,774 from a duty on bank notes, £139,000 of stamp duties, £17,328 from business licenses, £17,123 from tonnage dues, etc., and £140,796 from the income tax. The revenue from railroads was £2,583,442; from posts and telegraphs, £509,721; from Crown lands, £473,580; from other sources, £434,096. Of the total expenditure £1,880,196 went to pay interest and expenses of the debt, £1,428,701 for working expenses of railroads, £303,976 for other public works, £652,752 for posts and telegraphs; for Crown lands, etc., £170,789; public instruction, science, etc., £604,109; charitable institutions, etc.,

£255,417; judicial and legal expenditure, £168,896; police and jails, £299,415; customs, harbors, etc., £97,595; mining, £85,696; defense, £194,020; other expenditure, £618,877. Of the total debt the sum of £36,835,095 was borrowed for the construction of railroads, £7,197,706 for waterworks, £1,105,557 for school buildings, and £1,613,702 for other public works.

Of the revenue of Queensland £1,290,795 were derived from customs, £70,417 from excise and export duties, £100,052 from stamps, £52,685 from licenses, £53,033 from the dividend duty, £358,279 from pastoral leases, £195,888 from other rents and sales of land, £1,052,692 from railroads, and £238,115 from posts and telegraphs. The chief expenditures were £1,286,531 for interest of the public debt, £63,138 for endowments of municipalities, etc., £222,850 for public instruction, £166,815 for the colonial Treasurer's department, £640,662 for operating railroads, £296,491 for posts and telegraphs, and £99,491 for the administration of public lands. The expenditure from loans during the year was £592,158, mostly for new railroads, roads and bridges, harbors, telegraphs, waterworks, etc. The sum of £157,192 was paid out for guarantees to sugar works. The estimated total revenue for 1897 is £3,667,940, and expenditure £3,601,500.

The revenue of South Australia is mainly derived from customs, excise, posts and telegraphs, railways, and lands, and the largest part of the expenditure is for the public works and railways, and for interest on the debt. The civil administration, judiciary, police, prisons, and defenses absorb about a third of the revenue. The receipts for 1897 are estimated at £2,583,732, and expenses at £2,590,597. Three quarters of the public debt has been spent in the construction of railroads, telegraphs, and waterworks. The railroads of this colony yield a net return of 3.65 per cent. per annum.

Of the total revenue of Western Australia in 1895 railroads, the post office, and leases of lands produced nearly half, and the rest, £621,825, was derived from customs.

In Tasmania the receipts from customs in 1895 amounted to £304,365. About three fifths of the revenue is derived from taxation, and one fifth from railroads, posts, and telegraphs. Of the expenditure 43 per cent. is for interest, 31 per cent. for public works, 8 per cent. for general administration, 5 per cent. for education and religion, 6 per cent. for charities and sanitation, and 7 per cent. for law and protection. The bulk of the debt pays 4 per cent. interest. The whole of it was raised for public works. The revenue for 1896 was estimated at £768,790, and expenditure at £743,655.

The revenue of New Zealand given above does not include receipts from sales of land, amounting to £126,571 in 1896. Of the ordinary revenue £1,649,310 came from customs, £707,188 from stamps, posts, and telegraphs, £1,182,280 from railroads, £271,399 from land taxes, and £92,778 from the income tax. The land tax rate for 1896 was 1*d.* in the pound. In addition there is a graduated tax ranging from $\frac{1}{2}$ *d.* on estates worth between £5,000 and £10,000 up to 2*d.* on land worth £210,000 or over. The rate of the income tax was 6*d.* in the pound on taxable incomes up to £1,000, the first £300 being exempt, and 1*s.* in the pound on all higher incomes. The chief branches of the ordinary expenditure were £1,683,775 for the debt, £744,200 for railroads, £453,156 for education, £338,836 for posts and telegraphs, and £196,999 for constabulary and defense. The ordinary revenue for 1897 is estimated at £4,699,558, including a surplus of £215,558 carried over, and the expenditure at £4,452,165, leaving an estimated surplus of £247,393. The total expenditure out of the public works

fund, including expenses of raising loans, from 1870 to 1896, was £29,954,651.

Commerce and Production.—The value of the foreign and intercolonial trade of the different colonies in 1895 is shown in the following table:

COLONIES.	Imports.	Exports.
New South Wales.....	£15,992,415	£21,934,785
Victoria.....	12,472,344	14,547,732
Queensland.....	5,349,007	8,982,600
South Australia.....	5,585,601	7,177,038
Western Australia.....	3,774,951	1,332,554
Tasmania.....	1,094,457	1,373,063
New Zealand.....	6,400,129	8,550,224
Fiji.....	241,759	332,209

There were 1,348,600 acres under cultivation in New South Wales in 1896, producing 5,195,312 bushels of wheat and 5,687,030 bushels of corn, besides barley, oats, potatoes, lucerne, and hay. There were 1,231 acres planted to tobacco; 32,927 acres to sugar cane, yielding 207,771 tons of raw sugar; 7,519 acres to the vine, yielding 885,673 gallons of wine and 7,149 gallons of brandy; and 11,956 acres to oranges, yielding 5,954,940 dozen. There were 47,617,687 sheep, 2,150,057 cattle, 487,943 horses, and 221,597 pigs in the colony in 1896. The quantity of wool exported in 1895 was 329,992,675 pounds, valued at £9,976,044. The value of the gold produced in 1895 was £1,315,929; of silver, £81,858; of silver-lead ore and metal, £1,560,813; of coal, £1,095,327. The export of tallow in 1895 was £1,102,145 in value; of coal, £773,954; of hides and skins, £924,466; leather, £294,708; preserved and frozen meat, £695,504; gold coin, £2,710,560. Of the total imports £6,420,107 came from the United Kingdom, £7,321,668 from the other Australasian colonies, £611,021 from other British possessions, £624,268 from the United States, and £1,015,351 from other foreign countries. Of the total exports £9,371,418 went to the United Kingdom, £7,590,985 to the other Australasian colonies, £360,702 to other British possessions, £383,606 to the United States, and £3,928,073 to other foreign countries. The value of home produce exported was £16,436,210, and of foreign exports £5,498,575. The foregoing figures relate to sea-borne commerce only. The overland imports amounted to £1,783,368, and exports to £4,748,129.

The cultivated area in Victoria was 2,864,000 acres in 1896. The production of wheat was 5,668,000 bushels, an average of only 4 bushels to the acre; of oats, 2,879,000 bushels. Vines covered 30,712 acres. There were 431,547 horses, 1,833,900 cattle, 13,180,943 sheep, and 337,588 pigs in the colony in 1895. The value of the gold output of 1895 was £2,960,344. There were 29,897 miners working in the gold fields, of whom 2,014 were Chinamen. The number of hands employed in manufactories was 41,273. The tariff duties average 15 per cent. of the value of imports. The imports of wool were £2,367,915 in value and exports £5,151,153. The exports of gold and specie were £3,570,737; of live animals, £294,886; of leather, leathern cloth, and articles made of leather, £285,194; of breadstuffs, £629,960; of refined sugar, £82,554; of apparel, £105,592; of tallow, £249,904; of all other articles, £3,997,801. Of the total imports £4,759,546 came from the United Kingdom, £5,800,710 from Australasian colonies, £215,238 from India, £113,719 from Ceylon, £16,669 from Canada, £255,419 from other British possessions, £359,680 from the United States, £343,371 from Germany, £132,527 from France, £130,835 from China, £93,769 from Belgium, £96,743 from Java and the Philippines, £79,675 from Sweden and Norway, and £74,443 from other countries. Of the exports £3,068,121 went to the United Kingdom, £4,461,638 to

Australasian colonies, £150,930 to Ceylon, £99,859 to India, £10,406 to Canada, £103,275 to other British possessions, £560,098 to Germany, £320,003 to Belgium, £281,394 to the United States, £224,122 to France, £18,636 to Java and the Philippine Islands, and £249,250 to other countries.

About half the area of Queensland is forest. Of the total area 12,453,840 acres have been alienated and 1,757,755 acres are in process of alienation, leaving 413,626,485 acres still owned by the state. The receipts from land up to the end of 1895 were £7,543,460. A large proportion of the area is leased for pastoral purposes under the law of 1884 allowing 20,000 acres or less to be selected on a lease for thirty years. The same act provides for the selection of agricultural land up to the maximum of 1,280 acres on a lease running fifty years, with the privilege of purchasing it under certain conditions. There were 3,339 pastoral runs in 1895, aggregating 264,882,426 acres. The live stock of the colony comprised 468,743 horses, 6,822,401 cattle, and 19,856,959 sheep. The cultivated area was 299,278 acres. The corn crop was 2,391,378 bushels in 1895. There were 77,247 acres under sugar cane. The gold product of 1895 was 631,682 ounces. Tin was produced of the value of £68,133; copper, £13,097; silver, £30,042; opals, £32,750; coal, £123,530. The chief exports in 1895 were gold, of the value of £2,272,109; copper, £31,324; wool, £2,991,413; sugar, £796,117; hides and skins, £456,506; tin, £74,187; silver, £48,379; tallow, £595,992; pearl shells, £71,856; preserved and salted meat, £402,480; frozen meat, £583,409; meat extract, £42,791; green fruit, £58,555. The trade is chiefly with Great Britain and the other Australian colonies. The imports from the United States were valued at £130,885.

In South Australia there were 2,625,741 acres cultivated in 1893, of which 1,732,711 acres were under wheat. The wheat crop of 1894 was 13,618,062 bushels. The live stock consisted of 187,666 horses, 323,602 cattle, and 7,267,642 sheep in 1895. There were 112,762 square miles leased in pastoral runs. There was £266,494 worth of copper produced and exported in 1895. The export of wool in 1895 was £1,438,776; of wheat, £445,461; of flour, £392,974. The imports from the United States were £241,886 in value; exports to the United States, £14,439.

In Western Australia agriculture and stock raising have made great progress, as well as mining. The land under cultivation in 1895 was 218,239 acres, a minute fraction of the surface of the colony, which embraces 624,588,800 acres. The live stock comprised 58,506 horses, 200,091 cattle, and 2,295,832 sheep. The chief crop is wheat, of which 8 bushels are raised to the acre. There are silver, copper, lead, tin, and coal mines, as well as gold mines. The gold export increased from £226,284 in 1892 to £421,385 in 1893, £787,094 in 1894, £879,748 in 1895, and £1,068,808 in 1896. The export of pearls in 1895 was valued at £20,000; pearl shells, £27,298; sandalwood, £30,863; timber, £88,146; wool, £183,510; skins, £18,941.

In Tasmania the land sold or granted to settlers amounts to 4,711,074 acres. The unalienated land, embracing 10,860,426 acres, not counting 1,206,500 acres of lakes and islands, is mostly heavily timbered and contains valuable minerals. The area under crops in 1896 was 212,703 acres; under grasses, 221,970 acres; leased as sheep runs, 630,035 acres; planted with fruit trees, 11,037 acres. The yield of wheat in 1896 was 1,164,855 bushels, 18 to the acre; of oats, 906,934 bushels, 27 to the acre; of potatoes, 81,423 tons, 4·23 to the acre; of hay, 62,345 tons, 1·14 to the acre. Large quantities of fruit are exported. There were 510,387 bushels of apples gathered. The hop product was 543,650

pounds. The live stock consisted of 31,580 horses, 162,801 cattle, 1,523,846 sheep, and 70,142 hogs. The colony is rich in gold, iron, tin, copper, silver, lead, and coal. The export of gold in 1895 was £218,308; of silver, £227,916; of tin, £167,754; of timber and bark, £65,125; of wool, £202,341; of hops, £18,210; of green and preserved fruit, £161,464.

Of 66,710,320 acres, the total area of New Zealand, 21,131,251 acres had been alienated up to April, 1895. About two thirds of the surface of the island is suitable for agriculture and grazing. About 20,000,000 acres remain under forest and 9,000,000 acres are barren mountain, lakes, and waste lands. There were 9,285,170 acres sown to grasses in 1896, and a total area under crops of 10,698,809 acres. The public lands leased for pastoral purposes amounted to 12,469,976 acres. The wheat crop of 1896 was 6,644,000 bushels, averaging nearly 28 to the acre. Of oats, 12,264,000 bushels were grown, over 33 to the acre. The live stock consisted of 237,418 horses, 1,047,901 cattle, 18,982,080 sheep, and 239,778 pigs. The values of the principal exports in 1895 were: Wool, £3,662,131; frozen meat, £1,262,711; gold, £1,162,181; butter and cheese, £378,510; hides, skins, and leather, £382,254; Kauri gum, £418,766; tallow, £260,999; grain and flour, £218,996; timber, £141,892; preserved meat, £66,137; grass seed, £64,112; New Zealand hemp, or phormium, £21,040; live animals, £37,256; hams and bacon, £6,450. The export of wool was 144,295,154 pounds; of frozen meat, 1,025,243 hundredweight; of butter, 60,771 hundredweight; of cheese, 55,655 hundredweight; of Kauri gum, 8,338 tons.

Of the total imports, £3,992,359 came from the United Kingdom, £1,261,125 from Australian colonies, £394,223 from the United States, £282,571 from Pacific islands, £233,135 from India and Ceylon, £38,664 from China, £12,474 from Mauritius, and £185,578 from other countries. Of the exports £7,045,646 went to the United Kingdom, £1,035,753 to Australia, £316,639 to the United States, £125,643 to Pacific islands, and £26,543 to other countries.

Navigation.—There were 3,121 vessels, of 2,929,758 tons, entered during 1895 at the ports of New South Wales, 2,900, of 2,604,664 tons, being British and 221, of 325,094 tons, foreign. The total number cleared was 3,090, of 2,930,280 tons, of which 2,881, of 2,610,510 tons, were British and 209, of 319,770 tons, foreign. The shipping registered in the colony comprised 479 sailing vessels, of 54,222 tons, and 485 steamers, of 57,820 tons, having been increased during the year by 13 sailing vessels, of 1,363 tons, and 13 steamers, of 5,172 tons.

The number of vessels entered at Victorian ports during 1895 was 1,948, of 2,181,539 tons, of which 408, of 885,839 tons, were British, and 1,440, of 1,065,234 tons, were colonial; the number cleared was 1,889, of 2,167,147 tons, of which 398, of 876,468 tons, were British and 1,390, of 1,061,925 tons, colonial. The shipping registered in the colony consisted of 261 sailing vessels, of 41,925 tons, and 153 steamers, of 48,029 tons.

In Queensland 584 vessels, of 469,710 tons, were entered and 634, of 502,195 tons, cleared during the year. The shipping of the colony consisted of 137 sailing vessels, of 10,780 tons, and 92 steamers, of 12,415 tons, including river steamers.

There were 1,106 vessels, of 1,483,440 tons, entered and 1,110, of 1,496,203 tons, cleared at South Australian ports. The shipping of this colony consisted of 95 sailing vessels, of 17,715 tons, and 214 steamers, of 22,930 tons. In Western Australia 485 vessels, of 814,368 tons, were entered and 433, of 764,185 tons, cleared in the course of 1895. The

vessels on the register of the colony were 11 steamers, of 3,504 tons, and 144 sailing vessels, of 4,770 tons. At the ports of Tasmania 711 vessels, of 463,979 tons, were entered and 742, of 473,546 tons, cleared in 1895. The colonial merchant fleet consisted of 162 sailing vessels, of 10,009 tons, and 51 steamers, of 8,159 tons. The number of vessels entered at the ports of New Zealand in 1895 was 611, of 672,951 tons, of which 579, of 636,722 tons, were with cargoes; the number cleared was 597, of 648,946 tons, of which 554, of 622,311 tons, were with cargoes. Of the number entered 146, of 299,667 tons, were British, 420, of 319,313 tons, colonial, and 45, of 53,971 tons, foreign. The vessels registered in the colony consisted in 1895 of 299 sailing ships, of 35,925 tons, and 180 steamers, of 38,856 tons.

Railroads, Posts, and Telegraphs.—The length of railroads in operation in New South Wales on June 30, 1896, was 2,531 miles, costing £36,852,194 to build and equip. The receipts for the year were £2,820,417, and the working expenses £1,551,888, being 55·02 per cent. of the gross earnings. There were besides 84 miles of private railroads.

The railroads of Victoria, all belonging to the state, had in 1895 a length of 3,103 miles, built at a cost of £37,909,626. The receipts in the fiscal year 1895 were £2,581,591, and the operating expenses £1,543,393, giving a net return of 2·75 per cent. on the capital, which was borrowed at the mean rate of 3·91 per cent. per annum. There were 40,250,000 passengers and 2,435,857 tons of freight carried in 1895.

In Queensland there were 2,379 miles of railroad open for traffic at the end of 1895, all belonging to the Government and built at a cost £16,603,427. Including loan expenses the cost was £18,458,536. The receipts for 1895 were £1,048,634, and expenses £608,709.

South Australia had 1,888 miles of railroads in 1895, of which 146 miles were in the northern territory. The railroads pay a net profit of 5 per cent. to the Government.

In Western Australia there were 1,164 miles of railroads open for traffic at the end of 1895, when 115 miles were building and 283 miles being surveyed.

Tasmania had 475 miles of railroad at the close of 1895.

The railroads of New Zealand had on April 1, 1896, a total length of 2,189 miles, of which 775 miles were on the North island and 1,239 miles on the South island. The latter figure includes 175 miles of private lines. The receipts of the Government railroads for the year ending March 31, 1896, were £1,183,041, and the expenses £751,368. The cost of construction was £16,328,964. There were 4,162,426 passengers and 2,087,798 tons of freight carried during the year.

The postal traffic of New South Wales for 1895 was 68,079,000 letters, 957,400 postal cards, 44,902,900 newspapers, 11,259,300 packets and book parcels, 422,772 parcels, and 406,235 money orders for the total amount of £1,269,200. The postal revenue of Victoria in 1895 was £509,721, including receipts from telegraphs and telephones, and the expenses were £652,752. In Queensland 18,278,870 letters, 11,885,858 newspapers, 4,834,453 packets, and 134,603 parcels were carried. The post office of South Australia forwarded 17,073,913 letters, 2,129,994 packets, and 8,723,501 newspapers. The Western Australian post office in 1895 handled 17,867,952 ordinary letters, 273,615 registered letters, 17,996,387 newspapers, and 4,079,368 packets. The number of letters passing through the Tasmanian post office in 1895 was 5,992,376; of postal cards, 202,-

332; of newspapers, 4,506,191; of packets, 1,354,551. The revenue of the post office alone was £55,876; of the telegraph and telephone service, £14,939; expenses of the department, £61,927. The postal traffic of New Zealand in 1895 was 28,949,936 letters, 637,013 letter cards, 1,201,633 post cards, 11,023,330 books and parcels, 12,675,973 newspapers, and 243,497 money orders issued and 183,995 paid; receipts of posts and telegraphs, £365,727; expenses, £362,325.

The telegraph lines of New South Wales had a length of 12,316 miles at the end of 1895, with 28,799 miles of wire, erected at a total cost of £840,380. The number of messages for that year was 2,635,456. The receipts were £367,316, being £145,901 over the expenses, but the Post Office Department as a whole took in £647,845 only and spent £758,130. Victoria in 1895 had 7,091 miles of lines, with 14,409 miles of wire. The number of dispatches sent during the year was 2,033,630, paying £95,896. The telegraphs of Queensland had a total length of 9,979 miles, with 17,790 miles of wire. There were 853,156 messages sent and 112,952 foreign messages received, besides 89,507 official messages. The receipts from telegraphs were £76,011, and the postal revenue was £158,682, while the expenses of the department were £295,065. South Australia had 5,620 miles of telegraph, with 13,473 miles of wire. There is an overland line connected with the British Australian cable crossing the continent from Port Darwin to Adelaide, 2,000 miles. The Government earns a profit on its telegraphs above running expenses and interest charges.

The telegraph lines in 1895 had a length of 4,577 miles in Western Australia, where 240 miles were being added. There were 720,992 messages sent during the year. The net revenue was £61,673, the total expenses of telegraph service and post office being £108,578. The telegraphs of Tasmania had a length of 1,789 miles, with 3,004 miles of wire, besides 422 miles of cable and 520 miles of telephone wire. The number of dispatches in 1895 was 190,277. The length of the New Zealand telegraphs on March 31, 1896, was 6,245 miles, with 15,764 miles of wire. The number of messages during the year was 2,124,211, of which 1,899,632 were private messages, paying £92,289.

Australian Federation.—At the conference of premiers held at Hobart in February, 1895, it was agreed to dispense as far as possible with the necessity for further parliamentary action in relation to the federal movement, and to appeal by popular election directly to the voters of each colony. But to give validity to the proposed elections, it was necessary first to obtain parliamentary sanction to the scheme in several colonies. For this purpose each colonial parliament was asked to pass an enabling bill. The same difficulty that had been experienced in connection with the draft commonwealth bill of 1891 as to harmonious action on the part of six parliaments was again felt in regard to the passing of the enabling bills. After two years' delay the colony of Queensland had for local reasons still failed at the beginning of 1897 to pass the enabling bill. The necessary legislation had been carried through all the other parliaments, though with a slight departure in Western Australia from the purely popular programme adopted at the Hobart conference. All the Australian colonies, Queensland excepted, were ready at the beginning of 1897 to take action on the bills that had been passed. The lead in the matter was accorded by common consent to New South Wales. A proclamation was issued in that colony by which the enabling act was brought into force on Jan. 4, and after a consultation between the premiers of the principal colonies, from which Western Australia

at first abstained, it was agreed that writs for the elections to the federal convention should be issued on Jan. 20, that nominations should be received until Feb. 11, that the elections should be held on March 4, and that the convention should meet on March 29. Western Australia at first refused to join, but at the last moment decided to take part and to hold its elections on March 13. The enabling act passed in each colony in practically identical terms took the matter henceforth out of the hands of the parliaments. It provided that the convention charged with the task of framing the federal constitution should consist of 10 representatives from each colony elected by the voters for the Legislative Assembly. When three or more colonies should have elected their members to the convention, it devolved upon the governors of those colonies to summon the convention. After framing a constitution the convention was to adjourn for at least thirty, but not more than sixty days, to enable the constitution to be criticised. After the adoption of the constitution by the convention, it was to be referred to the direct vote of the electors for acceptance or rejection. If three colonies accepted the constitution, it should be presented for imperial enactment by the British Parliament. The convention possessed a groundwork for its labors in the comprehensive commonwealth bill framed by the Sydney convention of 1891 after six weeks of deliberation. In that convention Queensland took part, and the scheme of federation drawn up there was in great part the work of the Chief Justice of that colony, Sir Samuel Griffith. New Zealand was also represented at Sydney, but even then showed no strong bent for uniting with the Australian colonies separated from it by 1,200 miles of sea. The elections of delegates to the new federal convention were governed in Victoria and New South Wales largely by the consideration of state rights. The commonwealth bill of 1891 proposed that the Federal Parliament should consist of two houses, of which the lower was to represent the population of Australia, and the upper was to represent the states. State rights were fully guaranteed by the provision that each state was to be represented by 8 senators, each senator to have one vote. Thus every state, small or great, was to have equal power in the Senate, while for the lower house the representation was to be proportioned to population, each state having a representative for every 30,000 inhabitants. The smaller colonies insist strongly on equal state rights, which they regard as the only guarantee that they will not be swamped in the Federal Parliament by the greater representation in the lower house of the more populous colonies. The great colonies of New South Wales and Victoria, on the other hand, demur to an arrangement that will enable Western Australia, South Australia, and Tasmania in combination to outvote them in the Senate. A federal council met at Hobart on Jan. 27 to consider joint action by the colonies to celebrate the sixty years' reign of Queen Victoria, trade relations between Great Britain and Australia, the New Hebrides question, federal quarantine stations, and uniform bank laws. The Victoria delegates deprecated proceeding with business of importance in view of the early meeting of the federal convention. The Queensland and Western Australia delegates strongly opposed inaction, predicting that the labors of the convention would prove abortive. Finally it was decided to proceed with the business. The conference discussed Mr. Chamberlain's suggestion of a Zollverein, but were unable to determine whether it involved free trade within the empire or lower duties on British as compared with foreign goods. The Australian premiers here, and

later in London, declared generally in favor of preferential duties on British goods on condition of a like protection of Australian products in the British market. The delegates to the federal convention were elected in the five colonies of New South Wales, Victoria, South Australia, Western Australia, and Tasmania. In New South Wales and Victoria several delegates were elected on a platform of state rights. The Victorian delegates held a meeting with a view of coming to an agreement on debatable questions, but they decided to go to the convention free to vote at their individual discretion.

The convention met on March 22 at Adelaide, the central capital between Sydney and Perth. An amendment to allow women to vote for members of the House of Representatives was rejected by a vote of 23 to 12. On the questions of state rights and federal finance widely divergent opinions were expressed. As the debate did not lead to a satisfactory agreement, the convention adjourned till September, when it was hoped that Queensland would also be represented. The Queensland ministry proposed to the Parliament to authorize the election of delegates to the September convention, but the bill was defeated.

The second federal convention assembled at Sydney early in September.

In the interval all the colonial parliaments had discussed amending bills to the commonwealth act, and the results of their deliberations were laid before the Sydney convention to serve as a guide to the framing of the final federal constitution. In the spring convention it was proposed that the Senate should control money bills, and this was carried by the votes of South Australian, Western Australian, and Tasmanian delegates against those of New South Wales and Victoria. It was decided that amendments to the federal constitution, after passing both houses, should be submitted to a referendum. Sir George Turner proposed that deadlocks in the Legislature should also be settled by the popular referendum, but this was negatived. The New South Wales Assembly proposed various amendments of a democratic nature to the constitution which the convention had framed on conservative lines in close imitation of constitutional precedents. The Senate, instead of being a permanent body, re-elected at intervals in segments, it was proposed to make dissolvable at any time by the Governor at the advice of the ministers—that is, at the dictation of the House of Representatives. Equal representation in the Senate of each state was pronounced unacceptable to New South Wales, and a plan of proportional representation on the basis of population was proposed, with popular election of the senators in separate election districts. All money bills, including those that fix fees or salaries as well as taxation and appropriation bills, must originate in the House of Representatives. In case a difference should arise between the two chambers, the referendum would settle it. Judges were to be removable by address from both houses. Constitutional amendments would require only a majority vote of the people of the whole commonwealth, not of each state. The parliaments of the smaller colonies—South Australia, Tasmania, and Western Australia—insisted on equal representation in the Senate of all the states, large or small. The Victorian Assembly conceded this. The Adelaide convention gave the Senate power to reject bills imposing taxation, but the question of the right of amending such bills was compromised, a small majority deciding that the Senate should only have power to suggest amendments to the House of Representatives by message. This compromise the parliaments of the

smaller colonies rejected, desiring that the Senate should have full power to amend. The assemblies of Victoria and New South Wales, on the other hand, wished to deprive the Senate of even the right to suggest amendments. The problem of how to surmount deadlocks between the houses was left by the Adelaide convention without a solution. The assemblies of Victoria and New South Wales suggested three methods of settling such disputes: By the simultaneous dissolution of both houses; by a clause providing that if the bill should be passed a second time by the House of Representatives and the Senate should again reject it, the latter should be dissolved; or by the decision of the people in the form of a referendum in case a bill has been twice passed by one house and twice rejected by the other. The Adelaide convention adopted an elaborate scheme for the distribution among the states of the surplus revenue of the commonwealth derived from the uniform federal tariff that would be adopted. The colonial treasurers of New South Wales and Victoria attached great importance to the scheme, but the others thought that the question ought to be left to the commonwealth Parliament. The Victorian Legislative Council offered few and unimportant amendments, but the Council of New South Wales, led by the Attorney-General, voted for numerous and drastic changes in the draft constitution as it issued from the Adelaide convention, being actuated by the confessed purpose of wrecking the bill. The very word "federal" was struck out of all the clauses, and the commonwealth Parliament was deprived of the power of imposing duties or taxes of any kind or of raising revenue by any means. In view of the serious character of many of the parliamentary amendments, the prospects of federation were not regarded as favorable when the Sydney convention came together at the beginning of September. Sir George Turner proposed adjournment for a year in order to give the colonies opportunity for further discussion and to enable Queensland to be represented. Sir Samuel Griffith, Chief Justice of Queensland, wrote to urge adjournment. When the enabling bill was introduced in the Queensland Assembly it was expected that it would pass without opposition, and as soon as an amendment was proposed the minister withdrew the measure. After the Federal Convention assembled in Sydney the Queensland Assembly requested it not to conclude its labors until Queensland was represented by a direct vote of the people. A motion providing for the election of delegates by popular vote in the same manner as in the other colonies was finally carried in the Queensland Assembly on Sept. 16 by the majority of 34 to 8. The other parliaments that placed obstacles in the way of the scheme of federation adopted at Adelaide were not fairly representative of the people on the subject of federation, which was expressly intrusted to the delegates to the convention elected by the direct vote of the people. It was therefore expected that the commonwealth bill, as finally elaborated at Sydney, would meet no further opposition in the parliaments if it proved acceptable to the people of the several colonies and received a large majority of their votes when submitted to their decision.

The second session of the Federal Convention opened at Sydney on Sept. 2, and, in response to the request of the Queensland Government that Queensland should be represented in the convention before the commonwealth bill was finally adopted, adjourned on Sept. 24 until January, 1898, when a third session was to be held at Melbourne. The convention rejected the principle advocated by New South Wales of proportional representation in

the Senate as well as in the House of Representatives, which would give the larger colonies an overwhelming majority in both houses and place the destinies of the smaller states in all federal questions in their hands. By a majority of 41 votes to 5 it was decided to give all states, large or small, equal representation in the Senate. It was moreover decided that the members of the Senate should be elected by each colony voting as one electorate. In the case of new states entering the federation, however, representation shall not necessarily be equal. A proviso favoring female suffrage was negatived. The delegates of the smaller colonies, after being helped to their decisive victory on the question of equal representation in the federal Senate, were expected to make concessions to the larger colonies on the question of limiting the powers of the Senate in regard to money bills and in the matter of providing against deadlocks. A number of them proved themselves accommodating by rejecting the proposal of Sir John Forrest, Premier of Western Australia, to give the Senate full power to amend money bills, which was lost by 39 votes to 29. Even the compromise that was adopted at Adelaide in order to save the commonwealth bill was now dropped, and it was decided that the popular house should have sole control over the finances of the commonwealth. On the question of the best method of dealing with or averting deadlocks between the houses, which the Adelaide convention left undetermined, strong diversity of opinion was disclosed. Victorian delegates were disposed to support the proposal of a referendum emanating from New South Wales, but since this would place the Senate ultimately under popular control the smaller colonies objected to this system as tending to nullify state rights. Most of the delegates were in favor of a simultaneous dissolution of both houses and were willing to adopt a dual referendum, requiring a majority of states and a majority of the people to agree on the subject referred. Another proposal was that the lower house should be dissolved, and if the disputed bill was passed a second time after an appeal to the country and a second time rejected by the Senate, that the Senate should then be dissolved. The proposed dual referendum seemed farcical to Sir John Downer, of South Australia, and a monstrous absurdity to Mr. Reid, of New South Wales. Josiah Symons, of South Australia, proposed the dissolution of the Senate in the event of its rejecting a measure passed by the lower house after an appeal to the country, and this was accepted by the narrow majority of 5 votes. Amendments providing for a referendum in the event of the further rejection of the same bill by the newly elected Senate for a dual referendum, for allowing the Government a choice between dissolution and a referendum, for the dissolution of the house that had been longest elected, for a joint vote on the disputed measure by both houses, were rejected in succession, and after a long and heated debate the convention finally accepted a compromise suggested by Mr. Wise, of New South Wales. This provides that in case of deadlock both houses shall be simultaneously dissolved, and a further amendment proposed by Mr. Carruthers, of New South Wales, provides that in the event of the double dissolution proving insufficient the matter in dispute shall be decided by a three-fourths' majority of both houses sitting together. Financial questions were left to be dealt with by the Melbourne convention. Though the view prevailed in the colonial parliaments that the distribution of surplus revenue should be left to the future consideration of the Federal Parliament, it was decided to refer the question to a finance committee for special consideration and report.

New South Wales.—The Parliament consists of a Legislative Council of 66 members, appointed for life, and a Legislative Assembly, of 125 members, elected in separate districts for three years by manhood suffrage. The number of registered electors in July, 1895, was 267,458. The Governor is Viscount Hampden, appointed in 1896. The Cabinet at the beginning of 1897 was composed as follows: Premier, Treasurer, and Minister for Railways, George Houstoun Reid; Chief Secretary, James Nixon Brunker; Attorney-General, John Henry Want; Secretary for Lands, Joseph Hector Carruthers; Secretary for Public Works, James Henry Young; Minister of Public Instruction and of Labor and Industry, Jacob Garrard; Postmaster-General, Joseph Cook; Secretary for Mines and Agriculture, Sydney Smith; Minister of Justice, Albert John Gould; Vice-President of the Executive Council and Representative of the Government in the Legislative Council, Andrew Garrahan.

When all the Australian premiers went to England to take part in the Queen's jubilee a tacit truce was agreed to, in accordance with which no serious legislative proposals of a controversial nature were put forward by the acting premiers, and no attempts to overturn the ministries were made by the Opposition. Mr. Brunker, who filled the place of the Premier of New South Wales, encountered difficulties in connection with the collection of land and income taxes, though on the whole the revenue returns were satisfactory, showing a total revenue of £9,309,000 and an increase of £57,000 over 1896, strengthening, on the whole, the free-trade policy of the Government. The session of Parliament was opened in April. One of the laws passed abolishes the payment of school fees.

Victoria.—The Legislative Council has 48 members, elected under a property qualification, and the Legislative Assembly 95 members, elected by universal adult male suffrage. There were 138,393 electors for the former and 247,730 for the latter on the roll in 1896. The Governor is Lord Brassey, appointed in 1895. The Cabinet was composed as follows at the beginning of 1897: Premier and Treasurer, George Turner; Chief Secretary and Minister of Public Instruction, A. J. Peacock; Attorney-General, Isaac Isaacs; Solicitor-General, H. Cuthbert; Commissioner of Trade and Customs, President of the Board of Land and Works, and Commissioner of Crown Lands and Survey, R. W. Best; Postmaster-General, J. G. Duffy; Minister of Defense, W. McCulloch; Minister of Mines and Water Supply, H. Foster; Minister of Agriculture and Commissioner of Public Works, J. W. Taverner; Minister of Railways and Minister of Health, H. R. Williams; Ministers without portfolios, A. McLean, David Coutts, and S. Williamson.

The recovery from former depressed conditions was more marked in 1897 than in any previous year. The clearing-house returns were much larger. The banks paid up a large share of the deferred deposits due since the Australian banking crisis. The coin deposits exceeded any sum previously recorded, amounting to £8,900,000 in January. Later there were heavy shipments of gold, especially after imports of wheat set in from the United States. The production of gold has been stimulated in all the Australian colonies. The yield in Victoria during 1896 was 84,000 ounces above that of 1895. There were new alluvial mines discovered near the New South Wales border, and auriferous rock in several new districts. The output for 1897 promised to exceed any previous yield for twenty years. The revenue of Victoria for 1897 amounted to £6,600,000, an increase of £170,000. The increase in railways was £200,000, and in customs £25,000. The question of meat exports

has occupied the attention of the public authorities as well as the producers in several colonies. The exporters of Victoria, in a conference with Mr. Taverner, the Minister of Agriculture, agreed that the state should supervise and control all meat exports in order to insure their perfect condition. A bill was passed providing for Government inspection, grading, and branding of butter, meat, rabbits, poultry, and fruit exported from the colony. This was the result of an agreement with the other Australian governments, which promised similar legislation on exported produce from all the colonies. A trial shipment of Victorian tobacco was considered by the Government expert to be equal to the American leaf. The Parliament opened in the middle of June, and closed at the end of August to enable the delegates to attend the second federal convention. The principal business besides the budget estimates was the consideration of the federal bill made necessary in all the colonies by the dissolution of the Adelaide convention. One of the new labor laws of Victoria forbids working before seven in the morning or after five in the evening. The new factories act authorizes joint boards of employers and employed to fix a minimum wage for each trade. The Labor party has pressed for a State bank, reform of the Council, taxation of unimproved land, and a referendum. By his new programme, presented to Parliament in September, Sir George Turner appealed to the moderate politicians, breaking away from the Labor leaders with whom he has been in alliance.

Queensland.—The Legislative Council consists of 59 members, appointed for life, and the Legislative Assembly of 72 members, elected by universal adult male suffrage. There were 86,878 registered electors at the end of 1895. The Governor of Queensland is Lord Lamington, appointed in 1895. The Cabinet in the beginning of 1897 was composed as follows: Premier, Vice-President of the Executive Council, Chief Secretary, and Treasurer, Sir Hugh Muir Nelson; Minister for Lands, J. F. G. Foxton; Postmaster-General and Secretary for Agriculture, A. J. Thynne; Secretary for Mines and for Railways, Robert Philp; Secretary for Public Instruction and for Public Works, D. H. Dalrymple; Home Secretary, H. Tozer; Attorney-General, T. J. Byrne; Ministers without portfolios, W. H. Wilson, Sir Thomas McIlwraith, and A. H. Barlow.

Queensland alone of the Australian colonies suffered a decline in its revenue in 1897, the total receipts being £3,613,200, or £28,400 less than in 1896. The industrial conditions, however, were not altogether unfavorable, though the pastoralists sustained losses due to the tick plague and agriculture suffered from drought. The sugar industry, according to the report of the Land Commission, was holding its own notwithstanding adverse conditions, and counted an export for the year of upward of 70,000 tons. The coffee and tobacco industries promised well, and there was a hopeful tendency in the mining interest as well as in agriculture. The output of gold was estimated for the year at £2,500,000. The legislative session began in the latter half of June. Owing to the absence of the Premier in England nothing of importance was transacted. A moderate and economical policy in extending the main railroad lines was proposed. The Premier conferred with the other colonial premiers in London with a view to providing against Asiatic immigration and concerning the administration of New Guinea and the Solomon Islands. A committee appointed to study the question of a Pacific cable unanimously affirmed the practicability of the scheme. Experienced colonists have been sent by the Government to England, the Con-

tinents of Europe, and America to lecture on the advantages of emigration to Queensland. Sir Hugh M. Nelson, the Premier, is desirous of amending the stringent mining laws by accepting the expenditure of money on machinery as a test of the good faith of the lessee in lieu of requiring the employment of a man on every acre, also by abolishing the dividend tax and by allowing a company to have only one shaft for two or more adjacent claims.

South Australia.—The Legislative Council contains 24 members, elected for nine years by property holders. One third of them retire every three years, and each of the 4 electoral districts elects 2 new members to succeed them. In 1894 the franchise was extended to women. The House of Assembly consists of 54 members, elected for three years by manhood suffrage, 2 for each assembly district. The number of registered voters in 1895 was 137,778. The Governor is Sir Thomas Powell Buxton, appointed in April, 1895. The Cabinet at the beginning of 1897 was composed as follows: Premier and Attorney-General, C. C. Kingston; Chief Secretary, J. V. O'Loughlin; Treasurer, F. W. Holder; Commissioner of Lands, L. O'Loughlin; Commissioner of Works, J. G. Jenkins; Minister of Education and Agriculture, J. A. Cockburn.

The position of Mr. Kingston's Government was somewhat weakened by the results of the elections in June to the Legislative Council, which gave a majority to the Opposition in that house. The Opposition in the lower house underwent also a reorganization under its new leader, Sir John Downer. These facts and the absence of the Premier deterred the Government from making any startling proposals when the session opened in June. The Railway Commissioners had an ambitious scheme to offer of important bearing on the development of the internal trade and communications of the Australian continent and of the export trade as well. This is a project for the construction of a connecting line of railway 1,000 miles long between South and West Australia, which would complete the railway circuit from Perth to Brisbane and bring Western Australia into easy communication with the other colonies. Mr. Holder, the acting Premier, laid the project before Mr. Wittenoom, who was filling that capacity in West Australia, and inquired if West Australia was prepared to undertake the construction of the part of the line crossing its territory. This the authorities of the vigorous young western colony would not promise, and hence this project, the cost of which is too great to be fairly borne by the two colonies alone, remains to be achieved by the future federated Australia. The proposed line, which will shorten mail communications between Australian cities and the outer world by two full days, will some day be as important for strategic as for commercial considerations. The revenue of New South Wales for 1896-'97 showed an increase of £44,000 over the previous year, and reached a total of £2,600,000. The increase in customs revenue was £23,000.

Western Australia.—The Legislative Council contains 21 members, 3 for each electoral district, elected for six years by holders of a certain amount of real property. The Legislative Assembly consists of 45 members, elected in separate districts for four years under a property qualification also, about half as high as the other. The Governor is Sir Gerard Smith. The Cabinet was as follows at the beginning of 1897: Premier, Treasurer, and Colonial Secretary, Sir John Forrest; Attorney-General, Septimus Burt; Commissioner of Lands, A. R. Richardson; Commissioner for Railways and Director of Public Works, F. H. Piesse; Minister for Mines and Education, E. H. Wittenoom.

The revenue of Western Australia reached the

astonishing figure of £2,842,751 for 1897, which was £984,057 more than the receipts for 1896. The yield of gold for 1896 amounted to 281,265 ounces, valued at £1,068,805, an increase of 49,753 ounces, as compared with the previous year. The yield for 1897 was expected to exceed £2,000,000 in value. The auriferous land extends from Dundas in the south to Kimberley in the northeast, covering a tract of 1,000 miles, in which 17 productive gold fields have already been discovered. The early boom was succeeded by a depression, from which the colony is emerging, as is shown by the increase in the railroad revenue and in land settlements. The Government has built railroads far into the interior, and in various other ways aided the gold-mining industry, including the erection of smelting works at Freemantle. The duties on mining machinery have been abolished. Many of the mines are now equipped with an expensive plant. The difficulty arising from scarcity of water in the gold fields is now met in a great measure by condensing water. The colony has very liberal land laws, offering to every settler the fee of 160 acres without payment, and even lending money for the development of the land. European investors who have expended immense sums in the gold mines of Western Australia complain of the mining laws of the colony. Certain onerous conditions regulating the employment of labor have already been modified to meet their views. As a further concession, they desire a law enabling them to amalgamate claims in the same district, at any rate, when these claims adjoin each other, so that they may be deemed a single holding for the fulfillment of labor conditions; also that the conditions effecting the forfeiture of a lease should be changed so as to favor the holder and secure a permanent title to persons who have expended large sums of money on mines. The present conditions as to labor permit two men to hold a claim of 24 acres, or any other area, for the first twelve months, after which one man must be working on every 6 acres. Sir John Forrest, when in England, promised that the Government would endeavor to meet the views of investors as to security of title for property on which British capital had been expended, and on other points, but a request for the abolition of duties on articles of food he was unwilling to comply with, because the colony not only wants to obtain ample revenues but also to build up a farming community that will produce all the food required by the people living in Western Australia. The Government intends to give assistance and encouragement to the pastoral industry, and is prepared to introduce a new land bill for this purpose. The mines of Western Australia, since the collapse of the share market, are being worked in a legitimate and businesslike manner. Trained mining engineers have gone into the fields to succeed ignorant and venal charlatans. The genuine properties are being opened up and developed under the supervision of competent managers, and are being equipped with the latest mining appliances. The labor conditions are at present extremely onerous for both the prospector and the capitalist, requiring an expenditure of £30 or £40 per annum on every acre of mineral ground, including the rental of £1 per acre. Wages vary from £3 10s. to £4 a week. The result has been that since the demand for prospecting exhibits ceased hundreds of leases have been abandoned, and no attempts are made to bring to light the properties, perhaps as rich as any yet discovered, that now lie hidden in the sandy desert of scrub. Capitalists are deterred from making new investments in Western Australian mines by the danger that they incur of having their property jumped and forfeited after they have spent large sums of money in purchasing

claims and in development work and machinery, simply because, perhaps through an oversight, they have failed to employ the full complement of men on the lease that the law requires.

The result of the elections in Western Australia was the return of Sir John Forrest to a third lease of power, with a mandate to continue the work of development that he has conducted with success since the grant of responsible government to the colony in 1890. Since then the population of the colony has grown from less than 50,000 to 140,000, and the revenue, then under £500,000, has increased over fivefold. During the year ending March 31, 1897, no fewer than 35,000 persons went as emigrants into Western Australia. Trade has increased in the same proportion as the revenue, and the gold output in a larger ratio, the total yield since the first discovery in 1886 being £4,000,000. The railroads have been extended in six years from a total length of 400 miles to more than 1,400 miles, and telegraphs from 3,500 miles to 8,000 miles. The number of persons employed in the public services has fully doubled since 1894. The legislative machinery of the colony has itself been enlarged to meet the expanding needs of the population, the number of members in both houses having been increased, and an elective upper house substituted for a nominated Legislative Council. The franchise has also been remodeled and expanded to meet the wants of an inflowing adult population. Now the right to vote and to be elected as a member of Parliament is possessed by every man of full age who has lived twelve months in the colony and six months in his district. The property qualifications attaching to membership in the upper house have also been abolished, so that no colony in Australia has so extended a franchise save South Australia, where women are allowed to vote. The bold policy of public works that has distinguished the administration of Sir John Forrest has had the approval of the colonists. Just before the last general election he applied for authority to borrow to the extent of £6,000,000, and the proposal was passed without a division in both houses. During the last year he has been able to spend £1,000,000 out of the revenue upon public works, and he holds out the prospect of having for some time to come a sufficient surplus revenue to construct all necessary public buildings and local public works throughout the colony. He stated before the election that he has no further intention of increasing the loan liability of the colony, believing that the amount already authorized will suffice for several years, unless there is an unexpected influx of population. There was a board created for the protection of the aborigines under the act conferring responsible government. The Government of Western Australia proposed to transfer this duty to one of the departments, but objections were raised in England, where the system of indenturing natives was condemned as a species of slavery, and stories of inhuman treatment were circulated. The Colonial Office in London finally sanctioned the creation of a special Government department to look after the interests of the natives and to superintend the distribution of funds provided for their relief.

Tasmania.—The Parliament of Tasmania consists of an elective Legislative Council, for which the larger property holders and professional men vote, with 18 members elected for six years, and a Legislative Assembly of 37 members, voted for by all owners or occupiers of real property or possessors of an income of £60 and serving three years. The Governor is Viscount Gormanston, appointed in August, 1893. The Cabinet in the beginning of 1897 was composed of the following members: Premier, Sir E. N. C. Braddon; Chief Secretary,

W. Moore; Treasurer, Sir P. O. Fysh; Attorney-General, A. I. Clark; Minister of Lands and Works, A. T. Pillinger; minister without portfolio, Thomas Reibey.

In Tasmania the revenue returns were so favorable that the Government felt justified in making a reduction of income and other taxes. Attention has lately been directed with satisfactory results to mineral development in this colony. The Government has introduced a *crédit foncier* system.

New Zealand.—The legislative power is vested by the act of 1875 in a General Assembly, consisting of a Legislative Council of 44 members and a House of Representatives, whose number was reduced in 1887 to 74, including 4 Maoris. The Representatives are elected for three years, every adult man or woman having a vote who has resided a year in the colony and three months in the electoral district or possesses freehold property worth £25. Members of the Legislative Council who were appointed prior to Sept. 17, 1891, hold their seats for life; others are appointed for seven years. There were 302,997 registered white voters in 1893, of whom 193,536 were men and 109,461 women. In the Maori community 11,269 were registered. Of the whole population 45½ per cent. were qualified voters. The Governor at the beginning of 1897 was the Earl of Glasgow, appointed in June, 1892. He was succeeded by the Earl of Ranfurly. The ministry at the beginning of 1897 was composed as follows: Premier, Colonial Treasurer, Postmaster-General, and Electric Telegraph Commissioner, Commissioner of Trade and Customs, and Minister of Labor, R. J. Seddon; Acting Colonial Secretary and Commissioner of Stamp Duties, J. Carroll; Minister of Justice, Industries and Commerce, and Defense, T. Thompson; Ministers of Lands, Minister of Agriculture, and Commissioner of Forests, J. Mackenzie; Minister of Public Works and Minister of Marine, W. Hall-Jones; Minister of Railways and Mines, A. J. Cadman; Minister of Education and Immigration and Minister in Charge of Hospitals and Charitable Aid, W. C. Walker.

New Zealand continues to advance in wealth and prosperity. The revenue for 1897 was £78,000 more than in the preceding year. This colony has in the past few years enacted some of the most original and advanced laws in the world in regard to land, labor, and taxation, legislation that has been denounced as democratic and semisocialistic, but which has been, on the whole, successful in operation and met with the popular approval of the colony. By the new land laws hundreds of worthy industrious men have been made into honest, sturdy farmers for one who through inexperience or indolence has met with failure. Immense estates have been broken up, and every man in the colony has been afforded an opportunity of obtaining a piece of land on which to build himself a home. The labor legislation has been less entirely successful, and some of it is regarded by many of the well-to-do colonists as vexatious. Against their opinion may be placed the fact of increased prosperity in every branch of trade. Prices are good, the interest rate has fallen to 4 or 5 per cent., and the waste lands of the colony are being rapidly taken up. With the introduction of one man one vote and the extension of the franchise to women, the power of corporate wealth in New Zealand seems to have been irrevocably destroyed. The United States consul at Auckland, in reporting on these conditions, says that the more reasonable members of the labor associations are now disposed to let well alone for the present, and considers that the leveling process, which began about seven years ago, has reached a point where prudence, good taste, and a due regard for

the rights of others might fairly suggest a respite, and that, too, without loss of dignity or interest to any class. Compulsory labor arbitration, a principle that has been vigorously resisted in some countries, has worked satisfactorily in New Zealand during the short time that the arbitration law has been in operation. Under the act the colony is divided into districts, in each of which a board of conciliation, composed of an equal number of workmen and employers, can be constituted. Over this is a special central tribunal, which possesses appellate functions and whose decision is final. The central arbitration court is presided over by a judge of the Supreme Court of New Zealand, who is assisted by two assessors, one chosen by the employers, the other by the workmen. The trade unions have power to sue and are themselves liable to be sued, not only the union funds being attachable, but the individual members responsible to the extent of £10 each should the common fund fail to cover the liabilities. The penalty for evading the award of the tribunal is limited to £500. Since this act has been in operation no strike or lockout has occurred in New Zealand. A protest was raised in England against the shipping act of 1896, which compels all masters of vessels engaged in the coasting trade in New Zealand to pay the scale of wages fixed by arbitration boards. As these wages are twice as much as seamen ordinarily get, the act prevents British vessels from engaging in that trade unless the contract wages of the sailors are doubled while the vessels are thus employed. New mining laws have been enacted in this colony, and to these some persons have attributed the decrease in the yield during last year, notwithstanding the large amount of fresh capital employed. Mr. R. J. Seddon, the Premier, on the contrary, lays it to the delays caused by the initiation of a less primitive system of working the various properties. Time and labor that would otherwise have been spent on obtaining gold have been devoted to the erection of improved machinery and the driving of winzes and stopes. He claims that by the mining legislation of last year the New Zealand Government has acted in the interest of all concerned, as it has thereby defined the position of the various parties interested in mines instead of leaving it in doubt. The tenure given by the colony for mines on Crown lands is as good and permanent as though it were freehold, and in every case where a lease has expired the Government has been willing to grant a renewal. It offers special facilities for such renewals, subject to the conditions imposed being observed. The labor requirements, which some have complained of as being too severe, are only such as guarantee *bona fide* occupancy, and in fact the jumping of properties is unknown and impossible in New Zealand. Although £51,000,000 of gold has been dug in the colony from 1857 up to the present time, the deepest shafts have not been sunk more than 600 feet, and mining experts consider that only the surface has been scratched in the mining operations hitherto.

The Parliament which was opened on Sept. 23 passed laws promoting technical education, enacting a referendum, establishing Government fire insurance, providing old-age pensions for laborers, promoting the beet-sugar industry, and abolishing the tax on commercial travelers entering the colony.

Fiji.—The British flag was hoisted in the Fijian Islands at the invitation of the Queen and chiefs on Oct. 10, 1874. The Governor is assisted by an executive council, and laws are approved by an appointed legislative council, consisting of 6 official and 6 nonofficial members. In 12 of the 16 provinces a native chief, called the Roko Tui, governs the people, under the supervision of European of-

ficials, after their native laws and customs. European commissioners administer 3 Fijian provinces and Rotuma.

The population on Dec. 31, 1894, consisted of 2,666 Europeans, 1,167 half-castes, 9,130 East Indians, 2,232 Polynesians, 2,113 Rotumans, 103,750 Fijians, and 808 others; total, 121,867, divided into 67,152 males and 54,708 females. Of the Fijian natives 55,332 were males and 48,418 females. Among them 3,912 were born and 4,620 died in 1894.

The revenue from customs in 1894 was £37,677; from navigation dues, £4,754; from internal revenue and licenses, £4,754; from native taxes, £18,679; from court fees, etc., £7,058; from stamps, £1,868; total, £80,054. The expenditures were £36,889 for personal emoluments and £35,315 for other charges; total, £72,204.

There were 1,401 acres planted by European settlers to bananas in 1894, 18,603 acres planted to cocoanut palms, 19,382 acres under sugar cane, and small plantations of tea, sisal hemp, peanuts, yams, and tobacco. The export of sugar was 27,265 tons, valued at £436,245; of copra, 5,833 tons, value £57,261; of bananas and other green fruit, £49,115; of distilled spirits, 133,971 gallons, valued at £16,746.

Dependencies of the Australian colonies are the British half of New Guinea (see "Annual Cyclopædia" for 1896) and the southern Solomon Islands. The northern part of this archipelago belongs to Germany. The southern islands, which have only recently been placed under British protection and are subject to the jurisdiction of the High Commissioner of the Western Pacific, lie between 7½° and 13° of south latitude and 150° and 163° of east longitude. The chief islands are Guadalcanar, San Christoval, Malaita, New Georgia, Gela, and Tulage. The number of foreign residents is about 50, mostly traders, scattered in twos and threes on the different islands and owning little trading schooners in which they collect produce and convey it to central stations, whence it is shipped to Sydney. There is a Government coaling station at Gavutu. The chief export is copra, which is smoke-dried, and hence less valuable than the sun-dried product of other South Sea islands. Next in importance are ivory nuts, growing in inexhaustible profusion on a species of sago palm and sent to Germany and Austria to be made into vegetable ivory buttons. Pearl shell, turtle shell, and *bêche de mer* are also exported. Tobacco is the chief article of barter. Pipes, matchboxes, axes and other tools, cotton stuffs, and beads are also traded with the natives. Plantations of the cocoanut palm have been set out by some of the traders. The sago palm grows in vast numbers, and in New Georgia a kind of ebony is found.

AUSTRIA-HUNGARY, a dual monarchy in central Europe, composed, under the fundamental law of Dec. 21, 1867, of the Empire of Austria and the Kingdom of Hungary, two inseparable constitutional monarchies that are hereditary in the male line of the house of Hapsburg-Lorraine or, in the event of the extinction of the male line, in the female line. The legislative power for affairs common to both monarchies, viz., foreign relations, military and naval affairs, common finance, commercial and railroad affairs concerning both monarchies, the customs tariff, the coinage, and the administration of Bosnia and Herzegovina, is exercised by committees of the legislative bodies of the two halves of the empire, which meet alternately in Vienna and Buda-Pesth. These committees, called the Delegations, are composed of 20 of its members elected every year by the Austrian House of Lords and the same number from the Hungarian Table of Mag-

nates, and 40 from each of the lower houses, the Austrian House of Deputies and the Hungarian Table of Representatives. The two Delegations meet and vote separately, except when there is a disagreement, in which case the matter is decided by joint ballot. The common ministers are responsible to the Delegations and may be impeached for any dereliction of duty.

The Emperor of Austria and King of Hungary is Franz Josef I, born Aug. 18, 1830, who was proclaimed Emperor of Austria on Dec. 2, 1848, when his uncle Ferdinand I abdicated in consequence of a popular uprising. He was crowned King of Hungary on June 8, 1867, when the ancient privileges of that monarchy were restored. The heir presumptive is the Emperor's nephew, the Archduke Franz Ferdinand, son of the late Archduke Karl Ludwig and the Princess Annunciata, daughter of King Ferdinando II of Naples.

The ministers for the whole monarchy at the beginning of 1897 were: Ministers of Foreign Affairs and of the Imperial House, Count Agenor Maria Adam Goluchowski, born March 25, 1849; Minister of War, Gen. Edmund Edler von Krieghammer; Minister of Finance, Benjamin de Kallay.

The Common Budget.—According to the *Ausgleich* or agreement in force in 1897 the expenses of the administration of common affairs, after deducting from the amount required the proceeds of the common customs and departmental receipts and 2 per cent. of the remainder, which is charged to Hungary, are borne by the two halves of the monarchy in the proportion of 70 per cent. for Austria and 30 per cent. for Hungary. The budget for 1897 was estimated at 160,584,751 florins, of which 2,618,871 florins are receipts of the Ministry of War, 122,412 florins those of other ministries, 50,573,136 florins the surplus from customs, 2,145,407 florins Hungary's 2 per cent., 73,578,452 florins Austria's quota, and 31,537,479 florins the quota of Hungary. The appropriations for the Ministry of Foreign Affairs are 4,019,500 florins for ordinary and 77,400 florins for extraordinary expenses; of the Ministry of War, 125,382,512 florins for ordinary and 14,797,187 florins for extraordinary expenses of the army, and 10,481,060 florins for ordinary and 3,600,200 florins for extraordinary expenses of the navy; of the Ministry of Finance, 2,093,500 florins; of the Board of Control, 133,392 florins.

The revenue collected in Bosnia and Herzegovina in 1896 was estimated at 14,413,590 florins, and the expenditure at 14,368,296 florins, exclusive of the extraordinary expenses of the army of occupation, estimated at 3,533,000 florins.

Public Debt.—The general debt, contracted before 1878, amounts to 2,766,183,000 florins. The interest and sinking fund in 1896 amounted to 127,377,468 florins, of which Austria paid 97,066,393 and Hungary 30,311,075 florins. There is a common floating debt, amounting at the end of 1896 to 192,846,145 florins. Austria's special debt was 1,435,338,000 florins in 1895, costing 70,696,391 florins a year. The special debt of Hungary has grown from 1,793,484,000 florins in 1890 to 2,144,786,000 florins in 1895.

Area and Population.—The area of Austria-Hungary is 240,942 square miles. The population at the census of Dec. 31, 1890, was 41,231,342. Austria, with an area of 115,903 square miles, had a population of 23,895,413, composed of 11,689,129 males and 12,206,284 females. The number of marriages in 1894 was 194,233; of births, 928,739; of deaths, 682,803; excess of births, 245,936. The population of Vienna, the capital, in 1890 was 1,364,548; of Prague, 184,109; of Trieste, 158,344. There were 19,146 elementary schools in 1894, with 68,038 teachers and 3,312,530 pupils, out of a total

population of school age of 3,807,376. These schools are supported by the communes. The subjects of instruction are religion, reading, writing, language, arithmetic and elementary geometry, geography, history, some branches of natural history and physics, drawing, singing, gymnastics, and for girls domestic economy. The age of compulsory attendance is from six to fourteen. There are 81 training colleges for teachers.

The area of Hungary is 125,039 square miles. Its population in 1890 was 17,463,473, comprising 8,667,971 males and 8,795,502 females. The number of marriages in 1894 was 166,033; of births, 761,607; of deaths, 563,558; excess of births, 198,049. Budapest, the capital, had on Dec. 31, 1890, a population of 506,384. In Hungary education is compulsory between the ages of six and twelve. There were 16,536 primary schools in 1895, with 28,731 teachers and 2,540,183 pupils out of a total of 3,221,513 of school age. For teachers there are 70 normal schools.

The number of emigrants from Austria-Hungary in 1894 was 25,566, against 65,544 in 1893, 74,947 in 1892, and 78,524 in 1891. The destination of 22,965 in 1894 was North America. In 1895 the number of Austrians emigrating was 18,256, and of Hungarians 15,206; in 1896 there were 34,196 Austrian and 30,898 Hungarian emigrants.

The Army.—The military system established by the Austrian and Hungarian laws of 1889 divides the military forces into the army and its Ersatz troops, or reserve, common to the whole monarchy, and the Landwehr, with its Ersatz reserve, a national institution in each half of the empire. Men who do not belong to either the army or the Landwehr and those who have served their time in the Landwehr are enrolled in the Landsturm for ten years. The period of service in the active army is three years, beginning at the age of twenty-one; then seven years in the reserve. Those not called into active service spend the whole ten years in the Ersatz reserve. Men transferred from the army serve two years with the Landwehr; others twelve years. There are 15 army corps, usually consisting of 2 divisions of 2 brigades of infantry, 1 brigade of cavalry, and 1 brigade of artillery. The annual contingent of recruits for the regular army is 103,100 men, 60,389 being furnished by Austria and 42,711 by Hungary. The annual contingent for the Austrian Landwehr is 10,500, and for the Hungarian Honved 12,500. The peace strength of the Austro-Hungarian army in 1896 was 25,176 officers and 334,717 men; total, 359,883, with 47,149 horses. There were 3,738 staff officers, with 3,843 men, 79 officers, and 2,854 men in the sanitary corps, 1,536 officers and 7,680 men in the military schools and other establishments, 10,047 infantry officers and 177,712 infantry men, 1,874 officers and 45,506 men in the cavalry, 1,636 officers and 28,152 men in the field artillery, 412 officers and 7,760 men in the fortress artillery, 575 officers and 9,918 men in the pioneers, railroad, and telegraph corps, etc., and 393 officers and 1,899 men in the artillery train of the regular army. The Austrian Landwehr consisted of 2,168 officers and 20,657 men in the infantry and 196 officers and 1,899 men in the cavalry; the Hungarian Honved of 2,132 infantry officers and 21,232 men, and 390 officers and 4,251 men in the cavalry. The war strength of the army is stated to be 45,238 officers and 1,826,940 men, with 281,886 horses, not counting the Landsturm, estimated at more than 4,000,000 men. There are 1,048 field guns in peace and 1,864 on the war footing.

The Navy.—The Austro-Hungarian navy is small, but is kept up to the modern requirements for the defense of the ports and commerce of the empire. There are 8 battle ships, 8 port-defense

vessels, including 4 monitors for the Danube, 5 new cruisers, 23 third-class cruisers, and 25 first-class, 5 second-class, and 26 third-class torpedo boats. The "Monarch," "Wien," and "Budapest," sister ships launched in 1895 and 1896, have a displacement of 5,550 tons, 10·6 inches of side armor, engines of 8,500 horse power, giving a speed of 17 knots and an armament consisting of 4 9·4-inch guns and 6 5·9-inch and 14 47-millimetre quick-firing guns, besides machine guns and 4 torpedo ejectors. The ram cruiser "Marie Theresa," launched in 1893, has a displacement of 5,250 tons and engines of 9,800 horse power, making 19 knots, and carries 2 9·4-inch, 6 6-inch, and 11 quick-firing guns and 4 torpedo ejectors. The "Kaiser Franz Josef" and "Kaiserin Elizabeth," of 4,000 tons, are similarly constructed. A new armored cruiser now building, of 6,100 tons, with a belt of 10·6-inch armor, is designed to carry 2 9·4-inch guns, 8 5·9-inch quick firers, 18 smaller ones, 4 torpedo tubes, and to run 20 knots an hour with 12,000 horse power. The *personnel* of the navy consists of 628 officers, 446 petty officers and mechanics, 7,500 sailors, and 4,500 marines. The marines are raised by conscription like the army, and when the term of four years is past they are transferred to the reserve for five years, and then form part for three years longer of the Seewehr, created in 1888, which corresponds to the Landwehr.

Commerce and Production.—Austria is a country of diversified industry, though agriculture employs about half the working population. Hungary is mainly an agricultural country. The wheat crop of Hungary in 1894 was 53,085,000 hectolitres, while that of Austria was 16,982,000 hectolitres. Hungary produced 28,382,000 hectolitres of maize, and both countries grew large crops of oats, rye, and barley. The sugar beet is extensively grown in Austria, the crop amounting to 67,285,000 hectolitres, and potatoes cover as large an area as wheat. The exports of horses, of which there were 1,548,197 in Austria and 1,997,355 in Hungary at the last census, and of cattle and sheep, are much greater than the imports. There are 9,775,722 hectares of forest in Austria, over two thirds of it covered with pines, and in Hungary 9,074,000 hectares, of which 2,440,167 hectares are oak, 4,752,978 hectares beech, and 1,880,975 hectares beech forest. The exports of timber and forest produce from Hungary amount to 24,000,000 florins a year. The coal mined in Austria in 1895 was worth 69,000,000 florins; the Hungarian output was worth 23,700,000 florins. The iron produced in Hungary was 27,771,000 florins in value; the Austrian output, 12,490,000 florins. The total value of the merchandise imports of Austria-Hungary in 1895 was 722,500,000 florins, and of the exports 741,800,000 florins. The chief imports were: Cotton, 51,687,000 florins; wool, 39,232,000 florins; coffee, 37,631,000 florins; coal, 33,501,000 florins; woolen yarn, 24,978,000 florins; machinery and carriages, 24,179,000 florins; leaf tobacco, 21,257,000 florins; silk, 20,295,000 florins; grain, 18,900,000 florins; hides and skins, 17,991,000 florins; instruments and clocks, 17,422,000 florins; leather, 16,700,000 florins; books and maps, 15,681,000 florins; silk goods, 14,499,000 florins; live animals, 14,018,000 florins; cotton yarn, 13,939,000 florins; manufactured tobacco, 4,221,000 florins. The principal exports were: Sugar, 63,003,000 florins; sawed timber, 39,500,000 florins; cattle, 39,396,000 florins; eggs, 39,357,000 florins; coal, 30,427,000 florins; grain, 28,722,000 florins; hardware and clocks, 26,106,000 florins; glassware, 23,048,000 florins; horses and mules, 22,756,000 florins; gloves, 21,457,000 florins; wood and bone goods, 18,824,000 florins; hides and skins, 18,409,000 florins; woolen goods, 17,837,000 florins; bev-

erages, 13,464,000 florins; leather goods, 13,278,000 florins; iron goods, 12,423,000 florins; paper and paper goods, 11,848,000 florins; wool, 10,409,000 florins.

The imports into Hungary in 1895 were valued at 543,977,000 florins, the chief articles being cotton goods for 58,649,000 florins, woollens for 45,738,000 florins, clothing for 18,990,000 florins, silk goods for 17,719,000 florins, sugar for 10,104,000 florins, wine in casks for 9,990,000 florins, and cotton yarn for 9,004,000 florins. The total value of all Hungarian exports was 504,812,000 florins, of which 86,417,000 florins represent cattle, pigs, and horses; 71,671,000 wheat, corn, and barley; 69,618,000 flour; 19,387,000 wine in casks; 11,489,000 cask staves; 8,822,000 wool; and 8,739,000 eggs. Of the imports into Hungary 81·21 per cent. came from Austria, and of the Hungarian exports 77·24 per cent. went to Austria.

The value of gold and silver coin and bullion imported into Austria-Hungary during 1894 was 37,639,940 florins, and in 1895 it was 54,146,791 florins; the exports in 1894 were 27,361,456 florins, and in 1895 they were 24,257,737 florins in value.

The trade of Austria-Hungary was divided among foreign countries in 1895 as follows, values being given in Austrian florins:

COUNTRIES.	Imports.	Exports.
Germany.....	258,932,000	383,342,000
Great Britain	75,285,000	63,740,000
Italy	47,519,000	62,264,000
Russia	46,887,000	26,868,000
France.....	25,861,000	30,417,000
Switzerland.....	21,272,000	34,658,000
United States.....	37,660,000	16,820,000
British India.....	40,110,000	6,571,000
Roumania.....	13,888,000	24,916,000
Brazil.....	34,202,000	2,192,000
Turkey.....	15,506,000	19,537,000
Servia.....	17,292,000	9,348,000
Belgium.....	13,257,000	7,451,000
Netherlands.....	11,291,000	8,352,000
Egypt.....	7,057,000	8,345,000
Greece.....	10,245,000	3,877,000

Navigation.—The number of vessels entered at the ports of Austria increased from 66,271, of 8,773,713 tons, in 1890, to 87,503, of 9,494,229 tons, in 1895; the number cleared increased from 66,257, of 8,759,632 tons, to 87,421, of 9,472,485 tons. Austrian vessels formed 85 per cent. of the total number and 89 per cent. of the tonnage. At the port of Trieste 8,085 vessels in the foreign trade were entered, aggregating 1,760,055 tons, and 8,103, of 1,759,875 tons, were cleared in 1895; at the port of Fiume 7,023, of 1,063,970 tons, were entered and 7,006, of 1,060,538 tons, cleared.

The number of vessels owned in Austria and Hungary on Jan. 1, 1896, was 11,912, of 264,193 tons, employing 33,023 men in their crews. Of the total number, 244, of 202,352 tons, were seagoing merchant ships; 1,746, of 38,849 tons, coasting vessels; and 9,922, of 22,992 tons, vessels engaged in the fisheries.

Communications.—The railroads owned by the state had a total length of 4,950 miles in Austria in 1895, besides which the state operated 589 miles belonging to companies, while the railroad companies had 4,561 miles. In Hungary the Government owned 6,725 and companies 1,492 miles. The Austrian roads carried 102,898,000 passengers in 1894, and 92,865,000 tons of freight. The receipts were 243,208,000 florins, and the working expenses 136,227,000 florins. On the Hungarian lines in 1893 the number of passengers carried was 95,582,000, and the freight traffic was 124,460,000 tons. The receipts were 102,591,000 florins, and expenses 53,702,000 florins.

The Austrian postal traffic in 1895 was 689,306,-

140 letters and postal cards, 99,071,300 samples and printed packets, and 82,309,600 newspapers; receipts, 45,484,751 florins; expenses, 42,158,412 florins. The Hungarian post office in 1895 forwarded 152,889,000 letters and postal cards, not including official and franked letters, 31,283,000 bookpackets, samples, etc., and 89,081,000 newspapers; receipts, 16,771,000 florins; expenses, 12,153,000 florins.

The telegraphs of Austria had a total length of 29,750 miles in 1895, with 86,328 miles of wire. The number of dispatches sent during 1895 was 13,234,625. In Hungary there were 12,473 miles of telegraph lines, with 35,320 miles of wire. The number of dispatches in 1894 was 9,969,844. In Bosnia and Herzegovina the telegraphs had 1,784 miles of line and 4,262 miles of wire in 1893, and the number of messages that were sent in that year was 531,269.

Bosnia and Herzegovina.—The Turkish provinces of Bosnia and Herzegovina, in accordance with a provision of the Berlin Treaty, have been administered by the Austro-Hungarian Government since 1878. The Bosnian Bureau is subject to the authority of the Imperial Minister of Finance. The provincial government in Sarajevo, divided into the departments of finance, internal affairs, and justice, is assisted by an advisory body consisting of the dignitaries of the Greek Church and 12 representatives of the people. Bosnia and Herzegovina have an area of 23,262 square miles. The sanjak of Novi Bazar is occupied by Austro-Hungarian troops, but is administered by Turkish officials. The population of the occupied provinces in 1895 was 1,568,092, comprising 828,190 males and 739,902 females. There were 673,246 Greek Orthodox, 334,142 Roman Catholics, 3,596 Evangelical, and 251 other Christian inhabitants, 548,632 Mohammedans, 8,213 Jews, and 12 of other religions. Except the Albanians of the southern part and scattered gypsies the people are of the Servian race. Tobacco is the most valuable product. Wheat, corn, and other grains, potatoes, flax, and hemp are cultivated. Dried prunes are exported largely. Cattle breeding is an important industry. There were 233,322 horses, 1,416,394 cattle, 1,447,049 goats, 3,230,720 sheep, and 662,242 hogs in 1895. Nearly half the country is covered with forest. Iron, copper, manganese, antimony, chromium, quicksilver, lead, and zinc are mined. Compulsory military service has been introduced, and 5,185 men were enrolled in the local forces in 1895. The Austrian army of occupation numbers 22,994 men.

Renewal of the Austro-Hungarian Compromise.—The negotiations for the renewal of the Austro-Hungarian *Ausgleich*, the settlement of the amount to be contributed by each half of the monarchy to the common expenses, were not concluded by the Austrian and Hungarian deputations, which separated with mutual expressions of regret that they had failed to come to an agreement. Hence, in virtue of the constitutional law, the question was referred to the two governments, which submitted their decision to the parliaments in Vienna and Buda-Pesth. Count Badeni and Baron Banffy decided to continue the expiring treaty for one year more pending further negotiations. Under the present arrangement Austria pays 68·6 per cent. and Hungary 31·4 per cent. In view of the great economic development of Hungary it was urged by the Austrian deputation that the Hungarian quota ought to be raised to 43·16 per cent. and that of Austria reduced to 56·84 per cent. Hungary, which in the last decade has enjoyed a comparatively greater degree of growth and prosperity than Austria, though still possessing far less wealth and industrial development, was willing to bear a heavier

part of the imperial expenses than heretofore, but the Hungarian representatives objected strenuously to the principle put forth by their Austrian colleagues that the number of the population in the two halves of the dual monarchy should henceforth furnish the basis of calculation. They urged on the part of Hungary that the quota should be based on the revenue derived from taxation in each half of the monarchy, since the great majority of the population of Hungary is agricultural and comparatively poor. The deputation of the Austrian Reichsrath in May reduced the contribution demanded from Hungary to 36·4 per cent., but the Hungarian deputation would not agree to a higher quota than 33·2 per cent. The negotiations were broken off, and the Hungarian Government would not renew them, being unwilling to commit itself to any precise figures in the absence of an assurance that the Austrian Government could secure the sanction of the Reichsrath for any definitive agreement. The Austrian agricultural interests wanted protection against Hungarian flour, while the growing industrial interests of Hungary would willingly see the customs union lapse in order to establish protective duties against Austrian manufactures. Hence there were strong influences at work in both halves of the monarchy tending to retard a settlement. Negotiations were begun in September for the provisional extension of the existing *Ausgleich*. The two premiers agreed to an extension for twelve months, and bills to authorize this arrangement were introduced in both parliaments. The temporary extension includes the customs and commercial treaty and the understanding between the two governments and the Austro-Hungarian Bank.

International Politics.—The visit of Count Goluchowski, Austro-Hungarian Minister of Foreign Affairs, in Berlin in January, 1897, showed with sufficient clearness that the *rapprochement* between Austria and Russia created no coldness between Austria and Germany and did not affect their defensive alliance. In the Grecian question Austria, which was the first to suggest coercive measures, acted throughout in evident harmony with Germany, and both in a spirit of compliance toward or agreement with Russia that contrasted with the wavering attitude of Russia's ally, the French Republic. The German Kaiser, instead of meeting the Emperor Franz Josef at a frontier watering place, this year visited Vienna, where he was received with royal honors on April 21. The Austrian Emperor visited the Czar at St. Petersburg, and there an understanding is supposed to have been reached regarding matters that might lead eventually to a rupture between Austria-Hungary and Russia, and causes of difference or suspicion to have been, for a time at least, smoothed away.

The Reichsrath in 1896 sanctioned a so-called investment loan, free of taxes and bearing 3½ per cent. interest, to raise 53,500,000 florins for the payment of debts incurred by the various ministries, to cover the costs incurred in the transfer to the state of the telephone system, to increase the rolling stock of the state railroads, and to set aside a sum for new investments. In February the Government issued 58,000,000 florins, representing the amount of the new loan, which was taken at the net price of 92 per cent. by a syndicate composed of the firm of Rothschild, two Vienna banks, and the Post Office Savings Bank, with the understanding that all profits accruing to the syndicate from subscriptions over and above the price of 93½ per cent. shall be shared equally with the Government. This is the first state issue in Austria that bears so low a rate as 3½ per cent. interest, the previous average annual rate being 4 per cent.

Austria.—The Austrian Reichsrath is composed of the Herrenhaus, or House of Lords, in which 21 princes of the imperial family, 67 territorial nobles, 2 cardinals, 8 archbishops, 7 bishops, and 120 life members have seats, and the House of Deputies, of 353 members elected for six years, partly by the direct votes of citizens twenty-four years of age who possess a small property or other qualification. The electors are divided into four classes: Landed proprietors paying from 50 to 250 florins in direct taxes, according to the province in which their estates are situated, who elect 85 Deputies; chambers of trade and commerce, represented by 21 Deputies; the towns, where every citizen who pays direct taxes of 5 florins or over or who possesses certain personal qualifications, has a direct vote, electing 118 Deputies; and rural communes, where a similarly qualified class of voters choose 1 elector for every 500 inhabitants, and these electors meet and vote for the 129 rural Deputies.

Bohemia is represented in the Reichsrath by 92 Deputies, Galicia by 63, Lower Austria by 37, Moravia by 36, Styria by 23, Tyrol by 18, Upper Austria by 17, the coast land by 12, Carniola by 10, Silesia by 10, Carinthia by 9, Bukowina by 9, Dalmatia by 9, Salzburg by 5, and Vorarlberg by 3. Each province has its own Landtag, or diet, and possesses a large degree of autonomy. The Landtage are single chambers, elected similarly to the Reichsrath, for six years, containing in Lower Austria 72 members, in Upper Austria 50, in Salzburg 26, in Styria 63, Carinthia 37, Carniola 37, Görz and Gradiska 22, Istria 33, Tyrol 68, Vorarlberg 21, Bohemia 242, Moravia 100, Silesia 31, Galicia 151, Bukowina 31, and Dalmatia 43.

The Austrian Cabinet, constituted on Sept. 29, 1895, consisted in the beginning of 1897 of the following members: President of the Council and Minister of the Interior, Count Casimir Badeni; Minister of Education and Ecclesiastical Affairs, Baron D. Gautsch von Frankenthurn; Minister of Finance, Ritter von Bilinski; Minister of Agriculture, Count T. Ledebur Wicheln; Minister of Commerce and National Economy, Baron Hugo Glanz von Eich; Minister of National Defense, Field-Marshal Count Zeno von Welsersheimb; Minister of Justice, Count Johann Gleispach; Minister for Railroads, E. von Guttenberg.

Finances.—The budget estimate of revenue for 1897 was 692,703,959 florins, of which 681,083,783 florins were ordinary, and 11,620,176 florins extraordinary receipts. The following are the sources of revenue: Reichsrath and Council of Ministers, 813,485 florins; Ministry of the Interior, 1,175,373 florins of ordinary, and 52,370 florins of extraordinary receipts; Ministry of Defense, 394,126 florins; Ministry of Worship and Education, 6,594,274 florins of ordinary, and 133,709 florins of extraordinary receipts; Ministry of Finance, 494,303,807 florins of ordinary, and 1,260,629 florins of extraordinary receipts; Ministry of Commerce, 50,170,870 florins of ordinary, and 47,120 florins of extraordinary receipts; Ministry of Railroads, 108,959,780 florins of ordinary, and 9,129,300 florins of extraordinary receipts; Ministry of Agriculture, 13,869,782 florins of ordinary, and 2,948 florins of extraordinary receipts; Ministry of Justice, 1,039,479 florins of ordinary, and 8,800 florins of extraordinary receipts; pensions, subventions, etc., 1,320,123 florins of ordinary, and 255,300 florins of extraordinary receipts; state debt, 2,431,834 florins of ordinary, and 580,000 florins of extraordinary receipts; various sources, 10,850 florins of ordinary, and 150,000 florins of extraordinary receipts.

The total expenditure for 1897 was estimated at 692,161,183 florins, of which 655,775,446 florins are for ordinary, and 36,385,737 florins for extraordi-

nary purposes. The ordinary expenditures are 4,650,000 florins for the imperial household, 79,500 florins for the Imperial Cabinet Chancery, 2,472,206 florins for the Reichsrath and Council of Ministers, 22,725 florins for the Supreme Court, 116,736,482 florins for the Austrian contribution to the common expenditure, 20,620,567 florins for the Ministry of the Interior, 22,677,650 florins for the Ministry of Defense, 26,093,219 florins for the Ministry of Worship and Education, 96,256,303 florins for the Ministry of Finance, 45,040,404 florins for the Ministry of Commerce, 85,344,500 florins for the Ministry of Railroads, 15,846,411 florins for the Ministry of Agriculture, 22,859,800 florins for the Ministry of Justice, 175,200 florins for the Board of Control, 28,125,030 florins for pensions, subventions, etc., 168,137,859 florins for the public debt, and 637,990 florins for management of the debt. The extraordinary expenditures are 185,685 florins for the Reichsrath and Council of Ministers, 2,396,198 florins for common extraordinary expenditure, 3,789,284 florins for the Ministry of the Interior, 416,520 florins for the Ministry of Defense, 1,647,932 florins for the Ministry of Worship and Education, 7,131,374 florins for the Ministry of Finance, 2,182,800 florins for the Ministry of Commerce, 12,700,230 florins for the Ministry of Railroads, 1,875,706 florins for the Ministry of Agriculture, 2,127,008 florins for the Ministry of Justice, 1,904,500 florins for pensions and subventions, and 28,500 for debt.

Agrarian Agitation.—The most remarkable social manifestation of the year was a movement akin to social democracy among the peasantry in certain parts of the country, particularly in Galicia. The leader of the movement among the Polish peasants was Father Stojaloffski, an eloquent priest, whose views partake of the social philosophy of Karl Marx, and whose sermons are a singular mixture of the style of the Hebrew prophets with modern socialistic phraseology. While a parish priest he began to inveigh against the tyranny of landlords and the injustice of Government officials, and for this he was repeatedly the object of disciplinary punishment on the part of the bishop of his diocese. Hence he resigned his living and joined the archdiocese of Antivari, in Albania, thereby placing himself outside the jurisdiction of the Galician episcopacy, though he remained in Galicia as a priest without a charge. He preached, whenever he could get an opportunity, against the iniquity of great people, editing at the same time two magazines, in which he advocated his principles. The Austrian Government prosecuted him on various minor charges, such as his having read mass in a public house and his having refused to comply with an order for the dissolution of a political meeting. The Pope ordered him to go to his own diocese of Antivari, and when he refused to do this he was excommunicated. He protested against his excommunication, declaring that it was contrary to the canons, and was therefore null and void, and that the bishops had perverted the intentions of the Pope. His excommunication did him least harm in the very part of the country that is considered the main stronghold of the Catholic religion. His followers declared that the Galician authorities wished to get rid of him in view of the coming elections. He continued his campaign, and continued also to say mass, thus infringing the Austrian law. His utterances had a Russophile tinge, and contained also an admixture of anti-Semitic sentiment, but their burden was the vindication of justice for the peasantry, which had been robbed by the nobility and was denied its rights by the civil authorities. After he was repeatedly prosecuted and imprisoned for offenses against the press laws, Father Stojaloffski fled to Hungary, where he

was arrested and kept in custody some weeks at the instance of the Austrian Government. The Hungarian authorities finally refused the application for his extradition, and on Jan. 11, 1897, set him at liberty. The Galician agrarian movement, to which Father Stojaloffski gave fresh impulse and development, is one of long standing, dating from the annexation of western Galicia to Austria and the abolition of serfdom by the Emperor Josef II. Up to that time there existed in Galicia the old Slavonic institution of the *mir*, the village commune. When this system came to an end it was succeeded by that of private property, in the apportionment of which the peasants deemed that they were deprived of their own, although portions of the forests and pasture lands remained in the possession of the communes. For many years this grievance was a sore point with the Galician peasantry. Polish novelists have made the hatred of the peasants toward the landlords who have deprived them of their forests the motives of their romances, and popular songs have contributed to perpetuate the feud. There is a prevailing notion in the rural districts that the Emperor wants his beloved peasants to get their forests back again. During the revolutionary movement among the Polish nobility and students in 1848 the Austrian Government armed the peasantry for the preservation of public order, but with disastrous results, for nobles and their families were massacred by hundreds, their houses were burned and pillaged, and a reign of terror hung over the country until Gen. Benedek came with imperial troops and put down the peasants by military force. The agricultural distress and the spread of socialistic teachings have revived the old grievance; but, whereas the principal seat of the peasant movement at that time was in eastern Galicia, where most of the noblemen are Poles and Roman Catholics, while the peasants are Ruthenians of Greek Catholic or Greek Orthodox faith, the present agitation has its headquarters in the western part of the province, where both landlords and peasants are Poles and Roman Catholics. The approach of the electoral campaign of 1897 witnessed an increase in the agitation among the peasants. In one instance a meeting summoned by members of the clergy to express confidence in the Polish representatives in the Reichsrath voted down a resolution to that effect by a large majority. In their electoral manifestoes the followers of Father Stojaloffski appealed to their brother peasants (upon whom had been shifted the heaviest burden of the taxes, whose debts were driving them from their native soil into the wide world, and whose rights were betrayed in Vienna to the landlords) to drive out the recreant representatives and send faithful men to the Reichsrath who would have the law altered so as to restore and defend their rights. Prince Sanguszko, the Statthalter of Galicia, at the opening of the provincial Diet condemned without reserve all who took part in the movement among the peasantry and working classes. This gave occasion to interpellations in the Reichsrath, where Polish members inquired whether the Government intended interference in the electoral campaign, and reflections were suggested regarding the means by which is secured the election of a compact group of Poles, three quarters of whom represent exclusively the interests of the nobility and the clergy.

The Ruthenian nationality entered the field of racial politics in 1897, and put forth a programme that is partly national, demanding the division of Galicia into two administrative districts—one Ruthenian and the other Polish and partly agrarian, appealing to the Polish as well as to the Ruthenian peasantry, the main demand proposing the sale of

the great estates and their division into small peasant holdings. The Ruthenians, though outnumbering the Poles, under the new election law elected for the first time separate national representatives in the Diet and in the Reichsrath.

General Election.—The admission of the new category of electors, which practically established universal suffrage, was attended with new developments in political parties. The rivalry between the Anti-Semites and the Social Democrats, both bidding for the votes of the newly enfranchised class, became more acute. The old German Liberal party, that once directed the fortunes of the empire, was practically submerged by the new parties, and even the remnant joined the general hue and cry against the development of capitalism, which this party had done most to foster. A new German National party, composed largely of the less instructed German population enfranchised by the new electoral law, expressed the racial jealousy roused in antagonism to the triumph of Czech nationalism. This intense German revival reacted in turn on the Czechs and the Poles, and established a closer bond between these nationalities which have had more grounds of antagonism than of political fusion so long as the Czechs coquetted with Panslavism, and appealed to the protection of the Russians to save their nationality and language from extinction. Having found powerful allies within the empire, the Czechs dropped their Panslavism as if it were a mask, and in effusive gatherings with the Poles echoed the hereditary antipathy of the latter against Russia.

The Social Democrats of Vienna arraigned severely the Anti-Semitic majority in the municipal council, reproaching it with working in a direction directly opposed to the interests of the people by withdrawing subventions from the public library and societies for the winter refuges for the poor and attaching such conditions to the subvention to the volunteer ambulance society, which included some Jews in its membership, that the society properly refused it, and, on the other hand, by granting a large subvention to a suburban church building association, thus betraying its Ultra-Clerical tendencies and its subservience to the Clericals, who had contributed large funds for the Anti-Semite electoral campaign. Dr. Adler, the Social Democratic leader, accused the vice-burgomaster of desiring to expend 30,000,000 florins on the city gas works for political purposes, and said that the Christian Socialistic municipal council had shown itself an enemy to the working classes sooner than was expected. The Anti-Semitic and Christian Socialist leaders in advising their followers to purchase nothing from the Jews, in whose hands most of the trade and capital were concentrated, did not aid the prosperity of the capital, which lagged in a depressing way, while the general feeling was that the administration was generally unsatisfactory, and disgust was expressed at the violent altercations in this municipal council and its partisan decisions and oppression of the minority. The Government made some attempt to hold in check the Christian-Socialist and Anti-Semitic elements, yet, with no effective support from the Liberal party, which had almost ceased to exist as such and was undergoing a fundamental transformation, it had nothing to fall back upon but a disorganized and disunited minority in any attempt to curb the imposing Clerical majority that stimulated and protected popular passions and social jealousies that formed no part of its own party tenets. The Social Democracy of Austria regarded the troublous and confused political situation as rapidly leading to their advent to power. Their numbers tended constantly to increase, and the exemplary discipline of the party was well maintained. They half expected to win the elections for the

Reichsrath in the capital, and afterward attributed their defeat to the fact that their rivals, the Anti-Semites, controlled the administration and the electoral machinery. They counted surely on sending 20 representatives to the Chambers from the capital and other manufacturing centers, and in this they were not disappointed. Long before the elections the Government made a concession to the industrial classes in the matter of prison labor by increasing the tariff paid by contractors who farmed the work of convicts in order to lessen the competition that industry and trade suffered from prison-made goods.

The electoral campaign was the most exciting and keenly contested that Austria has ever known. The new German popular party carried on a spirited canvass in Austria proper, Bohemia, Styria, and Silesia against the Clerical and Anti-Semitic alliance. They hoped to gain about 30 seats. Their programme, which looked to the formation of a great German party on the single basis of nationality, proposed a union of the middle classes with a view of working out social reforms gradually, free from socialistic theories, but still opposed to the growing preponderance of capitalism. The manifesto of the Austrian episcopate, signed by 5 cardinals, 4 archbishops, and 26 bishops, advised the electors to vote for men who pledge themselves to defend the principles and interests of the Church, notably that of religious education, against the attacks of the anti-religious. The Social Democratic party issued a manifesto reminding the Social Democrats of Austria that, in virtue of the new electoral law, they were for the first time entitled to vote, and urging them to vote in such manner that the laboring classes should be represented and the Social Democracy be heard from the only tribune in Austria that is free from police supervision, so that the whole truth may be told without reticence, and the sufferings and requirements of the laboring section of the population be made known in the place where hitherto laws opposed to the working classes have been created. The impending struggle was foretold to be a hard one, for the Government would be hostile to the Social Democracy, which would have to fight, moreover, the elements of reaction under various names and guises, all in league against the Social Democracy, and wearing each its mask of friendship for the people, behind which it was nevertheless easy to detect the trinity of the landholding nobility, the capitalists, and the priesthood. The Socialists carried on an active campaign in Vienna and in all the mining and manufacturing centers with fair success, especially in some of the workmen's districts in the north, and in Bohemia. In that province there was intense excitement, and such antagonism between the Germans and the Young Czechs as to lead to rioting. The mixed nationalities were everywhere in a ferment, and presented a more complex problem than in any previous election. Dr. Lueger's Anti-Semites in Vienna showed no signs of declining strength or lack of enthusiasm. The Anti-Semites and Social Democrats, in competing for the new category of Deputies, 73 in number, to be elected for the first time by universal suffrage, were nightly involved in election fights in Vienna and other populous centers, and the police only intervened when bloodshed occurred. Father Stojaloffski, from his headquarters at Czaczka, near the frontier of Galicia, organized the revolt of the Polish peasant voters which menaced the control over their votes and representation that the Galician aristocracy and clergy have been accustomed to exercise. Under the leadership of Dr. Rieger, the Old Czechs effected a coalition in many districts with the Young Czechs in the electoral contest against Germans, Social Democrats, and Anti-Sem-

ites. In some districts, however, Young Czechs opposed their candidates to those of the Old Czechs. The most obvious feature in the campaign was the manifest strength of the Clerical and Anti-Semite coalition. Count Badeni, the Austrian Premier, threw the weight of his influence in favor of the groups characterized by the Liberals as reactionary, with the object of building up a new Government party that should embrace all sections of Conservatism and Catholicism. The aristocratic Hohenwart Club, the feudal party of Bohemia, and the Clericals in Tyrol and Salzburg, Upper Austria, and Styria rallied to the summons to form a Center party in the new Reichsrath that should be the nucleus of a strong Government majority.

The elections for the lower house of the Reichsrath began on March 9. The Christian Socialists prevailed in the capital over the Social Democrats, polling, in fusion with the Anti-Semites, 117,000 votes to 88,000 cast by the Social Democracy aided by many Liberals and even some Moderate Conservatives. The Christian Socialists for their part have been assisted by the influence of the Vatican and the patronage of the papal nuncio, and count as allies the lower clergy, who are generally discontented with their own lot, and thus received a great number of Ultramontane votes, while the episcopacy and higher clergy, mistrustful of the interference of the Vatican and apprehensive of assaults on their own privileges and authority, gave a dubious and half-hearted support. Of the German Liberals who sat in the last Reichsrath one third were displaced, mainly by German Nationalists. The party, which had 114 representatives in the former parliaments, disappeared as a separate group, becoming merged in the Progressists, while the National Germans increased from 19 to 43. The new Unterhaus was composed of 77 Progressive Germans, 43 German Nationalists, 28 Christian Socialists, 63 Clericals, 20 Social Democrats, 62 Young Czechs, 21 Feudal Czechs, 59 Conservative Poles, 15 Italian Liberals, and 50 representatives of other parties. The Poles no longer returned a solid deputation controlled by the Clericals, but sent some Agrarian Socialists and Ruthenians, and even a Social Democrat from Cracow. In the urban *curia* the Anti-Semites were beaten by the Liberals and Socialists. A strong ministerial majority was not indicated by this distribution of the seats. Hence the Premier attempted to negotiate with the Progressist group, with the object of forming a coalition majority, consisting of the Poles, the moderate Catholics, the Young Czechs, and such of the German Liberals as would join. He was anxious to dispense with the support of the Anti-Semites as well as the German Nationalists, and to remain independent of the reactionary Clericals. Failing in his plans, he and his associates offered their resignations on April 2, but they were induced to remain in office. The Austrian Social Democratic party were not disheartened at their defeat in the capital, where they contested all five districts, but showed the same confident hope that the future was theirs, and played shrewd politics as before, for instance, by collecting money at their sixth general congress, held in Vienna on June 6, to aid the street railroad strike then going on in the capital, although they had no share in organizing or influencing this strike, which, in so far as it was not due to the independent initiative of the strikers themselves, was the work of the Christian Socialist wing of the Anti-Semitic party. In this strike, although it interrupted the means of passenger transit in Vienna for some weeks, public opinion was on the side of the employees, who were encouraged by some members of the Reichsrath and supported by the municipal council, which warned the company of the

penalties they incurred by their failure to maintain the service. The company refused to reduce the working day from sixteen hours, or to pay certain classes of its servants more than 35 cents a day, or to grant them more than four Sundays or holidays in the year.

The new electoral law added a fifth estate to the four already represented in the Reichsrath—the great landowners with 85 representatives, the Chambers of Commerce and Industry with 21, the urban districts with 118, and the rural districts with 129. In the fifth *curia* only 15 out of the 73 Deputies are chosen by direct universal suffrage—9 from Lower Austria, and 1 each from Prague, Lemberg, Cracow, and 3 other cities. The remaining 58 are chosen by indirect suffrage, 1 elector being named for every 500 inhabitants. For the 15 seats filled by direct election the Christian Socialists polled nearly 248,000 votes and the Social Democrats nearly 219,000, while the Schoenerer party came next with 35,000, the German Nationalists after with 26,000, and then the Young Czechs with 20,000. In the indirect elections the Social Democrats polled the highest number, and after them Young Czechs, Poles, Ruthenians, and Christian Socialists.

On April 8 the municipal council of Vienna, by a vote of 93 to 39, elected Dr. Lueger for the fifth time burgomaster of the city. When elected on May 30, 1895, by a bare majority, he declined to accept office. He was elected again on Oct. 29, once more on Nov. 13 of the same year, and for the fourth time on April 18, 1896, but each time the ministry refused to ask the Emperor to confirm the election of the Anti-Semitic agitator. When Dr. Strohbach was chosen burgomaster Dr. Lueger accepted the office of vice-burgomaster. After the success of the party at the polls Dr. Strohbach resigned in order that his chief might be elected once more, and this time Dr. Lueger made none of the threats against the Jews, the Hungarians, and the Cabinet that had formerly rendered him obnoxious. The Emperor sanctioned his appointment, and he was sworn into office on April 20.

Race War in Bohemia.—In the session of the Bohemian Diet in February Graf von Coudenhove, the Governor, urged Germans and Czechs alike not to disturb the peace by mutual mistrust, promising that nothing in the nature of educational or national legislation would be undertaken without previously consulting the representatives of the two nations. A representative of the feudal landlords promised that they would assist in promoting a final settlement as soon as they found a harmonious feeling growing between the two races. Herr Lippert declared that the Germans would readily support any efforts for the establishment of friendly relations; previously, however, the position of the German-speaking population would have to be clearly defined. Dr. Herold, speaking in the name of the Czechs, declared that so long as equal rights were not given to both languages over the whole kingdom they could make no concessions. The resistance of the Germans to the demands of the Czechs removed the last differences between the Old Czech party and the aggressive and uncompromising Young Czechs, whose organization had already swallowed up the bulk of the old party of moderation and compromise, the remaining leaders of which now accepted the defiant programme of the stalwart champions of the restored Bohemian nation. The combined factions before the general election put forth a firm demand for the official use of the Czech language in the courts and administrative offices of Bohemia, Moravia, and Austrian Silesia on exactly the same footing as German. They also urged that the Emperor, when he celebrated the fiftieth anniversary of his ascent of the

throne, should come to Prague and solemnly assume the crown of St. Wenceslaus and the dignity of King of Bohemia.

In the new Reichsrath the united Czechs formed a more powerful and numerous group than the Young Czechs had in the last, and the Badeni ministry was more dependent on Czech support than it ever had been. Hence the long-expected and halfway promised decree of lingual equality could no longer be refused. An administrative ordinance was issued, directing that Czech should be employed on an equality with German as an official and judicial language throughout the Kingdom of Bohemia and the Margravate of Moravia.

The Young Czechs made their support of the Badeni ministry conditional on the full co-ordinate use of the two languages, Czech and German, in the judicial and official administration of Bohemia. Count Badeni therefore prepared a project, according to which, after a period of seven years, every Government official in Bohemia must be acquainted with both languages, and judges must dispense justice in either tongue at the request of the parties concerned. The German Deputies for Bohemia declared this to be a gross infringement on the interests of the German-speaking Bohemians, and the German landowners, upon whom Count Badeni had reckoned, refused to separate from the other German factions. Nevertheless the ministerial decree was issued providing for the concurrent use of both languages.

The Czechs have worked and striven hard for national recognition during the thirty years that have elapsed since Count Beust first promised, after Sadowa, to give Bohemia her virtual independence and Franz Josef planned to be crowned King of Bohemia and reign over a triple instead of a dual monarchy. Count Andrassy preserved the dual monarchy, and for a long time the Czech ambition was thwarted. During these years of deferred hope the Czechs have earned the racial and lingual supremacy that they have practically achieved. Socially and industrially they have risen to the level of their German competitors, and in political earnestness and discipline they have excelled them. Even in intellectual life they are the equals of their former teachers and political masters. They have not only built up a powerful political party and shown the capabilities of their formerly neglected and despised tongue for oratory and journalistic warfare; they have created a literature also, and even a musical school of their own, and in the fields of science, scholarship, and philosophy the Germans can scarcely still maintain that the Czech is not a *Cultursprache*, a literary language. Nevertheless the language ordinance of the Austrian ministry permitting this language to be used in courts of law and public offices, roused the Germans to such a pitch of uncontrollable fury and violence as the Young Czechs in their wild period of storm and stress never had displayed. The language war between the two populations was already severe enough over the question of education. In some districts Germans, in others Czechs, could not have their children taught in their own language. Cultured Czechs who had received their whole education in German would not have their children taught even its rudiments. In Prague German inscriptions have been erased from monuments, and that language is seldom heard. In many villages it is interdicted in the public schools under the law that requires the language of instruction to be the one prevailing in the district, although there are several Czech villages which have requested that the children be permitted to receive instruction in German as well as in Czech. In other villages Bohemian is banished from the cur-

riculum. After the issuance of the new language ordinance the Germans became fanatical in their hatred of the Bohemian Czechs, and the latter began soon to retort in kind. In Saaz the German ultras refused to attend mass, and the burgomaster called the prior of the Capuchin monastery to account because divine service was performed in Czech. In the neighborhood of Eger the German-speaking farmers discharged their Czech laborers and servant maids by wholesale, Czech tenants were evicted from their houses, and the railroad officials of that nationality found their life so unbearable that they petitioned to be transferred. In the town of Eger the Czechs made the lot of their German fellow-citizens unhappy, refusing to sell to them, or to serve them in restaurants or beer halls, or to rent houses to them. In some places Germans were compelled to walk miles to and from their luncheon. In many German districts, on the other hand, the Czechs were given notice to quit their offices, service, and dwellings because of their language, were mocked in public or personally maltreated if they used it, and in many cases were driven from their homes and compelled to seek shelter where their fellows are in the majority. Bohemian sermons were forbidden to be delivered in some of the churches. In the mining town of Reichenberg the two sections of the population engaged constantly in street fights, and here, where formerly the German authorities refused to allow Czech inscriptions to be chiseled on the gravestones, the Germans usually had the worst of it. But the Germans were, as a rule, the more violent and vindictive, for the disturbance was a part of their tactics, and they were incited by vulgar agitators with whom their party leaders had refused to consort until the new category of democratic voters were added to the electorate. The executive committee of the Young Czechs published a manifesto protesting in the name of the Bohemian Deputies against the persecution of Bohemians, especially the brutalities practised by fanatical Germans against the Bohemian minority in the closed districts, where "the honor, lives, and liberty of Bohemians true to their descent have been endangered by violent and insolent acts unworthy of a civilized people."

The language question was carried into the Reichsrath by the German Nationalists, who checked all business by tactics of obstruction and disorder such as had never before been tried in Austria. On May 25, when the president, worn out by anxiety, had fainted, and the vice-president was in the chair, the Opposition overturned desks, flung books in the faces of speakers, indulged in coarse invectives, and finally resorted to blows and broke up the sitting in riot and disorder, crowding around the ministerial table and menacing the Premier with clenched fists, with cries of "Down with the Polish Badeni!" At a large representative gathering at Brünn in early June the Germans threatened a continuance of the parliamentary obstruction and of determined resistance to the ordinance respecting the official use of the Czech language, even to the point of refusing their contingent of recruits to the army. The Czechs at a convention at Königgrätz, held about the same time, manifested the fullest confidence in the ultimate success of their cause. While they declared themselves ready at all times to come to an understanding with the Germans on the basis of complete equality between the two nationalities, they did not consider it a favorable moment then to begin negotiations and, moreover, were not themselves disposed to take the initiative. A mass meeting of Germans announced to be held at Eger on July 11 for the purpose of protesting against the action of

the Government was prohibited by the imperial authorities. In defiance of this prohibition notwithstanding the re-enforcement of the gendarmerie of the little town by mounted police from Prague, and the dispatch of a detachment of military to avert the expected influx, a great number of Germans made their way into the place from all parts of Bohemia. Headed by the entire German Bohemian delegation in the Reichsrath, the procession forced its way in the town hall in contemptuous disregard of the warnings of the local authorities. Several speeches were made before the police were able to disperse the meeting. The gathering reformed in procession in the streets and marched across the frontier to continue its deliberations on Bavarian soil. On the return of the demonstrators the streets were cleared by the police and military with drawn swords, several persons were wounded, and numerous arrests were made. The German citizens of Eger had decorated their houses for the occasion with black, red, and golden colors of the German Empire. The spokesman of the Deputies called upon the people to remain steadfast to their German nationality, and never to give up the fight until victory was won and the language ordinance withdrawn. In a German National meeting at Aseh, on Aug. 22, Deputy Iro made speeches that led to his indictment on the charge of high treason. During the parliamentary vacation the Prime Minister invited the German Nationalists to a conference with the Conservative landed proprietors and those of the constitutional party and with the Young Czechs for the purpose of considering the measures by which he proposed to bring about an understanding between the German and Czech nationalities. The German representatives refused to enter into any negotiations until the language ordinance should be withdrawn, basing their refusal upon the alleged incompetence of the ministry to issue such an ordinance.

Autumn Session.—The first session of the Reichsrath elected under the reformed suffrage was brought to an abrupt close on June 2. The violent interruptions and obstructive tactics of the German Nationalists, aided by the Socialists, prevented any business being done. The Prime Minister, stating that such proceedings were contrary to the provisions of the Constitution, prejudicial to the interests of the state, and calculated to undermine the fundamental principles of parliamentary institutions, and that it was a necessity of state to put an end to such a condition of affairs, declared the session closed. This course had never before been adopted except as a preliminary to dissolution, and it took the opponents of the Prime Minister by surprise. The Germans attributed the action to a desire to check their activity in the constituencies by depriving them of their constitutional immunity as Deputies, which a mere prorogation would have left intact. Before the Reichsrath came together again Count Badeni met the representatives of the parties forming the Slav Clerical majority, and received from them assurances of their continued support without conditions.

When the Reichsrath reassembled, on Sept. 23, Count Badeni was greeted with a hostile demonstration by the Schoenerer group, which cheered for the German people when cheers were called for the Emperor Franz Joseph. A series of motions was offered aiming at the impeachment of the ministers. The German Nationalists demanded the impeachment of Count Badeni, because of the conduct of the Government officials at public meetings. The German Radicals and the Schoenerer group wanted him impeached for prohibiting the mass meeting at Eger, and called for the impeachment of Count Gleispach, Minister of Justice,

Dr. Bilinski, Minister of Finance, and Baron Glanz d'Eicha, Minister of Commerce for exceeding their powers in the issuance of the decree authorizing the official use of the Czech language in Bohemia and Moravia. On the following day Dr. Wolf, the German Nationalist leader, who on May 8 had fought a duel with the Czech Deputy Horica, provoked a challenge from Count Badeni by insulting epithets, characterizing as blackguardism the alleged introduction of policemen into the house disguised as ushers. Although dueling is a violation of the Austrian criminal law, the Emperor approved the course of the Premier, and refused to accept his resignation. In the duel, which was fought the next morning, Count Badeni was wounded by a pistol bullet, which plowed its way along the whole length of his arm. The Opposition in the Reichsrath voted not to elect the 40 members provided by the statutes from the Unterhaus to the Austrian Delegation until they had settled their difficulties with the Government. There were five motions for the Premier's impeachment before the Reichsrath. The German and Anti-Semitic members declared that the Government intended to prorogue Parliament as soon as the Delegations were chosen, and enact the remaining legislation by despotic ministerial edicts. The stormy and disorderly meetings of the Unterhaus continued. On Oct. 19 the sitting was suspended after a band of deputies had surrounded the chair and assaulted their presiding officer. The outrages of the German obstructionists finally forced Thomas Kathrein, the president of the Unterhaus, to resign on Oct. 26. The budget for 1898, based on the new system of taxation, made the total revenue 719,900,000 florins, which was 29,760,000 more than in the preceding year. The expenditure was computed to reach about 715,000,000 florins. The new ground tax was expected to bring in 28,700,000 florins, as compared with 32,700,000 florins in 1897; the tax on buildings, 31,100,000 instead of 33,300,000 florins. From the new personal income tax a revenue of 15,600,000 florins was looked for, from the tax on *rentes* 3,100,000 florins, from the tax on salaries 310,000 florins. In the supplementary budget reckoned as permanent investment the sum of 29,000,000 florins was set down, to be raised by a 3½-per-cent. loan, and expended in discharging debts incurred for extraordinary purposes, and for domestic improvements in general, chiefly in constructing new railroads and equipping the old ones. The adoption of the budget and the renewal of the Austro-Hungarian *Ausgleich* were the only indispensable acts required of the Reichsrath. The Government resorted to all-night sittings in the hope of rendering the Opposition physically incapable of keeping up the obstruction. In the nocturnal sittings the scenes of turbulence and disorder grew worse, and the debates degenerated into an exchange of insulting epithets and personal abuse. Herr Lecker, on the Government side, stretched out one speech for twelve continuous hours. The Government, which is empowered to suspend the Constitution temporarily by one of the articles of that instrument, could carry on most of the public business without the help of the Reichsrath, but Count Badeni was reluctant to resort to this extreme course.

Hungary.—The Hungarian Reichstag consists of the Table of Magnates, in which 19 archdukes, 181 hereditary peers paying 3,000 florins in direct taxes, 41 dignitaries of the Roman and Greek Churches, 11 representatives of the Protestant confessions, 84 life peers, 17 state dignitaries, and 3 delegates of Croatia-Slavonia have seats, and the House of Representatives, consisting of 413 members from Hungarian towns and rural districts and

40 delegates of Croatia-Slavonia, elected for five years by all male citizens twenty years of age who pay a certain small house, land, or income tax or possess educational or professional qualifications. There were 821,241 electors in 1895, being 1 in every 18 inhabitants. Croatia-Slavonia has a provincial Diet of 90 members to legislate on local affairs.

The Hungarian Cabinet at the beginning of 1897, first constituted on Jan. 15, 1895, contained the following members: President of the Council, Baron Desiderius Banffy; Minister of Finance, Dr. Ladislaus de Lukacs; Minister of National Defense, Baron Geza Fejervary; Minister at the King's Court, Baron Samuel Josika; Minister of the Interior, Desiderius de Perczel; Minister of Education and Worship, Dr. Julius de Wlassics; Minister of Justice, Dr. Alexander Erdely; Minister of Industry and Commerce, Baron Ernest de Daniel; Minister of Agriculture, D. Ignatius de Daranyi; Minister for Croatia and Slavonia, Emerich de Josipovich.

Finances.—The budget estimates for 1897 make the total ordinary revenue 465,191,881 florins, and the transitory revenue 10,134,424 florins; total from all sources, 475,326,305 florins. Of the ordinary receipts 307,582,306 florins are from the Ministry of Finance, 132,407,875 florins from the Ministry of Commerce, 16,668,565 florins from the Ministry of Agriculture, 1,434,717 florins from the Ministry of the Interior, 800 florins from the ministry *ad latus*, 793,660 florins from the Ministry of Justice, 347,180 florins from the Ministry of Defense, 1,611,668 florins from the Ministry of Education and Worship, and 4,345,100 florins from state debts.

The total ordinary expenditure was estimated at 441,275,181 florins, transitory expenditure at 8,013,952 florins, the total of investments at 19,051,651 florins, and extraordinary common expenditure at 6,897,886 florins, making the total expenditures 475,238,670 florins. Of the ordinary expenditures 4,650,000 florins are for the civil list, 79,500 florins for the Imperial Chancery, 1,775,043 florins for the Reichstag, 27,881,803 florins for the contribution to common expenditures, 26,416 florins for pensions charged to the common account, 8,350,374 florins for Hungarian pensions, 129,031,474 florins for the national debt, 13,671,681 florins for debts of guaranteed railroads that have been acquired by the Government, 499,078 florins for guaranteed railroad interest, 8,356,364 florins for the administration of Croatia, 148,548 florins for the office of the Accountant General, 240,987 florins for the administration of courts of justice, 440,460 florins for the presidency of the Council, 70,808 florins for the ministry *ad latus*, 43,078 florins for the Ministry for Croatia-Slavonia, 16,447,501 florins for the Ministry of the Interior, 75,197,236 florins for the Ministry of Finance, 93,514,166 florins for the Ministry of Commerce, 17,607,512 florins for the Ministry of Agriculture, 12,140,122 florins for the Ministry of Public Instruction and Worship, 15,966,402 florins for the Ministry of Justice, and 15,136,628 florins for the Ministry of Honved.

The Session of Parliament.—A conflict arose between the ministry and the Opposition, and was prolonged for many weeks by means of obstructive tactics similar to those practiced in the Austrian Reichsrath. The matter at issue was a clause in a bill amending criminal procedure and trial by jury. The bill provided that in future newspaper libel cases should be tried before a judge alone without a jury. This the Opposition held to be an infringement on the liberty of the press. The Government refused to modify the bill, but temporarily withdrew it on encountering determined obstruction, and in its place brought in a bill for the extension for one year of the sugar bounty system. The Opposition, however, would not allow any progress to

be made with this or any other measure until the Government consented to modify or permanently withdraw the objectionable clause in the jury bill. At last, on July 30, the Government consented to a modification of the clause, and the Opposition in return promised to cease obstruction then and not to have recourse to it during the remainder of the session on the discussion of the provisional arrangement of the Austro-Hungarian compromise question and the voting of the provisional budget. When the question of the *Ausgleich* came up in October, Francis Kossuth urged the Government to take advantage of the Austrian chaos and try for Hungarian independence. Baron Banffy replied that the union of the two countries must be regarded as indissoluble, but should the Austrian Constitution break down Hungary would be obliged to act independently regarding the questions of the customs and commercial treaty and the charter of the Austro-Hungarian Bank. It is the view of most Hungarian politicians that if parliamentary government ceases in Austria or if the federal system is established there the present union will by that fact be abrogated and the only remaining tie between the two monarchies will be the sovereign.

Agrarian Socialism.—The theories of socialism have not been rife hitherto in Hungary, as they have been for many years among the laboring classes of Austria and Germany. They have not permeated the rural population of those or any other countries, nor have the Hungarian peasantry been prone to the phases of agrarian discontent that have cropped up elsewhere in Europe, or used to holding conventions to discuss their condition and voice their grievances. Hence the Agricultural Laborers' Congress that met at Buda-Pesth in the beginning of February, 1897, was a novel and a singular phenomenon, and its most singular aspect was its distinctly socialistic cast. It revealed the existence of an agrarian movement of a serious character among a part of the Hungarian peasantry, differing from the peasant movement in Galicia in many respects, and starting spontaneously from the bosom of the peasant community instead of being fomented by any popular agitators, or guided by men of enlightenment and culture, such as Father Stojaloffski. There was no lack, however, of forcible and eloquent pleaders of their cause, for every Hungarian is a born orator, and the villagers are practiced in political and electioneering arts. At the congress several addresses were delivered that were worthy of the Reichstag, and they attracted the attention of politicians of note. The members of the congress declared that, in case the authorities should continue to place obstacles in the way of the organization of the Agrarian Socialist party, they would form a secret society and bring about a general strike if their demands were rejected. These were an increase of wages, a reduction of the hours of labor, and the abolition of the *corrée* system. The movement originated and had its principal seat in the midst of one of the most fertile parts of the Hungarian plain, a district where the land belongs to large proprietors and rich peasants. Its character was especially disquieting to the Hungarian authorities because advanced socialistic theories, involving atheism and the negation of patriotism, seemed to have taken deep root among the genuine Magyar population, formerly distinguished for strong attachment and devotion to the country and its institutions. The rapid spread of new theories among this landless population is easily accounted for, as the people here live in communities of from 20,000 to 30,000 persons, and while they find plenty of work in the summer and autumn on the farms and in the regulation of rivers, in the winter they have little to do and find plenty of time and opportunity

to discuss the hardness of their lot and listen to socialistic theories. Thus the doctrines of agrarian communism have made great progress in the lowlands between the Danube and the Theiss, although in other parts of the country they are unknown. The movement, limited as it was, caused anxiety in governing circles, where the opinion gained ground that legislative measures must be taken to provide redress for any legitimate grievances that the agricultural laborers have, though it was difficult to see in what form alleviation could be extended when the low prices of agricultural produce precluded a rise in wages, while a shortening of the hours of labor might prove disastrous in a country where the harvest has to be gathered in so short a time that work goes on day and night. These natural conditions made this agrarian socialism appear more serious and more troublesome to be dealt with by the authorities than socialism is in large industrial centers. An industrial strike, which is also quite unusual in Hungary, occurred in January at Temesvar, where the workmen employed in the Anina coal mines, belonging to the state railroad, organized a demonstration against an increase in their contributions to the benefit fund. An immense crowd, which included a large number of women, proceeded to the offices of the directors to protest against the change. When the gendarmes pressed them back, the men, incited by the women, hurled stones, one of which wounded a lieutenant. The gendarmes then fired, killing 9 and wounding 11 persons. The infuriated miners compelled the gendarmes and officials to take refuge in the Government building until they were rescued by a detachment of soldiers. To frustrate the threatened harvesters' strike the Government determined not only to use force when necessary to preserve the peace, but send a sufficient force of laborers to take the place of the strikers wherever the strike should break out. Early in June socialist riots occurred in the peasant communes of Nadudvar and Alpar, where the gendarmes fired on the disturbers, killing one man in each place and wounding a considerable number. In connection with these disturbances 21 persons were arrested as socialist agitators. Near the end of the month, in the height of the harvest season, an extensive strike occurred in the Alföld district, and the movement continued in spite of the introduction of outside laborers through the agency of the authorities and the premature intervention of the police, prior to any disturbance of the peace, with the object of coercing and intimidating the strikers. The Government labor reserve had little or no effect on the regular harvesters, who proceeded to carry out their threat of striking unless the employers accorded the terms demanded. The untrained imported laborers, on the other hand, proved inefficient and expensive, and were almost useless to the employers, who complained that the provisions made by the Government were useless, and that it was impossible to get their crops in properly with inexperienced hands, such as those provided. Some of the imported workers at the last moment declined to carry out their engagements, in consequence of threats of violence from the local agricultural laborers.

Peasant riots occurred in September in Croatia-Slavonia, where 4,000 men armed with scythes and pitchforks, after killing two Hungarian officials, took up a fortified position. Twelve districts were placed under martial law, and troops were sent to quell the disturbance, which here originated in a belief of the Croats that the Hungarian authorities intended to deprive them of their ancient privileges and forcibly convert them to Catholicism. When the signs of disorder appeared in April the Governor, Count Khuen Hedervary, revived the old

law of association, under which political societies may be dissolved and their funds confiscated, and even nonpolitical societies suppressed unless they are specially authorized by the Government. In Slavonia the agrarian movement had at that time become so threatening that wholesale arrests were made among the peasantry and military precautions were taken against disturbances. While in Croatia proper the peasants are to a great extent the owners of the soil, in Slavonia, and particularly in the eastern parts, the land belongs to great proprietors. The landlords, many of whom own enormous estates, are absentees, and where the land is owned by the cultivators, these are worse off than the tenant farmers, owing to the heavy mortgages they must carry. Owing to these causes a communistic agrarian movement similar to that in Galicia found a fertile soil in eastern Slavonia. The Government party has a large majority in the Agram Diet, but it is opposed by a noisy minority whose aim is separation from Hungary and the restoration of the dismembered kingdom of Croatia, embracing Croatia, Slavonia, Dalmatia, Bosnia, and Herzegovina, Fiume, and Istria.

Bourse Legislation.—The question of regulating the stock and produce exchange has engaged the attention of the Hungarian Government, which first sent its representatives to investigate the conditions prevailing in the principal bourse centers of Europe. Then a commission was constituted under the auspices of Baron Daniel, the Minister of Commerce, on which various financial, mercantile, and agricultural institutions, the Reichstag, and the legal profession were represented. The bourse of Buda-Pesth is an institution through which business in produce, as well as in stocks and shares, is transacted. Being the only establishment of the kind in Hungary, it plays an important part in the commercial and financial affairs of the country. The bourse committee, which has extensive administra-

tive powers, is elected from among the members, and the elections are afterward ratified by the Minister of Commerce. The decisions of the committee are final after they have been reviewed by officials appointed by the Government for the purpose, but the powers of these officials are limited to restricting the action of the committee to its prescribed sphere, within which its power is practically uncontrolled. The subjects to which the Government inquiry was directed were the position of the bourse in relation to the state, the composition of the bourse committee, the conditions regulating the terms of membership, and the disciplinary authority of the bourse authorities. The majority of the commission approved the intervention of the state for the regulation of the bourse and its methods of business. In the discussion of the second question the representatives of agrarian interests proposed that the committee should in future be composed partly of candidates elected by the members of the bourse and partly of candidates elected by agricultural associations having no direct connection with the bourse. This latter element they desired to add because the produce exchange exercises a preponderating influence on agriculture in general and upon the material welfare of the farmer and landowner in particular. Their opinion was opposed by the financial experts on the plea that all corporations, agricultural and others, that were in direct touch with the bourse were entitled to a voice in the election of the committee, but the adoption of the proposals of the agrarians would subject the decisions of the committee to outside control, which in the end would prove detrimental to all concerned. With regard to the third question the representative of the bourse committee advised the application of legal measures limiting the number of members who should be entitled to vote, and the exclusion of undesirable elements.

B

BAPTISTS. The American Baptist Yearbook for 1897 gives the following numbers for the Baptist churches in the United States: Number of associations, 1,567; of churches, 40,658; of ministers, 27,257; of members, 3,824,038; of persons baptized during the year, 172,433; of ministers ordained during the year, 504; of Sunday schools, 23,787, with 164,431 officers and teachers and 1,590,190 pupils; value of church property reported, \$84,039,959; amount of salaries and church expenses reported, \$8,106,769; of contributions for missions, \$1,222,621; of gifts for education, \$165,286; of miscellaneous gifts, \$2,214,682. Six hundred and sixty-two churches were organized during the year, and 351 church buildings dedicated. Thirty-three charitable institutions return property valued at \$1,525,721. One hundred and sixteen periodicals are conducted as representative of the Baptist churches and principles. For Baptists in the world, including America, Europe, Asia, Africa, and Australasia, are enumerated 47,363 churches, 31,825 ministers, and 4,573,264 members.

Home Mission Society.—The seventy-fifth annual meeting of the American Baptist Home Mission Society was held in Pittsburgh, Pa., May 19 and 20. The Rev. H. Kirke Porter presided. The total receipts for the year had been \$422,428, of which \$297,329 were from the contributions of churches, Sunday schools, and individuals. The expenditures had been \$450,693, viz., \$202,308 for missionaries' salaries, \$84,460 for teachers' salaries, and \$50,377

for expenses of administration. The gross debt of the society on April 1, 1897, was \$214,694, toward the payment of which \$32,933 had been specifically subscribed, leaving a net indebtedness of \$181,761. In the missionary department 1,064 missionaries and teachers had been employed, of whom 254 missionaries and 21 teachers had labored among the foreign population; 47 missionaries and 216 teachers among the colored people; 17 missionaries and 21 teachers among the Indians; 17 missionaries and 5 teachers among the Mexicans; 4 teachers among the Mormons; and 452 missionaries among Americans. The missionaries had supplied 1,775 churches and stations, and reported 4,916 members received by baptism, 49,253 church members, 137 churches organized, 1,157 Sunday schools, with a total attendance of 68,379; and \$91,305 of benevolent contributions from the mission churches. The society aided in the support of 31 established schools for the colored people, the Mexicans, and the Indians, 11 day schools for the Chinese, and 1 day school in Utah, and 1 in New Mexico. The work among the Indians was confined almost exclusively to Indian and Oklahoma Territories. The work among the foreign populations was gradually assuming new aspects. Several of the churches called foreign had during the year become American, dropping their foreign tongue and using the English language in all their services. Much of the work done among these people was "foreign" now only in name. Probably the majority of German, Swedish, and

French missionaries under appointment spoke English readily, and did a large part of their work through the medium of the English tongue. The new plan of co-operation with the white and colored Baptists of the South, which went into effect in 1895-'96 in North Carolina and Alabama, had been extended to South Carolina and Virginia. The Southern brethren were desirous of having the plan put into operation in other States. The work of the schools for negro education in the South had been successful, and was continuing to exercise a wide influence in lifting the people up. Ninety-one churches in 26 States and Territories had been aided from the Church Edifice fund. A joint effort had been made by the committees of this society and of the American Baptist Missionary Union to extinguish the debts of the two societies, amounting, together, to \$486,000. Mr. John D. Rockefeller had offered to give \$250,000 to this purpose on condition that the societies should raise \$236,000. It was announced during the meetings of the societies that \$204,000 of the required amount had been subscribed. In view of this promise of success, a resolution was adopted: "That the happy and successful co-operation of the Missionary Union and this society in securing pledges of money for the liquidation of their debt and ours warrants the appointment of a committee of conference from the two societies, to report next year whether it is not possible to arrange a system of permanent co-operation in all the raising of funds for these societies."

Publication Society.—The seventy-third annual meeting of the American Baptist Publication Society was held in Pittsburg, Pa., May 20 and 21. The Hon. Samuel A. Crozer presided. The society had had to bear during the year the disadvantages arising from the entire destruction of its publication house and its accumulated stock by fire in February, 1896; yet the result of the year's operations had been "more than satisfactory." The sales of the year had amounted to a total sum of \$607,397, while the other receipts of the publishing department had been \$11,595; receipts in the Bible department, \$12,799; in the missionary department, \$113,617. The deficit in the last department had been diminished from \$14,317 to \$11,374. On account of the much greater indebtedness of the Missionary Union and the Home Mission Society; and in order not to embarrass their efforts, no special attempt had been made to reduce this debt. The entire amount coming into the benevolent treasury of the society through the customary channels had been \$117,561; besides which \$8,855 had been received from bequests in the form of conditional gifts. One hundred and twenty-two new publications had been issued. It had been necessary further to reprint the entire list of the society's publications in order to replace the stock destroyed by the fire. Ninety-eight missionaries and workers had been employed in the missionary department, who had visited 38,771 families, and sold and given away 28,923 books, besides thousands of tracts, and who returned 387 persons baptized, 18 churches constituted, 258 Sunday schools organized, 997 institutes held and addressed, 113 Sunday schools aided by gifts of literature and Bibles, and 248 pastors and ministerial students aided with grants for their libraries. The interest in the chapel cars was represented to be increasing, and their usefulness constantly demonstrated. Six were now in operation. The society had raised in thirteen years \$246,455, or nearly \$19,000 a year for Bible work, and the whole sum had been expended on home and foreign fields. The work of revision of the Bible to which the society is pledged as the successor of the American Bible Union and of the American and Foreign Bible Society, was progressing.

Missionary Union.—The eighty-third annual meeting of the American Baptist Missionary Union was held in Pittsburg, Pa., May 24 and 25. Dr. Henry F. Colby presided. The treasurer reported that he had received during the year from all sources \$467,102. The expenditures had been \$580,955, leaving a deficit of \$113,854, which, added to that already in existence April 1, 1896, \$163,827, made a total debt of \$277,681. The Executive Committee insisted in their report that the annual receipts were inadequate efficiently to maintain the work of the society in its present dimensions and methods. The situation anticipated in the previous year's report had been reached, viz.: "In case the debt shall be increased during the coming year, your committee see no alternative but that suggested by the secretaries of the board, of closing some of our missions or in some way curtailing the work." The subject had been one of frequent and earnest consideration by the committee, and they had deliberately concluded that the appropriations for the coming year should be made upon a scale about \$60,000 below those of the past year, and that in the years to come the average receipts from all sources for the five preceding years should be adopted as the basis of missionary appropriations for any single year. "To effect this will in heathen lands compel the actual abandonment of stations upon some of your mission fields with the recall of missionary families; a serious reduction in the force of native workers upon others, besides such other curtailments in the furnishing of missionary equipment as can not fail to prove a serious embarrassment to the workers in the field, and, for a time at least, curtail progress. From several of our European missions it will involve the withholding of nearly one half the present appropriations and a considerable reduction of the work in France, with the possible withdrawal altogether from Spain. When the extent to which retrenchment has already been carried, and how disproportionate to the growth and prosperity of the work have been the offerings of the past five years, is taken into account, it must readily be seen that any line of action less drastic will fail to secure the relief demanded." The report of the Committee on Finance recommended to the Executive Committee such rearrangement and readjustment as might be consistent with the least injury to the missionary work, saying that "in the light of the experience of recent years we should deem it exceedingly unfortunate if the plans of the coming year should make it necessary to incur a new debt." The Executive Committee were advised to exercise the utmost economy, and the church members were exhorted to a more conscientious and considerate stewardship. A committee was appointed to confer with a like committee of the Home Mission Society with regard to further co-operation.

Progress in missionary work was noted in the Telugu mission, progress in self-support in that mission and in Burmah, and increased general spread of evangelical religion in France and Germany. The whole number of missionaries of the union was 452; of native preachers, 1,105; of churches, 853, with 99,564 members; of baptisms in 1896, 5,174.

Commission on Systematic Benevolence.—The first annual public meeting of the Commission on Systematic Benevolence was held in Pittsburg, Pa., May 22. The Rev. T. S. Barbour presided. The report of the secretary recited that in order to render effective the undertakings of the commission (which was formed at the anniversary meeting of 1896 for the purpose of promoting unity in the benevolent work of the Baptist churches) it had been deemed essential to summon to co-operate with it three representative organizations now in

operation throughout the country, namely, the State conventions, the associations, and the local churches. The recommendations that had been made to these bodies were detailed. Bulletins concerning "Plans of Giving" had been issued, and documents containing various papers in regard to phases of the work. The one distinctive work of the year, as described in the address of the president, had been the initiatory steps in opening up channels of communication between the central commission and the great body of the churches. State boards had been formed. The immediate work now was that of extending the organization to each association; in every State a commission in touch with every church; in every church the adoption of some thoughtful plan of giving, the holding of a monthly service in recognition of the great joint enterprises represented in the denominational life, and the appointment of a church commission, which by the use of literature and personal effort shall seek to secure in every member conscientious, habitual fidelity in the discharge of the obligations of Christian stewardship; the use of a simple form of annual report by church, association, and State—thus to unify and promote intelligent development of the work. Report was made of the effort, in co-operation with the offer made by Mr. John D. Rockefeller, to secure payment of the debts of the Missionary Union and the Home Missionary Society, that the whole amount so far obtained was \$199,889.

Woman's Home Mission Society.—The twentieth annual meeting of the Woman's Baptist Home Mission Society was held in Pittsburg, Pa., May 17. Mrs. J. N. Crouse presided. The total amount of money in the treasury during the year had been \$66,156. The disbursements, including \$5,000 paid on the deficit and reinvested, had been \$69,478, and \$378 were on hand at the close of the year. The deficit thus appeared to be about \$3,700, but as \$2,000 of this sum was an emergency fund, the real deficit was \$1,700. The training school had graduated 21 students, of whom 15 were Americans, 3 Swedes, 1 Dane, and 2 Germans. The number of missionaries employed during the year had been the same as during the previous year, 130. The work was carried on among 11 classes of people in the United States, in 39 States and Territories, and at 85 stations. Free conferences were held during the meeting on the literature of the society, methods and services for collecting money, the training of girls to take interest in foreign and home missions, and the same among children.

Woman's Foreign Missionary Societies.—The twenty-sixth annual meeting of the Baptist Woman's Foreign Missionary Society was held in Washington, D. C., April 20 to 22. The general receipts for the year had been \$86,438, and the expenditures \$96,452. The receipts for the Home for Children of Missionaries and of Hasseltine House had in both cases been in excess of the expenditures. One hundred and twenty missionaries had shared the gifts of the society, 63 of whom were entirely supported by it, 11,126 pupils were enrolled in its schools, 167 Bible women had been engaged in their special work, and 713 baptisms were reported. More detailed reports were given of the school and other work in Burmah, among Eurasians, the Karens, Garos, Tamils, Telugus, in Pegu, and in India. The deficit in the general current accounts of the society having been reduced to \$8,500, a plan was prepared and adopted for extinguishing or further reducing it, without changing the schedule for the coming year.

The twenty-sixth annual meeting of the Woman's Baptist Foreign Missionary Society of the West was held in Cincinnati, Ohio, April 21 and 22. The en-

tire general receipts for the year had been \$56,810, and the receipts for the Home for Missionaries' Children \$1,806. The invested funds amounted to \$11,256. The work of the society in the foreign mission field—Burmah, Assam, Teluguland, China, and Japan—was represented by 40 missionaries, 1 assistant, 3 under appointment, 44 schools, 2,419 pupils, 115 teachers, 47 baptisms during the year, 68 Bible women, 4 Bible schools; and, in the medical department, 6 hospitals, 3 dispensaries, 5 helpers, 1,306 in patients, and 26,036 out patients. The whole amount appropriated for the missionaries was \$37,263. The appropriations to the foreign field and the home expenditures had all been cut down, and the States had been asked to fix their apportionments at such figures as could be reached. Four candidates for appointment as missionaries had been accepted, three of whom were already in the field. A correspondence school for candidates for mission fields, opened in 1883, had 85 students enrolled—6 during the past year—36 of whom had been graduated from one or more of its courses; and of these 24 had gone to the foreign field and 1 as a missionary among the Chinese in California. The Home for Missionaries' Children at Morgan Park, Ill., was full, and in need of a building.

Historical Society.—The American Baptist Historical Society having lost all its collections in the burning of the American Baptist Publication House in February, 1896, the annual meeting, May 20, was devoted most largely to expressions of sympathy and the presentation of its aims and needs. The president, the Rev. Dr. Lemuel Moss, defined the object of the society as being to collect and preserve all books, manuscripts, and documents relating to Baptist history, everything written by Baptists or in favor of Baptists, or in opposition to Baptists, and pictures, portraits, and mementoes. It was to have rooms in the new fireproof building of the Publication Society in Philadelphia, and needed \$25,000. Addresses were made by representatives of the several Baptist societies holding their anniversary meetings at Pittsburg expressive of the interest which their respective bodies had in the work of this society. A committee appointed in the previous year to encourage the study of Baptist history reported that it had secured the promise of historical papers to be published during the ensuing year, to be written by Dr. H. S. Burrage, Dr. Norman Fox, Dr. E. B. Hulbert, and Dr. A. H. Newman. The publication would be continued quarterly. Partial promises had been received from other Baptist scholars. Subscribers were invited to support the enterprise by the contribution of \$1 a year, in return for which they would receive the publications of the society.

Southern Baptist Convention.—The Southern Baptist Convention met in its fifty-second session at Wilmington, N. C., May 7. Mr. Jonathan Haralson was unanimously elected president. The Home Mission Board reported that the year had been one of the severest financial stress it had ever passed through. It had begun with an indebtedness of \$8,000 and an obligation to pay \$5,700 toward the purchase of a House of Worship in New Orleans, making a total indebtedness of \$13,700. The total amount of \$180,596 had been raised. All indebtedness had been discharged except \$4,500 due on the New Orleans House of Worship, and the year had closed with a balance of \$220 in the treasury. Three hundred and seventy-two missionaries had been employed, serving 1,963 churches and stations, who returned 4,709 baptisms during the year, 130 churches constituted, 57 houses of worship built and 129 improved, with an expenditure of \$52,040, and 313 Sunday schools organized, connected with which were 10,725 teachers and pupils. Nineteen

State and Territorial boards had co-operated with the General Board in part or the whole of their work. The Woman's Missionary Union co-operating with the board reported concerning the distribution of literature and supplies. Work among the negroes under the plan of co-operation of this board with the State boards and the American Baptist Home Mission Society was in operation in Alabama, North Carolina, South Carolina, and Virginia, with 14 missionaries employed. Forty young colored men were studying for the ministry. A course of lectures had been delivered in connection with the work at the Atlanta Baptist Seminary. The report expressed gratification at the progress made by the colored race, and especially at their enterprise in connection with Sunday schools. Work among the foreign population needed to be greatly extended. The enforced removal of all the pastors of the board from Cuba had left the missions there in the hands of the body of the membership, who had to maintain it against adverse conditions; yet the schools had been continued, religious services kept up, and new members added. Churches had been aided in 90 per cent. of the most important centers of population in the Southern States.

The Foreign Mission Board had received during the year \$125,682, and had expended \$107,314. It had been able to pay \$18,368 on its indebtedness, leaving the present debt \$13,533, against \$13,900 at the close of the previous year. Of the funds received at the office in Richmond, about 92 cents on the dollar went to the missionaries. Of the 8 per cent. thus chargeable to office expenses, 1.7 per cent. was for interest. Besides this, however, the State expenses in collecting funds amounted to about 5 per cent. before the money was sent to the central office, so that the total expense of collecting and administering the missionary money was 13 per cent. The Woman's Missionary Union had co-operated with the board by distributing literature and supplies. Four of the missionaries in China had drawn no salary during the year. Others of the missionaries did not accept full salaries. Report was made from the mission in Italy of work at a considerable number of stations. Five missionaries and their wives were engaged in Brazil, where 251 persons had been baptized, and the 18 churches returned 1,022 members; the churches in south Brazil had formed an association, and the Rev. C. Z. Taylor, during a two months' trip up the San Francisco river, had been well received everywhere by the better class of people. The South Brazil Baptist Association had engaged a home missionary, and had resolved to send a missionary to Africa. The mission in Mexico returned 6 missionaries and their wives, 3 single ladies from the United States, besides the native preachers, 29 churches with 1,116 members, and 112 baptisms during the year. A notable decrease of hostility was mentioned. Fifteen missionaries from this country with their wives and 10 single ladies, besides native pastors, were laboring in China, where were 20 churches with 1,364 members, 167 of whom had been baptized during the year, and 29 day schools. A strong and increasing religious interest was developing in this country. The mission in Japan included 3 missionaries and their wives, 1 church of 48 members, 8 of whom had been baptized during the year, and 10 Christians, including a native preacher and his wife at Fukuoka. Four missionaries and their wives were laboring in Africa, where 54 baptisms were reported, 25 of which were at the Ebenezer Church in Lagos, which had become self-supporting. Not all the schools mentioned in the reports receive help from the board. Only a small proportion of the funds of the board goes to the schools, and a part of

what is appropriated is specially sent for that purpose.

The Sunday-school Board during the six years of its existence had afforded help to the departments under its care in the distribution of Bibles, tracts, etc., to mission schools, payments to the Home and Foreign Boards and to Sunday-school missions in different States, purchase and equipment of a publishing house, etc., \$64,703. The board had been having its printing done by the establishment of another denomination, but, having determined to take immediate charge of it, had purchased a suitable building at a cost of \$11,000. It publishes a full list of Sunday-school periodicals, called the "Convention Series." The Colored Baptist National Convention had been using the plates of the expositions of the Sunday-school lessons published by this board, free of charge, for the publication of its Sunday-school literature, but had now established its own publication house at Nashville, Tenn.

The Young People's Union Auxiliary to the Convention met May 6, and adopted a plan of co-operation with the Young People's Baptist Union of America. The union is organized and active in all the States represented in the convention except Louisiana.

Considerable discussion had been going on during the past year in the churches represented in the convention concerning certain matters which had been published by Prof. W. H. Whitsitt, of the Southern Baptist Theological Seminary. In a historical article in "Johnson's Cyclopædia" concerning the Baptists he had affirmed as the result of his investigations that "immersion was not practiced in England before as late a period as 1641." Exception was taken to this declaration by many Baptists, who held to the importance of an unbroken succession of immersions. A similar statement had been published in an article in the "Independent" newspaper, and in another article in that journal Dr. Whitsitt, it was alleged, had expressed approval of a Baptist woman who had married a man not a Baptist, going, under certain conditions, to her husband's church. The historical question raised by Dr. Whitsitt had been discussed in the convention of 1896, without reaching a conclusion. The trustees of the seminary afterward voted unanimously that Dr. Whitsitt had done and said nothing demanding notice at their hand. Again, May 6, 1897, the Board of Trustees adopted a declaration, after averring their loyalty to Baptist principles, "that we can not undertake to sit in judgment on questions of Baptist history which do not imperil any of these principles on which all Baptists are agreed, but concerning which serious, conscientious students are not agreed. We can, however, confidently leave to continued research and discussion the satisfactory solution of these questions. Believing the seminary to hold an important relation to the prosperity and usefulness of Southern Baptists, we consider it our duty, while demanding of those in charge of its departments of instruction the utmost patience in research and the greatest discretion in utterance, to foster rather than repress the spirit of earnest and reverent investigation." The resolution further invited reciprocal confidence between the Baptists of the South and the management of the institution. These resolutions were communicated to the convention, and with them a letter from Dr. Whitsitt explaining and modifying his articles in the "Independent," regretting any utterances objectionable to his brethren, but reaffirming his expressed historical opinions as unchanged. His explanations were accepted by the convention with enthusiasm, and the action in the matter of the trustees of the seminary was sustained.

National (Colored) Baptist Convention.—The National (Colored) Baptist Convention met in Boston, Mass., in September. The Board of Foreign Missions (in Africa) reported that more than \$5,000 had been raised for the work, and about \$1,500 had been appropriated directly to it. These figures do not include the work of the Virginia churches, which is carried on independently. It was shown that during the past seventeen years the negro Baptists of America have raised \$36,546 for African missions. The report of the Home Mission Board concerned chiefly schools and publications, while little had been done in the way of church extension. The convention further considered the subjects of systematic beneficence, the Young People's movement, and a magazine.

Young People's Union.—The seventh international convention of the Baptist Young People's Union of America (United States and Canada) was held at Chattanooga, Tenn., July 15 to 18. Mr. J. H. Chapman presided. The annual report of the secretary showed that the union was organized in all of the States except Utah, Nevada, Wyoming, Idaho, Mississippi, and the Territory of New Mexico. The treasurer's reports showed an improved financial condition. The receipts for the year had been \$69,824, and the deficit had been reduced from \$4,820 to \$1,738. The number of examinations in the Christian culture courses, 13,407, showed an increase of 1,962 over the previous year. An arrangement for union with the Baptist Young People's Union Auxiliary to the Southern Baptist Convention made through committees in March, 1897, had been formally ratified, and was in effect during the present meeting. In place of the division of the Young People's Baptist Union of America into four departments, known respectively as the Departments of the Red, Gold, Blue, and Green, it was determined that the aggregation of societies within the Dominion of Canada should be designated the Baptist Young People's Union of Canada; that within the territory tributary to the Southern Baptist Convention as the Union South; that within the remaining States east of the Mississippi river as the Union North; and that within the remaining territory west of the Mississippi river as the Union West. The principal features of the convention consisted of the addresses which were delivered, among the subjects of which were: "The Christ Conception—Person, not Proxy," by the Rev. Dr. Carter Helm Jones; "Divine Ownership—Human Stewardship," by the Rev. Dr. D. D. MacLaurin; "Education the Structural Idea," by the Rev. W. P. McKee; "Denomination our Conservative Idea," by the Rev. Dr. J. W. A. Stewart; "The Ideal Home and its Permanent Influence," by the Rev. W. W. Weeks; "The Stewardship of Service," by the Rev. Dr. B. A. Greene; "The Stewardship of Culture," by the Rev. Dr. C. S. Gardner; and "The Power of the Keys," the annual address of the president. Conferences of workers, department rallies, and other special meetings were held. The convention was attended by 3,200 delegates.

The Baptist Congress.—The fifteenth session of the Baptist Congress was held in Chicago, Ill., Nov. 16 to 18. The Rev. A. A. Kendrick, D. D., of St. Louis, Mo., presided. The congress is a voluntary meeting of Baptist ministers and laymen, without authority or formal representative character, the purpose of which is defined to be "to promote a healthful sentiment among Baptists through free and courteous discussion of current questions by suitable persons." The programmes of the meetings are prepared beforehand, and include a list of subjects on which papers are read by persons assigned to that function, which are in each case followed by remarks from appointed speakers,

after which opportunity is given for voluntary addresses. The subjects discussed at the present meeting were: "Are the Teachings of the Apostles of Equal Authority with those of Christ?" "Is Baptism a Prerequisite to the Lord's Supper?" "Should Denominational Beliefs impose Limitations upon Religious Teachers?" "Our Government and the Oppressed of Other Nations"; "The Psychology of Conversion"; and "The Power of the Cross in the Life of the Believer."

Baptists in Great Britain and Ireland.—The Baptist Yearbook for 1897 gives as the numbers of the Baptist churches in Great Britain and Ireland (including about 300 churches not reporting, for which estimates are made from previous years' returns) 2,924 churches, 360,112 members, 1,955 pastors, 4,838 local preachers, 3,822 chapels with 1,286,514 sittings, 50,721 teachers and 519,226 pupils in Sunday schools, and 16,113 baptisms during the year. Of these, 1,700 churches and 221,778 members were in England, 783 churches with 101,791 members in Wales, 108 churches with 15,698 members in Scotland, 28 churches with 2,487 members in Ireland, 4 churches with 337 members in the Channel Islands, and 1 church with 21 members in the Isle of Man. The figures in each department are in advance of those of the preceding year, the most prominent increase being that of membership—6,145. The amount expended during the year upon new buildings was £76,807, or £17,293 more than during the previous year; while £27,315 were upon chapel improvements, and £63,340 for the removal of debt on chapel property. A considerable increase is shown in the last item. The large number of local preachers is mentioned as an interesting feature in the statistics. With the exception of a few who are fully engaged as missionaries or evangelists, these local preachers are men who support themselves and their families by secular occupations and aid their pastors by preaching on Sundays and at other times at out stations, receiving no pay for these services. While many of the churches have no local preachers, a large number of them have from 1 to 20 each. Two report 22; one, 23; three, 25; one, 30; one, 44; and the Metropolitan Tabernacle in London returns 130. A paper on Baptist authors and history from 1527 to 1800, by the Rev. Dr. Joseph Angus, is published in the Yearbook. It gives the names of between 400 and 500 English Baptist authors, with some particulars about many of them, and the number of books published by each, with dates of publication. Abraham Booth and Andrew Fuller are credited in it with 40 works each; John Gill, D. D., with 45; and John Brine, J. Ryland, D. D., Dan Taylor, and W. Whiston with 50 each.

The Baptist Union of Great Britain and Ireland met in its annual meeting April 26. The address of the President, the Rev. E. G. Gange, bore special reference to the centenary of Baptist home missions, which was celebrated in connection with the present meeting. The report of the council showed an increase of 7 Baptist churches connected with the union, 6,145 members, 242 teachers, and 5,585 pupils in Sunday schools, and £18,960 in expenditure on new buildings and improvements, while building debts had been reduced or removed to the extent of £63,340 as against £57,392 in the previous year. The Board of Introduction had made 70 recommendations of ministers to churches without pastors. A Ministerial Recognition Committee had been formed, in accordance with proposals adopted at the previous annual meeting. The receipts of the General Expense fund had been £1,978; of the Church Extension fund, which now amounted to £9,491, £2,600. An increased activity in church extension was remarked in some

of the larger centers. The receipts of the Annuity fund had been £9,409. The fund had 650 beneficiary members, and 401 wives were subscribed for, while £6,673 had been paid in annuities during the year. The seventh triennial valuation of the investments belonging to the fund gave the purchase value as £174,527, showing an increase of £37,830.

About 20 English associations were co-operating with the council of the Home Mission Society in the home-mission work. Eighty-eight mission churches were on the list of the council, 50 of which were formed into 23 groups of two or three churches each. There were besides 25 mission stations, with 113 preaching places and 58 mission pastors. The number of communicants was 4,306, and of baptisms during the year 173. An historical sketch of the home missions, published in connection with the centenary celebration, showed that they were begun in July, 1796, when two ministers started from Plymouth on an evangelistic tour through Cornwall, under the direction of the Baptist Missionary Society. An "Address to the Friends of Evangelical Truth in General and to the Calvinistic Baptist Churches in Particular," by the Rev. Abraham Booth, issued in 1797, announced the formation of the Baptist Society in London for the Encouragement and Support of Itinerant and Village Preaching. This society did good work in many counties. It held its first public meeting in 1814. The name of the society was changed in 1817 to the Baptist Itinerant and Home Missionary Society. The income of the society in 1835 was £2,000; in 1841 it had risen to more than £5,000; but, except in 1845, when it rose to £5,901, had never since reached £5,000.

The capital of the Baptist Building fund stood at £51,578. Thirty-nine churches had been aided by loans of from £40 to £1,000 each, and for different terms of years to the total amount of £12,010.

The Bible Translation Society had received £1,300 during the year, all of which had been expended, except a balance of £57. The Legacy fund amounted to £1,600.

The year's sales of the Tract and Book Society had amounted to £1,622, £427 more than the sales of the previous year, which had been much larger than those of previous years; the subscriptions amounted to about £800. A balance of £120 was due the treasurer.

The income of the Baptist Missionary Society for 1896 was £75,978, the largest ever received by the society in any one year of its history except the centenary year. Of this amount, £11,186 had been contributed in response to an appeal for relief of the districts in India that were suffering from famine. The contributions to the general fund showed an advance of £2,083 over those of the previous year, with an additional £1,571 for the Thanksgiving fund, while the special gifts were £1,341 more than those of the year before. There had, however, been a falling off of £9,789 in the amount received from legacies. The expenditures had increased £3,947.

The year's receipts of the Baptist Zenana Mission had been £7,635. The association had 56 missionaries and 205 native Bible women and school teachers in India visiting regularly about 1,220 zenanas and several hundred houses in which the Bible is used.

The autumnal session of the union was held at Plymouth, beginning Oct. 6, the Rev. E. G. Gange presiding. Resolutions were adopted reiterating the protests of the union against state aid to denominational schools, and insisting on the extension of the school-board system to the whole country, the absence of denominational formularies from religious instruction in public elementary schools,

and the establishment of training colleges which shall impose no religious tests; favoring peaceful arbitration as a means of settling national disputes; condemning state regulation of vice in India and the toleration of slavery in countries under British protection; advising a movement for the extension of the Sunday closing of liquor shops over the whole of England; and regretting the spread of priestly pretensions and sacramentarian superstitions, and calling on all Christians to uphold the sole mediatorship of Jesus Christ. The consideration of a temperance resolution, embodying clauses advising the election of abstainers as deacons and other church officers, and declaring it inconsistent to solicit or receive financial aid from persons engaged in the manufacture or sale of intoxicants, was objected to as bearing against persons who were not present to defend themselves, and the subject was referred to the council with a view to its being brought forward again at the spring meeting of the union, 1898. The subjects were considered in papers and general discussions of the attitude of the churches toward Roman Catholicism, the Chautauqua movement, Christian Endeavor societies, and Free Church principles. Conferences were held of lay preachers and on Sunday schools, and meetings in behalf of the Baptist missionary and benevolent enterprises.

BELGIUM, a constitutional monarchy in Western Europe, founded in 1830, when it seceded from the United Netherlands. Its territory was declared neutral and inviolable by the Treaty of London, made on Nov. 15, 1831, by Austria, England, Prussia, and Russia. The constitutional amendment of Sept. 7, 1893, changed the manner of electing Senators, who were formerly elected directly. Now part are elected directly, and part by the provincial councils. There are half as many Senators as there are members of the House of Representatives. Senators elected directly are required to have an income of 12,000 francs from real estate, or pay 1,200 francs of direct taxes a year. The provincial councils in provinces having less than 500,000 inhabitants elect 2 Senators; if above that population, up to 1,000,000 they elect 3; and provinces of more than 1,000,000 inhabitants elect 4 Senators. The term of a Senator is eight years, one half retiring every four years. The House of Representatives are elected in districts having not fewer than 40,000 inhabitants for four years by the direct vote of the qualified voters. Every two years one half of the chamber is renewed. Every citizen over twenty-five years of age, resident in the commune for a year, and not disqualified by crime or pauperism, has one vote; owners of real estate worth 2,000 francs or having Belgian funds or savings-bank deposits yielding 100 francs a year, also married men or widowers with children, who are thirty-five years of age and pay at least 5 francs of house tax, are entitled to an additional vote; and one or two supplementary votes can be cast by university graduates, professional men, and officials or ex-officials, no citizen being entitled to more than three votes at any election.

The Cabinet, first constituted on Oct. 26, 1884, was composed at the beginning of 1897 as follows: President of the Council and Minister of Finance, P. de Smet de Naeyer, appointed Feb. 25, 1896; Minister of Foreign Affairs, P. de Favereau, appointed Feb. 25, 1896; Minister of Justice, V. Begerem; Minister of Railroads, Posts, and Telegraphs and Minister of War *ad interim*, J. H. P. van den Peereboom; Minister of the Interior and Minister of Public Instruction, M. Schollaert, appointed May 25, 1895; Minister of Agriculture and Public Works, L. de Bruyn; Minister of Industry and Labor, M. Nyssens, appointed May 25, 1895.

Area and Population.—The area of Belgium is 11,373 square miles. The population on Dec. 31, 1895, was estimated at 6,410,783, composed of 3,198,507 males and 3,212,276 females. The number of marriages in 1895 was 49,712; of births, 183,015; of deaths, 125,148; excess of births, 57,867. The population of Brussels, with suburbs, at the beginning of 1895 was 518,387. Antwerp had 262,255, Liège 163,207, and Ghent 157,214 inhabitants. There are 6,335 public primary schools, with 720,191 pupils; 1,431 infant schools, with 142,384 pupils; and 1,797 adult schools, with 69,270 pupils. Every commune is required to maintain at least one primary school. The provincial and national governments grant subventions. The total cost of elementary education in 1894 was 30,322,383 francs. About 27 per cent. of the population over fifteen years of age could not read nor write in 1890. Out of 63,113 young men called out in 1896 for military service 22,911 had more than a rudimentary education, 31,141 could merely read and write, 1,284 could only read, 7,129 could neither read nor write, and of 648 no returns were given.

Finances.—The revised budget for 1897 makes the ordinary revenue 386,923,178 francs. Of this sum 25,276,000 francs are derived from taxes on property, 19,846,000 francs from personal taxes, 7,270,000 francs from trade licenses, 400,000 francs from mines, 36,116,632 francs from customs duties, 52,420,297 francs from excise, 20,475,000 francs from succession duties, 19,850,000 francs from registration taxes, 6,500,000 francs from stamps, 5,778,000 francs from various indirect taxes, 1,579,000 francs from canal tolls, 154,000,000 francs from railroads, 6,730,000 francs from telegraphs, 12,649,500 francs from the post office, 1,435,000 francs from pilotage dues, 3,178,500 francs from domains and forests, 9,358,909 francs from funds and securities, the national bank, etc., and 4,060,349 francs from repayments. The total ordinary expenditure was estimated at 386,295,842 francs, of which 113,659,819 francs are for interest and sinking fund of the debt, 4,865,200 francs for the civil list and dotations, 21,594,240 francs for the Ministry of Justice, 2,806,014 francs for the Ministry of Foreign Affairs, 26,432,385 francs for the Ministry of the Interior and Public Instruction, 23,171,149 francs for the Ministry of Agriculture and Public Works, 116,438,585 francs for the Ministry of Railroads, Posts, and Telegraphs, 48,381,375 francs for the Ministry of War, 19,069,415 francs for the Ministry of Finance, 1,926,000 francs for the gendarmerie, and 3,095,060 francs for the Ministry of Industry and Labor.

The ordinary revenue for 1894 was 362,600,000 francs, and the extraordinary revenue 42,589,000 francs; total, 405,185,000 francs. The ordinary expenditure in that year was 353,340,000 francs, and the special expenditure 49,219,000 francs, making a total of 402,559,000 francs. The revenue of the provincial administrations in 1894 amounted to 15,225,500 francs, and their expenses to 14,069,000 francs. The revenue of the communes from ordinary sources amounts to about 118,000,000 francs a year, besides which 60,000,000 francs or more are expended for extraordinary purposes.

The public debt was raised almost entirely for railroads and other useful and reproductive public works. The capital amount in 1895 was 2,246,366,647 francs, of which 2,006,407,015 francs pay 3 per cent. interest, 219,659,632 francs 2½ per cent., and 20,000,000 francs are redeemable treasury bonds.

The Army.—The Belgian defenses consist of the central arsenal of Antwerp, with the fortified towns of Dendermond and Diest, the fortifications at Mons, Tournai, and Ypres, guarding the French frontier, and those at Liège, Huy, and Namur, with those of

the scheme of 1887 for the further fortification of the line of the Meuse. Every able-bodied Belgian on reaching the age of nineteen is liable to conscription, but substitution is permitted. The annual recruit is about 13,300 men. The period of service is eight years, though not more than two or three years of actual service with the colors are required. The strength of the army on the peace footing in 1895 was 3,515 officers and 48,165 men. Of the total, 1,923 officers and 27,738 men were in the infantry, 379 officers and 5,849 men in the cavalry, 467 officers and 8,215 men in the artillery, 94 officers and 1,534 men in the engineers, 64 officers and 2,522 men in the gendarmerie, and 588 officers and 2,307 men attached to the general staff, administrative corps, military school, and other establishments. The artillery is armed with 200 guns, in war time with 240. There are 7,200 horses for the army and 1,636 for the gendarmerie. The war strength of the army is 3,505 officers and 163,082 men, with 14,000 horses. In addition there is the Civic Guard organized, in the towns, numbering about 43,000 men.

Commerce and Industry.—Most of the land of Belgium is divided into small parcels, which are highly cultivated by farmers or by the owners. The proportion of cultivators owning their land is increasing. Of the total area of the kingdom, 67 per cent. is under cultivation and 17 per cent. is forest. The agricultural class forms about 22 per cent. of the total population. Wheat, rye, oats, and the sugar beet are the principal crops. Tobacco was raised to the amount of 5,166,000 kilogrammes in 1895. The raw sugar produced in 1895 amounted to 182,178,000 kilogrammes; refined sugar, 65,662,000 kilogrammes. The distilleries produced 628,340 hectolitres of proof spirit. There were 118,957 persons employed in the coal mines in 1895. The number of women working underground decreased from 2,172 in 1893 to 1,628 in 1895. The production of coal in 1895 was 20,451,000 tons, valued at 193,357,000 francs. The iron mines produced 312,637 tons of ore, and 1,942,900 tons of iron ore were imported, mostly from Luxemburg. The production of pig iron was 829,234 tons, valued at 40,207,000 francs; of manufactured iron, 445,899 tons, valued at 55,729,000 francs; of steel ingots, 407,634 tons, valued at 31,018,000 francs; of steel rails, etc., 367,918 tons, valued at 42,419,000 francs. The zinc product was 38,496,000 francs in value; lead, 4,203,000 francs; silver, 3,430,000 francs.

The value of imports in the general commerce of 1895 was 2,904,948,026 francs, of which 1,397,293,169 francs constituted the ocean trade and 1,507,654,857 francs the railroad and river traffic. The general exports amounted to 2,424,560,429 francs, of which 1,154,157,499 francs represent goods shipped from the ports and 1,450,705,084 francs the amount sent by land and river. The total value of the imports for domestic consumption was 1,680,400,000 francs; of the domestic exports, 1,385,400,000 francs; of the transit trade, 1,219,400,000 francs. The special imports of cereals were 268,292,000 francs in value; raw textile materials, 155,543,000 francs; drugs and chemicals, 95,105,000 francs; resins and gums, 85,457,000 francs; timber, 66,411,000 francs; woolen, cotton, and silk tissues, 64,059,000 francs; oil seeds, 59,462,000 francs; mineral substances, 59,458,000 francs; hides, 59,037,000 francs; coffee, 55,174,000 francs; metals, 50,357,000 francs; animal products, 38,958,000 francs; live animals, 37,791,000 francs; meat, 32,833,000 francs; wines, 32,792,000 francs; coal and coke, 30,263,000 francs; linen and woolen yarns, 23,338,000 francs; fertilizers, 20,612,000 francs; machinery, 19,518,000 francs; butter, 13,868,000 francs; flour, 18,785,000 francs; tobacco, 12,090,000 francs. The special exports of linen,

wool, and other textile yarns were valued at 106,-282,000 francs; coal and coke, 87,726,000 francs; textile materials, 80,643,000 francs; tissues, 72,490,000 francs; hides and leather, 65,551,000 francs; chemicals and drugs, 62,892,000 francs; cereals, 62,-821,000 francs; machinery and carriages, 61,780,000 francs; meat, 52,877,000 francs; iron, 52,370,000 francs; glass, 50,954,000 francs; sugar, 48,090,000 francs; steel, 47,906,000 francs; animal products, 36,028,000 francs; mineral substances, 33,320,000 francs; zine, 31,794,000 francs; fertilizers, 27,850,000 francs; horses, 27,288,000 francs; bitumen, 24,-447,000 francs; dyes and colors, 22,430,000 francs; oil seeds, 22,295,000 francs.

The foreign countries participating most largely in the Belgian trade and their respective shares in the special commerce of 1895 were as follow, values being given in francs:

COUNTRIES.	Imports.	Exports.
France.....	299,856,000	284,220,000
United States.....	132,852,000	46,650,000
Great Britain.....	193,130,000	266,708,000
Netherlands.....	174,602,000	165,004,000
Germany.....	199,195,000	310,790,000
British India.....	52,965,000	20,267,000
Russia.....	116,910,000	21,510,000
Roumania.....	100,108,000	9,038,000
Argentine Republic.....	92,693,000	14,353,000
Sweden and Norway.....	46,148,000	15,474,000
Brazil.....	41,145,000	21,859,000
Italy.....	19,834,000	25,323,000
Peru.....	36,733,000	1,487,000
Australia.....	21,171,000	5,665,000
Spain.....	20,339,000	21,932,000
Chili.....	28,274,000	7,710,000
Egypt.....	3,557,000	9,813,000
Switzerland.....	27,748,000	34,103,000

Navigation.—During 1895 there were 7,249 vessels, of 6,858,237 tons, entered at the ports of Belgium, and 7,227, of 6,811,765 tons, cleared. Of those entered, 3,867, of 2,569,024 tons, arrived from English ports, and 266, of 543,247 tons, from the United States, and of those cleared 4,960, of 4,046,331 tons, were bound for English and 224, of 548,776 tons, for American ports. The merchant marine at the close of 1895 comprised 5 sailing vessels, of 917 tons, and 54 steamers, of 86,296 tons.

Communications.—The railroads of Belgium had a total length at the beginning of 1896 of 2,839 miles, of which 2,044 miles were managed by the Government and 795 miles by companies. There were 76,937,198 passengers transported in 1895 on the state lines and 22,662,735 by the companies. The gross earnings of the state lines were 154,467,350 francs, and the expenses 90,436,312 francs. The total cost of the Government railroads was 1,413,057,543 francs. The net receipts from 1835, when the first railroad began running, till the close of 1895, amounted to 1,505,187,060 francs, and during the same period the sum of the fixed charges has been 1,437,038,840 francs.

The post office in 1895 carried 109,921,305 private and 20,786,583 official letters, 45,177,886 postal cards, 89,061,193 circulars, etc., and 110,695,533 newspapers. The receipts were 19,712,524 francs; expenses, 10,586,960 francs.

The telegraph lines in 1895 had a total length of 4,045 miles with 19,645 miles of wire. The number of messages sent in 1895 was 8,515,157; receipts, 4,909,693 francs; expenses, 4,867,971 francs.

The Flemish Question.—The principal question brought before the Parliament in the session of 1897 was that of the official rehabilitation of the Flemish tongue. Deputies Coremans and de Vriendt introduced a bill making Flemish equally with French the official language of Belgium. The literary revival of the Flemish tongue and the reawakening of historical memories and local or

racial pride of the Flemings, followed by their triumph in religious and political matters over the Liberalism of the French school that formerly held sway and gave the Walloons a preponderant influence, naturally suggested the elevation of their national tongue to an equal place beside the French as one of the parliamentary and legal languages of the country. The way was prepared by a long agitation conducted by their political leaders, known as the Flamings, who adopted for their motto the cry "In Vlaanderen Vlaamseh," and raised the proud claim that the Fransquillons, as they nicknamed the Walloons and their sympathizers, must acknowledge that the Flemish element has all the rights that can be claimed by their French-speaking fellow-countrymen, including that of being addressed by the official representatives of the sovereign power in their own tongue. By using their native language the Flemings, who form three fifths of the population of Belgium, could oftener make their way to the front than by trying to rival their Walloon competitors in the speech that these have employed from the cradle. They would follow the example of the burghers of Ghent, who returned to Charles V his letter written in French. It was a question with them of abstract justice and of individual liberty, for it is the immemorial right of every community to have its laws inscribed and discussed in its own language and of every person to be heard in the tribunals of his own country without recourse to a foreign tongue. From a government of their own creation and Chambers that they controlled the Flemish politicians thought that they could exact the recognition of their national language, on which they had set their hearts, and which they supported by arguments drawn from the most varied sources, in the guise of historical precedent, the preponderance of the Flemish race, the abstract principles of justice, and the nationalistic tendency of the age. Not that they or their Walloon opponents recognized any separatist tendency in the movement, for all were careful to assert that the difference of language by no means constituted a difference of nationality and that Flemings and Walloons were all equally Belgian patriots. The Walloons protested that the bill would constitute a grave danger for Belgium by completely isolating the Flemish section of the inhabitants and placing the Walloons in a position of relative inferiority, both in the Chambers and elsewhere, by reason of their ignorance of Flemish. The Liberal Association petitioned Parliament to reject it on the ground that the actual laws gave entire satisfaction to the Flemish, while the Coremans law would oblige Deputies to vote articles that they did not understand and was only the first of a series of measures having for their object the exclusion of Walloons from public employments, revealing a tendency that constituted a danger to national unity. The opposition of the Walloons only served to fortify the Flemish politicians in their resolution to secure what they considered a just recognition of the equal standing of their community with that of the Walloons of the south. They carried the measure through the Chamber of Deputies by a large majority without any long discussion. The National Flemish Union denounced vengeance upon the Brussels Deputies who enviously voted against it. There seemed little question of its passing the Senate in its integrity, especially after M. de Vriendt had declared that, should the Senate amend or modify it, he would withdraw it on its return to the Chamber rather than admit the least alteration in its stipulations. But before the vote was taken in the Senate the question began to be considered in quarters remote from the heat of political strife and the inconvenience and inexe-

diency of the change to be reflected upon. The bar of Ghent and Antwerp pronounced against it, for lawyers of both nationalities and political camps were agreed that the adoption of the two languages would needlessly complicate and encumber the forms of legal as well as parliamentary procedure in Belgium and that the translation of the French text into Flemish was fraught with many difficulties. The effects upon the standing and influence of the Belgian state and upon the opportunities of its citizens were the subject of misgivings. The act would accentuate the dual nationality of the Belgian people and tend to perpetuate race animosities among them. Every Walloon inhabitant would be compelled to learn to read and speak Flemish under penalty of being debarred from occupying any official post in his country, while the Flemings would not need, as heretofore, to become perfect masters of French. Yet a knowledge of Flemish serves no purpose outside of the little area where it is read and spoken. On the other hand, by maintaining the official position of French, the Government would render it incumbent on every aspiring Flemish youth to become proficient in a language that is not only spoken by every educated member of the community, but serves as a passport in most parts of the civilized world. Flemish as a language of affairs and legislation has yet to be created. Genuine Flemish, the literary form of the language, is not spoken in Belgium, where each village has its own rude and untranslatable dialect. The Walloons are entirely ignorant of Flemish except in the border district, where they can converse in the *patois* of their neighbors as well as in their own. North of this narrow district the Flemish dialects are uniformly heard, and south of it the Walloon dialects, but everywhere French is the common language of educated people, the language of polite intercourse, of literature and the press, of science, of law, and of commerce. All these considerations were brought out in the debate in the Senate, which was led to recognize that it was a proceeding fraught with serious and far-reaching consequences to confer a distinctly bilingual stamp upon the administration of the country. The only clause that finally passed the Senate, on Feb. 3, was one enacting that all acts of Parliament should henceforth be promulgated both in French and in Flemish. The friends of the bill would not accept this solution of the question. They withdrew the bill, determined to continue the agitation and press for the official and integral equality of the two national tongues in another year.

Legislation.—The Government on Jan. 1 accepted an arrangement presented by the French Minister regulating the relations of Belgium with France in Tunis. Parliament enacted a bill for suppressing gambling operations on the stock exchange. A plan of the works that will convert Brussels into a seaport was finally adopted by the ministry, the municipal authorities, and the commission of maritime installations on Jan. 4. The course of the canal will pass through the plain of Tour and Taxis, thus bringing the new docks nearly into the heart of the capital. The law authorizing the police authorities to expel foreigners, which was originally framed in 1835 and would expire on Feb. 15, 1897, was continued in force by a vote of 61 to 35 in the Chamber on Jan. 21. The English Government demanded redress for Ben Tillett, the labor organizer, who came to Antwerp in connection with the dock strike and was expelled by order of the Minister of Justice in 1896; but the Belgian Government cited precedents for its action. The British Foreign Office then proposed arbitration, and, Belgium acceding, a French jurist was se-

lected to arbitrate the matter. A congress of employees, composed of delegates representing clerks, salesmen, artisans, persons in Government employ, and the mass of wage earners who do not belong to the laboring class, met at Brussels on Feb. 7 with the object of taking common action with a view to bringing before Parliament the grievances of their class, and organized a system of local unions and a central league whose duty it should be to exact from parliamentary candidates a pledge to assist their cause. The Chamber, which heretofore has had no stricter code of discipline than the simple call to order, revised its rules against the protests of the whole Left for the avowed purpose of curbing the Socialists, who have introduced into the debates an unaccustomed laxity and disregard for parliamentary etiquette.

The Liberal Opposition supported the military authorities in the demand for army reorganization, which the Clerico-Conservative Cabinet took up and then abandoned or deferred because the ministers could not get their democratic followers to agree to submit to the enforced military service that it would entail. The Liberals insisted that the reform should embrace the reorganization of the Civic Guard. Societies of retired officers and military men of all grades, including veterans of 1880, representatives of the Liberal League, and delegations from communal councils and other corporate bodies, assembled in Brussels on June 13, and in a monster procession, with Gen. Brialmont for their spokesman, presented an address to the King in favor of army reform, to which King Leopold, who is a convinced advocate of the introduction of conscription into Belgium, replied with a powerful plea for the urgent necessity of strengthening the military defense of the country, saying that he was too solicitous for the security and eventual defense of the country not to desire that the principle of personal service should be the base of the military system, and that it would be at the mercy and hazard of events unless it organized its defenses solidly, modeling its military institutions on those of the surrounding nations, with tactical units composed, armed, and trained in conditions analogous to those of its neighbors. The King's outspoken utterances on the military question created a widespread sensation in Belgium and gave occasion for an interpellation in the Chamber. The bill for the reorganization of the Civic Guard was passed by the Chamber at the end of July after a long discussion. The Socialist Demblon protested against the clause providing for the administration of the oath of allegiance, and delivered a violent attack on the King, incurring thereby a vote of censure, passed by 74 votes to 17, with 6 abstentions. The Chamber passed a bill compelling all foreigners who have resided in Belgium for a year to enroll themselves in the Civic Guard. This measure was the result of the great increase of late in the foreign colonies of Brussels and Antwerp. Objections against the enforcement of this law were interposed by the British and American diplomatic representatives. The question of army reform took precedence of all other matters in the public mind. The original bill to enforce universal conscription and put an end to the privilege of purchasing substitutes enjoyed by the wealthy classes was withdrawn by the Government on the eve of the meeting of the Chambers in October, 1896, and in consequence Gen. Brassine resigned the Ministry of War. The actual strength of the Belgian army is the lowest of any country in Europe, and the military budget *per capita* is a third of that of France or Great Britain. Universal liability to service was exceedingly popular in the Walloon half of the kingdom. Even a section of the Socialists in their

parades carried banners praising the principle of a nation in arms. The Socialists in June set on foot a large miners' strike in the Borinage district around Mons, the object of which was to obtain the recall of recently issued obnoxious pit regulations as well as an increase of 20 per cent. in wages.

Congresses.—Four congresses dealing with questions concerning the welfare of the laboring classes were held in Brussels during the summer of 1897. The first, meeting on July 7, discussed the question of Sunday rest, and took account of all the grounds—hygienic, social, and religious—upon which it is advisable to insure to working people a respite from labor on the first day of the week and the means by which the desired end can be legally enforced. M. Nyssens, the Minister of Industry and Labor, presided at this congress, the committees of which were made up of prominent representatives of the cause from the various Continental countries and from England. The second congress, held on July 23 and the two succeeding days, dealt with the question of the housing of workmen's families under improved conditions and at cheaper rents than now prevail. M. Beernaert, Minister of State and President of the Belgian Chamber, presided over this congress and over the next one, which opened on July 26 and remained five days in session, discussing the question of the employer's or the workman's liability in case of accidents, the compulsory insurance of workmen against illness as well as accident, and the just apportionment of the cost between the workmen and the masters. The legislation of European countries on this subject was studied with a view of working out a system of compulsory insurance for Belgium. The fourth congress, of which the Duc d'Ursel was chairman, discussed on Sept. 27 and the three following days the feasibility of organizing a system of international protective legislation for the benefit of workers in mines, factories, and other industrial establishments. Among the subjects of debate were hygienic regulations and the limiting of the hours of labor for men as well as for women and children. The chief countries of Europe and the United States were represented.

On Aug. 30 a congress, presided over by ex-Minister Lejeune, met to discuss the ways of combating drunkenness and its consequent evils. This was the sixth international congress against alcoholism, and it remained in session four days. The most important subject of debate was the mission of the state in controlling or suppressing the abuse of alcohol and the poverty and misery caused by alcoholism, the increase of disease, insanity, vice, pauperism, and crime, and other grounds for state interference.

The international conference to promote arbitration was opened on Aug. 7 in the hall of the Chamber of Deputies, and had M. Beernaert for its president. There were delegates present from America, England, France, Austria, Germany, Italy, Spain, Denmark, Sweden, Holland, and Roumania. The British section offered resolutions expressing regret that the United States had refused to ratify the Anglo-American arbitration treaty. There was a women's congress held in August; also in connection with the Brussels exhibition were convoked congresses of legal, bibliographical, and architects' medico-legal associations. An international colonial congress was organized under the auspices of King Leopold, with Auguste Beernaert for its president, and representatives arrived from France, Spain, Hungary, Brazil, Persia, Santo Domingo, Servia, and the Congo Free State.

BOLIVIA, a republic in South America. The legislative power is vested in the Congress, consisting of a Senate of 18 members, elected for six years, and a Chamber of Deputies of 64 members, elected

for four years. Every male Bolivian of full age and able to read and write possesses the franchise. The President is elected for four years by the vote of the nation, and is not re-eligible for the next succeeding term.

Severo Fernandez Alonso was inducted as President on Aug. 15, 1896. The Cabinet at the beginning of 1897 was as follows: Minister of Foreign Affairs, Dr. Manuel M. Gomez; Minister of Finance, L. Gutierrez; Minister of the Interior and Justice, Macario Pinilla; Minister of Public Instruction, Colonization, Telegraphs, Public Works, and Industry, Dr. J. V. Ocha; Minister of War, G. Sanjines.

Area and Population.—The present area of Bolivia is computed to be 567,360 square miles. The population, according to an official enumeration made between 1890 and 1893, is 2,019,549, not including about 250,000 wild Indians. The civilized Indians number about 1,000,000, whites 5,000,000, and mestizos 500,000. La Paz, the former capital, has about 40,000 inhabitants; Sucre, the present capital, has 20,000. Education is free and legally compulsory. There were 506 primary schools in 1894, with 710 teachers and 26,873 pupils.

Finances.—The revenue for the financial year 1896 was estimated at 6,305,793 bolivianos, and the expenditures at 6,727,824 bolivianos. The public debt amounts to 9,493,705 bolivianos, consisting of 4,428,705 bolivianos of internal debt, various loans amounting to 3,065,000 bolivianos, and an external debt of 2,000,000 bolivianos. The expenditure on the army in 1896 was 1,781,624 bolivianos. The standing army numbers 1,250 men, besides which there is a National Guard, forming the reserve and the extraordinary reserve, in which, under the conscription law of 1892, all citizens are required to serve from the age of twenty-one to that of forty.

Commerce and Production.—Metals and forest products constitute the exports of Bolivia, besides some coffee, which is exported to Chili and the Argentine Republic, and hides and skins. Since the loss of Antofagasta to Chili Bolivia has had no seaport. The export of rubber is large and increasing. Coca is an important product, and so is cinchona, but less so than formerly. Sugar is grown for the distillation of rum. Wheat, corn, barley, and beans are raised for domestic consumption. Cattle, sheep, and llamas are numerous. These last are the common transport animals. Wool is made into coarse cloth worn by the Indians. The silver produced in 1894 was 14,519,296 ounces. Tin is found associated with silver, and in 1895 the export amounted to 2,000 tons of bars and about 4,000 tons of concentrated tin ore. The annual product of copper barilla is 3,000 tons. Gold is washed out by the Indians in small quantities. Other mineral products are antimony, bismuth, salt, and borax. The imports for 1894 were estimated at 6,800,000 bolivianos, consisting chiefly of provisions, hardware, textiles, wine and spirits, and apparel. The exports of silver and silver ore through Antofagasta are estimated at £1,914,500, and the tin exports at £433,900. Considerable silver is coined in the mint, but there has always been an export movement taking the coin out of the country, hence the Government now coins only half bolivianos and smaller pieces 8 per cent. lighter than the old bolivianos.

Communications.—There are 500 miles of railroad, forming the Bolivian section of the line leading from Antofagasta to Oruro, with a branch to Huanchaca. Concessions have been obtained for lines from Oruro to Cochabamba and from Challapata to Potosi, for one from La Paz to the Peruvian frontier, connecting with the road from Mol-

lendo to Lake Titicaca, and for one in the east from Santa Cruz to the Paraguay river. An international railroad between Bolivia and the Argentine Republic is projected.

The telegraph lines have a total length of 2,000 miles. The post office forwarded 1,532,458 letters, newspapers, etc., in the internal, and 420,579 in the international service in 1893.

BOOK-PLATES. To Germany we undoubtedly owe the origination of the earliest example of a book-plate with which to mark ownership of a printed book that came from German types, and to which it is an unstrained sequence. The earliest book-plate known has been assigned a probable date of about 1450. As might be expected, this was exceedingly crude when compared with more recently engraved plates by the best artists. The early plates were very simple in design, being, in fact, only what are now known as "name labels." These early labels were rectangular slips on which appeared the owners' names, often bordered elab-

later the late Hon. J. Leicester Warren (Lord de Tabley) published his "Guide to the Study of Book-



FRENCH PLATE UNDER NAPOLEON I. RANK INDICATED BY TOQUE AND PLUMES INSTEAD OF HELMET. DESIGNED BY LOUIS DAVID.

plates," following M. Poulet Malassis on French plates, whose monograph appeared in 1874, classifying, arranging, and originating a nomenclature that has since served as a standard. The rules described by Warren, on which the composition of book-plates had for the most part taken place, have been subject to frequent modification and change.



ENGLISH TRICKED PLATE. PERIOD PRIOR TO 1738.

In the fifteenth century it was the name label followed by the varying armorial and heraldic types, exemplified among others by the famous Albrecht



EARLY FRENCH PLATE. PERIOD PRIOR TO 1650. CHARGES ON SHIELD REPRODUCED ON MOSAIC PAVEMENT.

orately. Because of the limited education of the masses for a considerable time after the advent of printing, it was found that something more than a printed name was needed, and a substitute was sought and found in heraldry, since a knowledge of arms and coats of arms was then practically universal. A wider field was at once opened to the designer and the artist, which they quickly improved, and because of this fact and the present decadence of a knowledge of heraldry the book-plate collector of to-day is confronted with a considerable task by way of plate identification in the pursuit of his hobby. No one finds the mastery of book-plates to be an elementary or an easy matter, as might at first appear. To become an authority or an expert requires the labor of many years in many departments of research.

Notwithstanding the comparative antiquity of book-plates, little attention was paid to them until a very recent period. It is true they were used here and there, and people knew there were such things, but almost no literature appears on the subject until in 1837 Rev. Daniel Parsons wrote some magazine articles on book-plates. More than forty years

Dürer, that continued in use until the sixteenth century, when they gave way to the Jacobean, the popularity of which continued until 1745, or perhaps somewhat later. The book-plate work of William Hogarth was Jacobean.

The Chippendale plate originated before the passing away of the Jacobean style, and continued subsequent to it. This style was characterized by the

THIS IS THE PROPERTY

OF

BENJAMIN CASE.

N^o.

SOUTHOLD, (L. I.) 181

'Tis America alone that can boast of the soil,
Where the fair fruits of virtue and liberty smile.

EARLY AMERICAN NAME LABEL. DATE 1810 TO 1819.

graceful curves and lines of the furniture that was then in vogue, from which it derived its name.

The Ribbon-and-Wreath, or, as sometimes designated, the Festoon, style followed, and this became very popular for ladies' plates.

The Celestial, the Allegoric, the Portrait, the Bookpile, the Library Interior, and the View book-plates succeeded, in the order indicated, and as the caprice of the period and the artist and designer dictated.

Thomas Bewick did his best book-plate work, so much in favor now among collectors, in the View or Landscape style.

There is now apparently no prevailing school or style, all are fish that come to the modern designer's net; but if there be a tendency to-day it is toward what is called the Pictorial, which more than any other class affords opportunity to show, so far as such things can, the taste, the culture, and the ideals of the plate owner. They afford pleasing opportunities for the introduction of charming little bits of *genre*, artistic sketches, and a thousand tasteful creations that linger long in pleasant memory.

It was once customary to place upon a book-plate warning verses against various sins of omission or commission, selected examples of which are here introduced:

Fear not nor soil not.
Read all, but spoil not.

My friend, should you this book peruse,
Please to protect it from abuse:
Nor soil, nor stain, nor mark its page,
Nor give it premature old age:
And when it has effected all,
Please to return it ere I call.

If any one should borrow me,
Pray keep me clean;
For I am not like linen cloth,
That can be washed again.

Not until 1820 did book-plates begin to be collected and seriously studied, and it was a Miss Jenkins, of Bath, who inaugurated this amusement.

The book-plate collector has since been frequently subjected to no little abuse by writers who have scorned his harmless pastime, and who ignore the fact that the records on book-plates that are preserved by the indefatigable collector are sometimes of great utility, not alone to the historian and the genealogist, but also to the lawyer. They have compared him with Dr. Dibdin's Grangerite, who destroys ruthlessly many books for the sake of the extra illustration of other books (originally Granger's History of England, whence the derivative) with the engravings thus procured, and have even spoken of all collectors as ghouls, not knowing whereof they write.

Ladies' book-plates, as a separate class, first appeared in Germany about 1588. In England the earliest known is that of Elizabeth Pindar, dated 1606. Hannah Adams had the earliest known American plate.

The department of French book-plates is very interesting, as it records many political changes that have taken place, the influence of which has been reflected even in the examples of *ex libris* that have come down to us, which find no parallel in any other country. The illustration of a French plate of the middle of the seventeenth century shows a unique peculiarity wherein the arms rest upon a mosaic pavement, wherein the charges on the shield are reproduced on alternate squares thereon.

Prior to 1738 it was customary in England to "trick" the arms by indicating the color, as shown, instead of by arbitrary dots and lines in the conventional forms that subsequently came into use, which system now prevails.

England, Germany, France, and the United States all support *ex libris* societies, which encourage an interest in this subject. American collectors are turning more and more toward gathering plates of their own country, especially early American examples, and there is an especial interest for an American in such plates as those of George Washington, William Penn, Joseph Dudley, Daniel Webster, Oli-



AMERICAN ARMORIAL PLATE OF CHARLES HOPKINS, BROOKLYN, N. Y. HAS BEEN USED IN HIS FAMILY FOR TWO CENTURIES.

ver Wendell Holmes, George Bancroft, and others, with historical and other associations. The list of known collectors of book-plates in this country is not extensive. Probably 100 would far exceed the total number of those who have more than 3,000 specimens. This is easy to understand, because it is a subject that does not appeal to many. Among

the best-known early engravers of book-plates in America was Nathaniel Hurd, whose style was principally Chippendale, and who engraved a plate for Harvard College which is still in use there. Alexander Anderson, who was the first American wood engraver, produced, so far as known, seven plates on wood and three on copper, included among which are plates for the old Apprentices' Library and Columbia College, which are executed in the Allegorical style. Henry Dawkins worked entirely in the Chippendale style. The style of Ainos Doolittle favored the Allegorical. He is remembered by some excellent work of this kind, which includes two plates for the Societies of Yale College. Peter Rushton Maverick favored the Ribbon-and-Wreath style. He engraved a plate for De Witt Clinton, and two for the New York Society Library. Paul Revere was of the company of these early engravers of book-plates, his own and that of Epes Sargent being, perhaps, the best known of his work in this direction. One of the earliest collectors in the United States was the late James Eddy Mauran, of Newport, R. I., whose collection, when he died, in 1888, numbered about 3,500 plates. Among other collectors and authorities in this field in our country may be mentioned Richard C. Lichtenstein, of Boston, who has published several monographs on the subject; Fred J. Libbie, of Boston; H. E. Deats, of Flemington, N. J.; Dr. Henry C. Eno, of Saugatuck, Conn.; Mrs. Richard J. Barker, Warren, R. I.; Miss Helen E. Brainerd, of Columbia College; Henry Blackwell, of New York; Dr. Charles E. Clark, of Lynn, Mass.; Nathaniel Paine, of Worcester, Mass.; Dr. Joseph H. Dubbs, of Lancaster, Pa.; Dr. George L. Parmelee, of Hartford, Conn.; James Terry, of New Haven, Conn.; H. W. Bryant, of Portland, Me.; George F. Allison, of Brooklyn, N. Y.; and Laurence Hutton, of New York. The literature on this subject is not extensive, and has been limited mainly to newspaper and magazine articles. Charles Dexter Allen published in 1894 "American Book-plates," and in 1896 "Ex-Libris, Essays of a Col-

"Book-plates," by W. J. Hardy; and "Ladies' Book-plates," by Norma Labouchere. Henri Bouchot has treated of French plates, Herr F. Warnecke of Ger-



RECENT AMERICAN PICTORIAL PLATE.



RECENT AMERICAN PICTORIAL PLATE.

man plates, M. C. M. Carlander of Swedish plates. Robert Day in Ireland and J. Orr in Scotland are workers in the same field. Much remains to be done with this subject. The Italian plates are without remarkable excellence or defect, being often flat and insipid. The Spanish are frequently harsh, but bold and gloomy. The Swiss are stiff and generally ill arranged, and the Russian, so far as they are known to exist, have been borrowed from the French of the Louis XV period.

BRAZIL, a federal republic in South America. The legislative power is vested in the National Congress, consisting of a Senate of 63 members, 3 from each State and the Federal District, and a House of Deputies containing 212 members, elected by the voters of the States in proportion to their population, 1 member to 70,000 inhabitants. Senators serve nine years, one third retiring every three years; Deputies are elected for three years. The State of Amazonas elects 4 Deputies; Pará, 7; Maranhão, 7; Piahy, 4; Ceará, 10; Rio Grande do Norte, 4; Parahyba, 4; Pernambuco, 17; Alagoas, 6; Sergipe, 4; Bahia, 22; Espírito Santo, 4; Rio de Janeiro, 17; São Paulo, 22; Paraná, 4; Santa Catarina, 4; Rio Grande do Sul, 16; Minas Geraes, 37; Goyaz, 4; Matto Grosso, 4; the Federal District, 10. Every Brazilian male citizen twenty-one years of age and able to read and write possesses the electoral franchise with the exception of soldiers actually serving in the army, members of monastic orders, and paupers. The President, who appoints the ministers and, with the consent of Congress, the judges of the Supreme Federal Tribunal and the diplomatic representatives, and has the supreme command of the military and naval forces, is elected by direct vote of the people for four years. The National Congress legislates on import duties, stamps, postal arrangements, and bank-note circulation. The States have the right to impose export duties, and each one is administered at its own expense without the interference of the

lector." In England, beyond privately printed volumes and those previously mentioned, there have been published "English Book-plates," by M. A. Castle; "French Book-plates," by Walter Hamilton;

Federal Government save for defense, the maintenance of public order, and the execution of Federal laws.

The President of the republic, Prudente de Moraes Barros, elected for the term ending on Nov. 15, 1898, retired in November, 1896, and the Vice-President, Manoel Victorino Pereira, then became acting President. The Cabinet in the beginning of 1897 was as follows: Secretary of Foreign Affairs, Gen. Dionysio E. de Castro Cerqueira; Secretary of Finance, Dr. F. de P. Rodrigues Alves; Secretary of War, Gen. Bernardo Vasques; Secretary of Industry, Communications, and Public Works, Dr. A. Olyntho dos Santos Pires; Secretary of the Interior and Justice, Dr. A. de Seixas Martins Torres; Minister of Marine, Admiral Elisario J. Barbosa.

Area and Population.—The area of Brazil is estimated at 3,209,878 square miles. The population at the census of Dec. 31, 1890, was 16,330,216. The white population, residing in the seaport towns, numbered 3,787,289 in 1872, while the population of mixed blood numbered 3,801,787, the negroes, who predominate in Rio de Janeiro, Bahia, Pernambuco, and Minas Geraes, numbered 1,954,452, and there were 386,955 Indians, who form the largest element in the population of the northern States. The immigration in 1890 was 107,100; in 1891, 218,958; in 1892, 86,513; in 1893, 84,143; in 1894, 63,294. In 1895 there arrived 164,598 immigrants at Rio de Janeiro and Santos. Among the immigrants in 1894 were 37,266 Italians, 17,251 Portuguese, 6,497 Spaniards, 812 Germans, 754 Austro-Hungarians, 310 French, and 91 British. In Rio Grande do Sul, where there are important German and Italian settlements, 15 foreign colonies, numbering 108,000 persons, occupy 562,400 hectares of land, of which 220,050 hectares are cultivated. The higher education is under the control of the Federal Government, while the States are required by the Constitution to provide free, secular primary education. In none of the States is education compulsory. At the last census 84 per cent. of the population was returned as illiterate.

Finances.—The provisional returns give the Federal revenue for 1894 as 266,484,615 milreis (1 milreis = 54.6 cents), and the expenditure as 370,668,341 milreis. The budget estimate of revenue for 1895 was 300,725,297 milreis, and of expenditure 275,691,670 milreis; the estimate of revenue for 1896 was 331,174,400 milreis, and of expenditure 343,436,210 milreis. In the provisional estimates for 1897 the revenue is taken to be 335,894,000 milreis, of which 258,000,000 milreis are derived from customs, 1,700,000 milreis from various dues, 35,500,000 milreis from railroads, 7,100,000 milreis from posts and telegraphs, 8,300,000 milreis from stamps, 1,200,000 milreis from the waterworks of Rio de Janeiro, 1,500,000 milreis from lottery taxes, 6,939,000 milreis from miscellaneous sources, 1,700,000 milreis from tobacco duties, 150,000 milreis from export duties, and 13,805,000 milreis from extraordinary resources. The total of expenditure is estimated at 329,112,753 milreis, of which 16,258,872 milreis are for the Department of the Interior and Justice, 2,034,012 milreis for Foreign Affairs, 28,439,706 milreis for Marine, 54,767,584 milreis for War, 98,953,334 milreis for Industry, and 128,659,245 milreis for Finance.

The debt of the Federal Government on Dec. 31, 1895, amounted to 1,888,475,666 milreis, consisting of an external debt of £36,098,800, an internal funded debt of 362,488,635 milreis in paper, a gold loan of 275,473,500 milreis, 678,073,022 milreis of paper currency, a floating debt of 244,628,677 milreis, and 6,893,500 milreis of guaranteed railroad debts. Converted into paper values at current rates the debt amounted to 2,713,952,000

milreis. On the foreign debts 4 and 4½ per cent. interest is paid, on the internal funded debt from 4 to 6 per cent. The States had in 1895 funded debts amounting to 85,027,659 milreis, and 66,79,077 milreis of floating liabilities.

The Army.—Compulsory military service was introduced in Brazil in 1875. The term of service is three years in the active army and three years in the reserve. The army is organized in 40 battalions of infantry, with 1 transport and 1 depot company; 16 cavalry regiments of 4 squadrons each, 2 cavalry corps of 4 companies, 5 garrison companies, and 1 garrison squadron; 5 regiments of field artillery and 9 battalions of fortress artillery; and 2 battalions of engineers. The strength of the army in 1895 was 4,000 officers and 24,120 men.

The Navy.—The Brazilian navy contains some powerful vessels of modern type. The cruiser "Almirante Tamandare," of 4,465 tons, built in Brazil in 1890, has engines of 7,500 horse power and a formidable armament of rapid-firing guns. The "24 de Maio," of 4,950 tons, is the reconstructed "Aquidaban," which was sunk by a torpedo during the naval revolt of 1893-'94 and afterward refloated. This ship and the "Riachuelo," of 5,700 tons, are English-built battle ships, armed with 21-inch breech-loading guns mounted in turrets, and protected by a belt of 11-inch steel-faced armor. The "Niehtheroy," formerly called "El Cid," is a first-class cruiser. The "Benjamin Constant," of 2,750 tons, and "Barrozo," of 3,800 tons, are efficient second-class cruisers. There are 9 third-class cruisers and 6 port-defense armor clads and river monitors. The torpedo flotilla consists of 8 first-class and 6 smaller torpedo boats. The torpedo cruiser "Aurora," of 480 tons, built in England in 1893, has a speed of 18 knots. A new programme of construction has been adopted, including 3 second-class and 3 third-class cruisers, 2 ironclads of 3,162 tons for port defense, 8 destroyers, 6 first-class torpedo boats, and 2 Goubet submarine boats.

Commerce and Production.—Brazil is the largest producer of coffee of all countries. The annual yield is about 8,000,000 bags of 60 kilogrammes. The crop of 1897 in the State of Rio de Janeiro alone was estimated at 3,750,000 bags. The crop of Santos in 1895 was 4,010,249 bags. In Pernambuco sugar is raised extensively; the crop of 1894 was 185,000,000 kilogrammes. The production of alcohol is large and increasing. Rubber is a valuable forest product of Pará and the Amazon region. The forests of Brazil are of enormous extent and contain many products of value, but they are not available on account of the lack of communications. The mineral resources of the country are great, but lack of fuel, of transport facilities, and of skilled labor stand in the way of their utilization. Enormous iron deposits lie unworked. English and French companies operate gold mines in Minas Geraes. There is also some mining in Bahia, where, besides gold, silver, lead, zinc, iron, manganese, copper, and quicksilver have been found. Diamond mines are worked, though they are not so productive as formerly. In Rio Grande do Sul, where the climate is temperate and a large European population has settled, cattle raising is the leading industry. The number slaughtered in 1895 was 280,000. There are successful tanning establishments and breweries in this State, and the preserving of fruit for export is a growing industry. Cotton is raised in various parts of Brazil, and under a protective tariff progress is made in its manufacture.

The total value of imports in 1895 was estimated at \$150,000,000. The import duties are very high on spirits, tobacco, matches, textiles, provisions, and other articles of consumption, ranging from 80 to

120 per cent. *ad valorem*. On agricultural machinery and tools and implements of industry light duties are charged. The chief imports are cotton and woolen cloths, iron, machinery, coal, flour, cattle, jerked beef, rice, codfish, pork, lard, butter, corn, olive oil, macaroni, tea, candles, petroleum, salt, timber, wine, and spirits. The total value of exports for 1895 was computed to be about \$180,000,000. The exports of coffee from Rio de Janeiro in 1895 were 2,763,720 bags; from Santos, 3,574,484 bags; from Victoria, 307,438 bags; from Bahia, 264,775 bags; from Ceará, 20,202 bags. The export of cacao from Belem in 1894 was 4,963 tons. Of sugar 58,014 tons were exported in 1895 from Pernambuco, 36,000 from Maceio, and 4,360 tons from Rio Grande do Norte. Maranhão exported 1,521 tons of cotton; Pernambuco, 5,900 tons; Rio Grande do Norte, 21,568 bales. The export of rubber from Pará in 1895 was 20,600 tons; from Maranhão in 1894, 4,370 tons. Rio Grande do Sul in 1894 exported 20,831,226 kilogrammes of dried beef, 3,552,375 kilogrammes of tallow, and 496,011 raw-hides.

Navigation.—During 1895 there were 1,460 vessels, of 2,243,163 tons, entered at the port of Rio de Janeiro; 1,015, of 1,325,777 tons, at Bahia; 1,002, of 1,175,572 tons, at Pernambuco; 188, of 184,809 tons, at Ceará; and 148, of 181,852 tons, at Maranhão. Rio Grande do Sul was visited by 331 vessels, of 109,993 tons, in 1894.

The mercantile fleet of Brazil in 1895 comprised 285 sailing vessels, of 65,575 tons, and 189 steamers, of 75,283 tons. Under the law that went into force in November, 1894, foreign vessels are excluded from the coasting trade and river navigation, and companies that engage in such traffic under the Brazilian flag receive subventions from the General Government which amount to 2,809,640 milreis a year.

Communications.—There were 8,086 miles of railroads in operation in 1896, and 5,403 miles were under construction, 4,670 miles under survey, and 8,440 miles more projected. The Federal Government owned 1,832 miles of the completed lines and subsidized 2,259 miles more; 3,000 lines were managed by the State governments or operated under concessions received from them, and 995 miles were roads that received no subventions. Of the roads under construction 385 miles were being built without subventions, 961 miles were being constructed for the State governments, 667 miles were being built for the Federal Government, and 3,390 miles companies were building with concessions and guarantees from the Government. The majority of the companies owning the railroads have a guarantee of 6 or 7 per cent. interest on their capital from the Federal Government. The deficit paid from the national treasury up to the end of 1894 was 11,118,481 milreis. The capital invested in the national railroads was 257,674,937 milreis, and their receipts up to the end of 1894 had fallen short of the expenses and interest by 11,118,477 milreis.

The post office forwarded 33,441,000 letters and postal cards in 1895, and 37,674,000 samples, circulars, etc. The telegraphs are owned by the Government. There were 10,143 miles of line in 1895, with 21,936 miles of wire. The number of dispatches sent was 1,283,695; receipts for 1897 were estimated at 3,600,000 milreis, and expenses at 9,844,722 milreis.

Financial and Political Crisis.—Commercial depression, consequent upon the great fall in the value of coffee, the continuous depreciation of the currency, and the financial embarrassments of the Government produced a widespread feeling of political uncertainty and unrest. The people became dissatisfied with the way in which they were governed,

and yet were as strongly attached as ever to republican institutions and the more mistrustful of the Conservative element, formerly identified with the empire, because the very misfortunes of the republic seemed to suggest the advantages of monarchy. The men of tried experience, who gave tone to political life before the revolution, have been debarred from any participation in public affairs; many of them are in exile. A strong and turbulent factor in the political situation has been the semimilitary element that has sprung up as a result of the disturbed condition of affairs in the last eight years. This party is composed of ardent and jealous republicans, who imagine they see at every turn an attempt to restore the monarchy. On slight provocations, or with none at all, such men have organized riots in the streets of Rio de Janeiro and other cities and attacked their political opponents, even going to the length of killing prominent citizens suspected of monarchist sympathies. In 1896 and the early part of 1897 violent and irrational outbreaks of this character occurred repeatedly. The authorities took no precautions to prevent such disturbances, and in consequence these extreme republicans, most of whom are young men, have exercised a species of terrorism over peaceful citizens of Conservative tendencies.

The enormous debt that has accumulated under the republic is, with the diminishing revenue, an excessive burden. Out of a total income of little more than \$50,000,000 in gold value the National Government has to pay \$30,000,000 to meet the annual debt charges. Except the customhouse scarcely any source of revenue is available. The ordinary expenses of the administration swallow up the rest, leaving unforeseen and extraordinary requirements, such as the cost of suppressing insurrection or the purchase of war ships and munitions, to be added to the debt. The expenditure has invariably exceeded the revenue for many years past, and the usual method of meeting the deficit has been by fresh issues of inconvertible bank notes. To this the chief part of the financial difficulty of the Brazilian Government must be attributed. The true condition of the treasury is not publicly known, nor is the exact amount of these paper issues in circulation, but there were computed to be in the spring of 1897 not less than 700,000 contos of reis, equal to nearly \$400,000,000 in face value, and \$125,000,000 at the depreciated rate of exchange. Commerce has been depressed not only by the low prices obtained for coffee and the falling rates of exchange, but by the constant changes made in the tariff to which the Government was forced to resort in order to protect itself from the results of the constant depreciation of the currency, for the tariff duties are payable in paper, not in gold. To tide over its difficulties, which were increased by the expeditions sent against the fanatics of Bahia, the Government proposed to sell the lease of the State railroads, expecting to get at least \$25,000,000 in gold. Negotiations were opened with syndicates in England and Germany.

The depression in the coffee market affected not the finances of the Government alone, but the condition of the whole population of Brazil. Nearly all the energies of the country have been devoted to coffee cultivation, while cereals and other necessities of life have been imported from abroad. In former times the southern provinces of Paranaguá, Santa Catarina, and Rio Grande do Sul produced wheat and beef for the supply of Rio de Janeiro and other northern markets, but the revolutions and disturbances of the last few years have caused these industries to be almost abandoned. Since the currency has depreciated, and coffee prices have fallen at the same time, the difficulty of obtaining

food supplies from abroad has been doubled. There was no enterprise shown in pushing manufacturing interests when coffee gave good returns, and all the available labor supply of the country was wanted for coffee cultivation, and this concentration of capital in a single industry makes the conditions of life in Brazil exceedingly hard since that industry has ceased to be profitable. The overproduction of coffee is the result of planting immense additional areas and the opening of railroads not only in Brazil, but in Mexico, Central America, and other countries. The Brazilian crop for 1897 was nearly 9,000,000 sacks, but its value was much less than when the export was less than half as large. The world's consumption is about 11,000,000 sacks, while the total production of all countries in 1897 was 13,000,000 sacks. As Brazil is the chief producer of coffee it has been the principal sufferer through the fall in prices. The estimated value of Brazilian exports for 1897 is \$80,000,000 for coffee, \$30,000,000 for rubber, and \$12,500,000 for other products; a total of \$122,500,000, which is \$42,500,000 less than the value for 1895, a decline of over 25 per cent. in two years. The value of rubber is constantly increasing, but the quantities available make up but a small part of the loss through coffee.

Dr. Prudente de Moraes, who retired from the presidency in November, 1896, on the plea of ill health, resumed his functions on March 4, 1897. He issued, on the demand of the ministers, a public statement that he would follow the policy initiated by Vice-President Victorino Pereira. In June demonstrations in São Paulo against President Moraes called for the interposition of the military as well as the police. In May the Government was forced by the crisis to increase the customs duties 10 per cent. and to levy a heavier tax on the postal and telegraph services. Economies to the extent of \$7,000,000 were introduced in the Government expenses. The financial committee of the Chamber of Deputies in August reported that it would be necessary to suspend the payment of interest and amortization of the bonds, but the Government found means of raising funds to pay the most pressing obligations. The liabilities to be met during the year amounted to £7,174,300 sterling, consisting of £1,956,700 interest on the external debt, £1,156,700 on the internal gold debt, £1,284,300 of railroad guarantees, £776,600 on the internal currency loans, £1,000,000 of advances from the Bank of Paris to be repaid in 1897, £500,000 for war ships and armament contracted for, and £500,000 to pay for the Canudos expedition. The estimated expenditure for administrative purposes was 270,000,000 milreis, equal to £9,000,000, making the total expenditure over £15,000,000, while the revenue was estimated by the Budget Committee at 316,000,000 milreis, or about £10,500,000. The actual receipts were much below the estimate.

Foreign Affairs.—In February, 1897, a convention was signed between France and Brazil for the purpose of arbitrating the boundary of French Guiana in the basin of the Cunani river, a dispute of old standing, which reached an acute phase after gold was discovered along the upper Cunani. This convention President Prudente Moraes upheld vigorously, despite strong opposition among the people, which encouraged Congress to refuse its ratification. The Brazilian Government stipulated that the Amapa question should be dealt with and settled before proceeding with negotiations relative to other points in the Guiana boundary dispute. The Italian Government made heavy additional claims for wrongs committed upon Italian subjects during the revolution that occurred in the presidency of Gen. Peixoto. A new extradition treaty was concluded with the United States in May.

The Fanatics of Canudos.—For more than twenty years a religious enthusiast, Antonio, called Conselheiro (counselor), has gone about preaching the necessity of absolute and unbounded faith among the emotional and naturally religious people of mixed Indian, negro, and Portuguese blood inhabiting the interior districts of Bahia, Pernambuco, and the country farther to the north. He built chapels in many places, and was everywhere followed by a horde of devoted adherents drawn from the ignorant and superstitious country people, to whom he promised future happiness if they should be killed in defending his cause. The followers of Conselheiro were in great part armed, it being the custom of the country to carry arms. From their temporary encampments they committed many depredations and levied contributions on the inhabitants, as they had no other way of obtaining food. Their thefts of cattle and other things became a serious nuisance when their numbers increased to several thousands. The movement became a menace, moreover, to the state, for the constant burden of Conselheiro's harangues was that the present Government of Brazil was atheistic, and hence underserving of obedience and doomed to be overthrown. In November, 1896, the Fanatic, as the Brazilians called Conselheiro, established his headquarters in Canudos, a town in the Monte Santo district of the State of Bahia. The police charged on the bands when they first invaded the place, the leader having refused to depart, and were routed, some being killed. Re-enforcements of police were sent by the Governor from Bahia, and these too were driven back and a large number killed or wounded by a troop of women, who fell upon them in flight and slashed them with the *facaço*, a terrible cutting weapon. After this second affair Conselheiro went into the neighboring *sierra* with his followers and took up a position in a natural fort. The movement having taken on the character of a rebellion, people in the rural towns and plantations who were hostile to the Government helped the fanatics with arms and money. Others, who would not give willingly, were subjected to the vengeance of Conselheiro's bands. A battalion of Federal troops was dispatched from Rio Janeiro under the command of Col. Moreira Cesar and Major Francisco M. Beitto. While the troops lay encamped in the valley of Monte Santo, firing with their Mauser rifles at any of Conselheiro's men who showed themselves in the mountains, they were attacked by the fanatic Amazons. The onset was so sudden and furious that the soldiers dropped their arms and fled in panic, pursued by the women, who slaughtered the wounded. This victory of the rebels attracted fresh recruits. Men of military training improved their organization. In February Conselheiro had 8,000 well-armed men in Bahia. The Federal troops were defeated on March 3 when attempting to move upon the positions held by the rebels, fighting through a whole day with five times their numbers, and finally retreating with a loss of 600, leaving guns and ammunition in the hands of the insurgents. Many plantations and two small towns were burned by the fanatics. Having obtained steam launches, they patrolled the rivers in the districts where they were strong, and thus extended their depredations. Large quantities of arms, ammunition, and provisions poured in from mysterious sources. The growing strength of the rebellion and manifestations of sympathy in other parts of the republic gave rise to the belief that Conselheiro, who raised the imperial flag, was the forerunner of a general monarchist rebellion, and that the Conde d'Eu, the son-in-law of Dom Pedro II, was at the head of the movement. In Rio Janeiro, São Paulo, and other

cities monarchists were mobbed, and the offices of Conservative newspapers were wrecked. In March Conselheiro's bands appeared in Sergipe, Piahy, Pernambuco, and Minas Geraes. Saraiva, a lieutenant of Conselheiro, attempted to start an insurrection in Rio Janeiro province. Conselheiro himself had 10,000 or 12,000, and Plato Diniz about 1,500 in the northern provinces. The Government proposed to double the strength of the army, and there were threatening demonstrations in Rio against President Moraes, who expressed a willingness to resign. After the last engagement, in which Col. Moreira Cesar was killed, a fresh Government force of 7,000 men was sent up to Canudos from Rio and Pernambuco. Gen. Cantuzia was dispatched to Bahia with a large force of artillery. These forces, commanded by Gen. Arthur Oscar, attempted no rash movements, but advanced slowly against Canudos, where the fanatics were regularly intrenched. Their progress was impeded at every point of the 250 miles from Bahia. Well-guarded outworks stopped them, and fanatic bands of men and women rushed upon them from hiding-places. The arduous march took two months. Early in June the Brazilian troops, under Gen. Oscar, defeated 8,000 fanatics, killing 300. Before the end of the month they had driven them within their fortifications, and were victorious in several skirmishes. On June 27 and the following days a series of assaults on the town were repelled, with the loss of more than 1,000 of the Federal troops and higher losses on Conselheiro's side. The Government troops were re-enforced until they outnumbered the town's defenders three to one. The bombardment was kept up day after day, and in a final assault on July 7 the town was captured after a fierce battle lasting four hours. The troops destroyed churches and other buildings in which the fanatics took refuge. Conselheiro's forces concentrated in five villages in the Canudos district, which Gen. Arthur Oscar proceeded to invest. Further re-enforcements of 4,000 men were forwarded. On July 23 the Brazilian troops occupied two of the villages. Before the main position was attacked the Government army consisted of 15,000 men. Fighting occurred constantly, and the fanatics frequently held the road between Monte Santo and the front, and interrupted the transport of ammunition and stores. In the mean time fresh bodies of fanatics appeared in the States of São Paulo and Paraná. The force in the Canudos district was still 8,000 strong, and was well intrenched. In the petty engagements that took place during August 2,400 Brazilians were wounded in the hand-to-hand conflicts. In the beginning of October Conselheiro's position was at last captured after continuous fighting for several days. Admiral Barboza directed the final operations, during which Conselheiro was slain with thousands of his followers. The fanatic leader was a man of powerful build and stern and commanding presence, who possessed unusual military talents as well as a gift of magnetic oratory. He was very good and humane to his mixed troops, who obeyed him like children. Many soldiers deserted from the Brazilian army to Conselheiro. While the victorious battalions were undergoing review on their return to Rio Janeiro a soldier made an attempt on the life of President Moraes, killing Col. Moraes, who intercepted the dagger. Immediately afterward a shot struck Gen. Machado Bethencourt, the Minister of War. The capital was declared under martial law.

BRITISH COLUMBIA. This portion of the Dominion of Canada has come prominently before the public of other countries during the past year on account of the mineral discoveries and mining development. It extends about 700 miles north

from the international boundary line, and nearly 500 miles east and west. Its area is 383,000 square miles, which includes part of the ranges of the Rocky mountains and the Selkirks, the Queen Charlotte Islands, Vancouver island, and a great variety of forests, valleys, mountains, lakes, and water ways. The chief harbors are Esquimaux—the headquarters of the British Pacific squadron—Victoria and Nanaimo, on Vancouver island. Coal Harbor and English Bay, in connection with Burrard Inlet, are the ports on the mainland. The dry dock at Esquimaux is 450 feet long, with a width of 90 feet, while the fortifications, which are partly built at British and partly at Canadian cost, are considerable.

Political.—There were no political changes during the year 1896-'97, excepting the share which the province took in the Dominion elections. Lieutenant Governor the Hon. Edgar Dewdney retired at the end of his term, in November, 1897, and was succeeded by Senator McInnes. William Templeman, a local newspaper editor, was called to the Dominion Senate in place of the latter. The Executive Council at the end of 1897 included J. H. Turner as Premier, Minister of Finance and Agriculture; Hon. Charles E. Pooley as President of the Council; D. M. Eberts as Attorney-General; James Baker as Provincial Secretary and Minister of Mines and Immigration; G. B. Martin as Commissioner of Lands and Works.

The Legislature met on Feb. 8 and adjourned on May 8. The budget speech showed an estimated revenue for 1897 of \$1,283,000, and expenditure of \$1,566,000. During 1896 the receipts were \$989,765, and the expenditure \$1,614,723. The Government's railway policy was the lending of \$25,000 to various small development lines at the rate of \$4,000 a mile. The question of retaliation against the United States was discussed and a parliamentary committee reported in favor of a law for prohibiting aliens from mining in the province. But the central topic of discussion in the province was the Dominion policy of subsidizing the Canadian Pacific Railway to build a branch line through the Crow's Nest region into the heart of the mining districts. The province wanted an independent and competing line, but the continental road won the battle. The following were the terms accepted by the Canadian Pacific Railway in return for a Dominion grant of \$11,000 a mile for 330 miles of road from Lethbridge through the mountains to Nelson:

1. Running powers over the Crow's Nest Railway are conceded to other railways at a rental to be fixed by the Dominion Government.

2. The freight rates are to be under the control of the railway committees of the Privy Council.

3. Freights from points on the Crow's Nest Railway to points on any other part of the Canadian Pacific system, and *vice versa*, are to be under control of the Railway Committee, or of any railway commission to be hereafter appointed.

4. Rates on certain classes of freights on the eastern portion of the Canadian Pacific Railway—that is, from Fort William eastward—are to be reduced by from 10 to 33 per cent. at the beginning of 1898.

5. Rates on wheat and flour from Manitoba and farther west are to be reduced 11½ cents per hundred, beginning in 1898, and an additional 11½ cents per hundred, beginning in 1899.

6. Fifty thousand acres of picked coal lands are transferred to the Government.

7. Coal is to be put on the cars at the mines at not more than \$2 a ton.

8. The sale and price of timber lands, in the lands granted to the company, are to be subject to the regulation of the Governor General in Council.

Resources.—The bituminous coal, of which this region is the Pacific coast center, has steadily increased in production and sale. Large quantities are sent to San Francisco, the Hawaiian Islands, and China. The city of Vancouver is the mainland terminus of the Canadian Pacific Railway, and from its harbor the Canadian Pacific Railway steamships run to China, Japan, and Australia.

During recent years fruit-growing in the New Westminster district has been very successful, and apples, plums, cherries, pears, and even figs, have been produced with profit. In the Fraser river delta wheat has been grown to the extent of 62 bushels an acre, and oats 90 bushels to the acre. The Lilloet district during the past two years has come to the front as a gold region, and considerable milling gold has been found near the town of Lilloet, where the Golden Cache and other well-known mines are situated. There is good grazing land. The population in 1897 was still sparse and scattered.

The Yale district contains a mixed population of farmers, ranchmen, lumbermen, and miners. In it is the Okanagan valley, which is perhaps the best agricultural and pastoral section of the province, and the Nicola valley, where there are large areas of bituminous coal and iron ore and platinum. The chief towns are Agassiz, Yale, Kamloops, North Bend, Vernon, and Ashcroft, along the line of the Canadian Pacific Railway or its branches.

West Kootenay has become known during the past two years for its richness in minerals. It runs north and south from the Columbia river to the international boundary. During 1896-'97 the mining camps of Trail Creek, Rossland, Kaslo, and Nelson were developed into centers of population, and the output of ore during 1896 amounted to \$6,000,000. These mining districts are reached from Revelstoke, on the Canadian Pacific Railway, by a branch line to Arrowhead, at the head of the Upper Arrow lake, from which a recently established line of steamers runs to Nakusp, where rail communication is had with New Denver, Sandon, and other mining centers. Steamers have also been placed on the route to Robson, at the mouth of the Lower Kootenay, whence the Canadian Pacific Railway runs to Nelson, Rossland, and other points. The latter place was a small camp in 1894, and in January, 1897, had 6,000 people and a well-organized municipal system. The Slovan section of this district, north of Rossland, includes the best silver-producing mines. Near Nelson are the Silver King mines, purchased recently by an English company for \$1,500,000. During the summer of 1896 new and rich discoveries of gold, silver, and copper were made all through this Kootenay district. The wages of laborers are from \$2.50 to \$3 a day, of miners from \$3 to \$3.50, of mechanics from \$3 to \$4.

The East Kootenay district comprises the larger part of the region known by the name of "Kootenay," and is entered from the east by the Canadian Pacific Railway at Golden. It is a rich mineral country, but has not yet been worked to any extent. Within its bounds is a valley 300 miles in length containing the lakes from which the river Columbia has its rise, and providing excellent grazing resources. It contains much big game, and has large undeveloped oil fields. Field, Donald, and Port Steele are the chief centers of population.

Mineral Production.—In the Cariboo districts are the famous mines from which \$50,000,000 in placer gold has been taken since the early "fifties." During the past three years a new impetus has been given to mining in this region, and various costly hydraulic plants introduced and operated. The district covers a large area with varying climates, and has no settlements of importance. It

contains one creek—the Williams—from which \$20,000,000 in gold has been taken within a distance of 2 miles. The Cassiar district occupies the whole western portion of the province. It contains some rich gold mines and large fish-canning establishments.

At the beginning of 1897 there were over 50 shipping mines in the Kootenay region. Large iron deposits also have been discovered recently on Texada island, and copper abounds at many points throughout the mainland. A ledge of cinnabar is being operated at Kamloops lake. Bituminous coal, as already noted, exists in large seams at various places, and anthracite is being worked on the Canadian borders of the province at a place called Anthracite. The following figures, prepared by the provincial Bureau of Mines, show the total mineral production from 1858 to the beginning of 1897: Gold (placer), \$57,704,855; gold (quartz), \$2,177,869; silver, \$4,028,224; lead, \$1,606,427; copper, \$254,802; coal and coke, \$33,934,427; building stone, \$1,200,000; other materials, \$25,000; total, \$100,931,604.

Fisheries.—The salmon fisheries of British Columbia are very valuable. During the seasons of the "runs" broad expanses of river, or deep pools, may be seen packed with masses of fish making their way to the spawning grounds. The greater number of the canneries where these fish are put up for export are on Fraser river, but there are some in the more northern part of the province. There are 55 canneries in the province, each employing about 500 men during the season. Each cannery costs from \$30,000 to \$40,000, equipped, so that about \$2,000,000 are thus invested. In 1876 the catch amounted to \$104,697; in 1880 to \$718,355; in 1885 to \$1,078,038; in 1890 to \$3,487,432; in 1894 to \$3,954,228. To this should be added the catch of halibut, sturgeon, herring, colachan, trout, cod, etc. The total fishery production of the province in 1895 amounted to \$3,732,717.

Crown Lands.—Crown lands in British Columbia are classified as either surveyed or unsurveyed, and may be acquired by entry at the Government Lands Office by pre-emption or purchase. They may be pre-empted by any person who is the head of a family, a widow, or a single man over eighteen years of age and a British subject. Aliens may pre-empt Crown lands on making a declaration of their intention to become British subjects. The quantity of land that may be recorded or pre-empted must not exceed 320 acres northward and eastward of the Cascade or Coast mountains, or 160 acres in the rest of the province. No person can hold more than one pre-emption claim at a time and prior record or pre-emption of one claim, and all rights under it, are forfeited by subsequent record or pre-emption of another claim. Land recorded or pre-empted can not be transferred or conveyed till after a Crown grant has been issued. Such land, until the Crown grant is issued, is held by occupation, and the occupation must be a *bona fide* personal residence of the settler or his family. The settler must enter into occupation of the land within thirty days after recording, and must continue to occupy it. Continuous absence for a longer period than two months consecutively of the settler or family is deemed cessation of occupation; but leaves of absence may be granted not exceeding four months in any one year, inclusive of two months' absence.

Homestead Regulations.—Farms and buildings when registered can not be taken for debt incurred after the registration, and are free from seizure up to a value not greater than \$2,500. Goods and chattels are also free up to \$500, while cattle "farmed on shares" are also protected by an exemption act.

Dominion Lands.—All the lands in British Columbia within 20 miles on each side of the Canadian Pacific Railway line are the property of the Dominion, with all the timber and minerals they contain (except the precious metals). This tract of land, with its timber, hay, water powers, coal, and stone, is now administered by the Department of the Interior of Canada, practically according to the same laws and regulations that control the public lands in Manitoba and the Northwest Territories, except that the homesteads must not only be resided upon and cultivated for not less than six months in each of the three years after entry, but they must also be paid for at the rate of \$1 an acre. Dominion lands in the province may also be acquired by purchase, free from settlement conditions. Agencies for the disposal of these lands have been established at Kamloops in the mountains and New Westminster on the coast. The minerals in this tract, other than coal and stone, are administered by the British Columbia Government.

Trade and Commerce.—Though the trade of British Columbia is still unimportant when compared with its extent and resources, it has greatly developed during the past few years, and is now the largest in the world per head of population, except that of Holland. In 1871 the imports were \$1,789,283 and the exports \$1,858,050, and in 1896 there were \$5,526,490 of imports and \$10,576,524 of exports. The exports include fish, coal, gold, silver, timber, masts and spars, furs and skins, fish oil, and hops. A large portion of the salmon, canned and pickled, goes to Great Britain, eastern Canada, the United States, South Africa, and Australia; the States and the Hawaiian Islands consume a large share of the exported coal; and great quantities of timber are shipped to Australia, some to South Africa, China, and Japan, and to places in South America. To Great Britain, China, and the United States are sent the valuable furs and peltries of land animals and the much-prized seal and otter. Valuable shipments of fish oil, principally obtained from dogfish at the Queen Charlotte Islands, are consigned to the States annually, and also to the Hawaiian Islands. Gold and silver ore is shipped annually to the smelters in the United States.

Minerals.—Including coal, the total output of the mines for 1895 was \$5,655,302, and for 1896 it was \$7,146,425. In 1895 the value of placer gold amounted to \$481,683, and in 1896 to \$544,025; gold quartz, 1895, \$785,271, and in 1896 \$1,244,180; silver, 1895 \$47,642, and 1896 \$190,926; lead, 1895 \$532,255, and 1896 \$721,384; coal, 1895 \$2,818,962, and 1896 \$2,327,145; coke, 1895 \$2,260, and 1896 \$3,075; other minerals, 1895 \$10,000, and 1896 \$15,000. For the past two years the production of coal has been decreasing by reason of the increasing competition of British and American coal in the Pacific coast market of the United States, where most of the coal is sold.

Timber.—British Columbia probably possesses the greatest compact reserve of timber now left in the world, and of this but a fringe has yet been cut. The coast districts claim the greater proportion of good accessible timber, and among this, the climate being humid, the ravages of forest fires—which have in part depleted the thinner and less valuable woodlands of the interior dry belt of the mainland—have not been severe. The timber limits of the coast follow the rugged shore line, fringe the mountain sides, and extend even to Alaska, while there is also much good timber in the Cowichan, Chemainus, Nanaimo, and other districts of Vancouver island, and on several of the gulf islands. Large and serviceable timber of lighter growth than on the coast also extends over wide regions of the mainland interior.

Among the province's principal timbers is the Douglas fir, widely distributed from the coast to the Rocky mountain tops. This grows to exceptional proportions on the coast, where it sometimes rises 300 feet in height and has a base circumference of 50 feet. A good average is about 130 feet clear of limbs and 5 feet in diameter.

A timber license may be granted for 1,000 acres for four years, on payment of \$10 annually and 15 cents for each tree (except hemlock); and no person not licensed may cut timber on Crown lands except for farming and mining. Only one license at a time is obtainable, and this is not transferable. A special license for 1,000 acres for one year may be obtained by application in the "Official Gazette" and payment of \$50 to the Chief Commissioner of Lands and Works.

Education.—The following were the educational figures of the last two years in the common schools:

ITEMS.	1895.	1896.
Number of schools.....	172	190
Teachers.....	183	199
Pupils.....	5,081	5,743
Average attendance.....	2,883	3,087

There were 26 graded schools, with 139 teachers and 8,257 pupils, in 1896. The high schools numbered 4, with 460 pupils. The expenditure upon teachers' salaries in 1895 was \$169,448, and in 1896 \$185,998, and the total expenditure by the Government upon education was respectively \$208,000 and \$234,335.

Miscellaneous.—The gross debt of the province was \$6,469,768 in 1896, with assets of \$1,798,456, and a yearly debt allowance from the Dominion Government of \$583,021. The seagoing tonnage of the province in 1896 was \$2,167,797, compared with \$2,228,047 in 1895. There were 800 miles of railway at the end of 1896.

BULGARIA, a principality in eastern Europe under the suzerainty of Turkey, formerly a Turkish province. It was created an autonomous, tributary principality by the Treaty of Berlin, signed on July 13, 1878. Eastern Roumelia, which was constituted an autonomous province, expelled the Governor General nominated by the Porte and proclaimed its union with Bulgaria on Sept. 17, 1885, and on April 6, 1886, the Sultan, after a conference of representatives of the signatory powers, issued a firman confiding the administration of the province to the Prince of Bulgaria and appointing him Governor General. Since then the two parts of Bulgaria have practically formed one nation. The Mussulman districts of Kanjali and Rhodope were retroceded to the Porte as a condition of the Sultan's acceptance of the *de facto* union of North and South Bulgaria. The legislative power is vested in a single Chamber, called the Sobranje, the members of which are elected by the votes of all adult male Bulgarians, in the ratio of 1 member to 20,000 inhabitants, for the term of five years. A specially elected Grand Sobranje must be convened to decide on the succession to the throne or amendments to the Constitution. The Prince of Bulgaria is Ferdinand, Duke of Saxony, the youngest son of Prince August of Saxe-Coburg-Gotha and Princess Clementine of Bourbon-Orleans, daughter of Louis Philippe, King of the French. He was elected by the Grand Sobranje on July 7, 1887, after the deposition of Prince Alexander, and was finally recognized by the powers in March, 1896. The heir to the throne is Prince Boris, born Jan. 30, 1894, son of Prince Ferdinand and Princess Marie Louise of Bourbon, eldest daughter of Robert, Duke of Parma. Prince Boris was baptized in the faith of his parents, who are Roman Catholics, but on Feb. 14, 1896, was received into the Greek Orthodox Church.

The Cabinet at the beginning of 1897 was composed as follows: President of the Council and Minister of the Interior, Dr. C. Stoiloff; Minister of Foreign Affairs and of Worship, G. D. Nachevich; Minister of Public Instruction, C. Veliehkoff; Minister of Finance, Ivan E. Gueshoff; Minister of War, Col. R. Petroff; Minister of Public Works, J. Madjaroff.

Area and Population.—The area of the original principality is estimated at 24,360 square miles, and that of Eastern Roumelia, now called South Bulgaria, at 13,500 square miles. The total population at the census of Jan. 1, 1893, was 3,309,816, of whom 992,386 lived in South Bulgaria. The total population comprised 2,504,336 Bulgars, 569,728 Turks, 60,018 Greeks, 51,754 gypsies, 27,351 Jews, 3,620 Germans, and 1,379 Russians. Sofia, the capital, has 47,000 inhabitants, and Philippopolis, the capital of Eastern Roumelia, 36,033. The number of marriages in 1893 was 31,640; of births, 141,320; of deaths, 92,100; excess of births, 49,220. The population was divided in 1893 in respect of religion into 2,605,905 Greek Orthodox, 643,242 Mohammedans, 27,351 Israelites, 22,617 Roman Catholics, 6,643 Armenian Gregorians, and 2,384 Protestants. There are 3,844 elementary schools, where free education is provided for children between the ages of eight and twelve, the expense being borne in equal shares by the state and the communes. Fewer than half the boys and not one in six of the girls of school age attend school.

Finances.—The revenue for 1896 was estimated at 91,439,100 lei, or francs; the expenditure at 90,957,609 lei. Of the revenue 33,777,895 lei were derived from direct taxes, and direct taxes produced 34,260,000 lei. The chief expenditures were 22,474,671 lei for the army, 18,174,709 lei for the public debt, 9,242,924 lei for education, and 8,326,160 lei for the interior. The preliminary estimates for 1897 make the revenue and the expenditure balance at 83,320,000 lei. The public debt on Jan. 1, 1897, amounted to 169,814,404 lei, against which the Government shows assets in railroads, harbors, etc., valued at 157,200,806 lei. The debt statement does not include the debt of £1,000,000 due to Russia on account of the war of deliverance, nor the unpaid East Roumelian tribute, nor the Bulgarian tribute, of which none has been paid, nor the share of the Turkish debt to be charged to Bulgaria.

The Army.—All able-bodied Bulgarians are liable to be called into military service. Of about 40,000 who reach the age of twenty annually 16,000 are taken by lot, and are required to serve two years in the infantry or three years in the other arms. The peace effective is 39,320 officers and men. The war strength of the army is about 175,000. The infantry arm is the Mannlicher rifle. The artillery is armed with 144 field guns and 12 mountain guns on the peace footing, with an equal number of field guns and twice as many mountain guns in reserve.

Commerce and Production.—The Government retains the legal title to the land, as under the Turkish *régime*, and the landholders have perpetual leases, descending in their families by inheritance. They pay to the Government a tithe of the agricultural produce, often collected in kind. Most of the farms are less than 6 acres. Pasture and woodland are attached to the communes and used in common. There are 9,770,700 acres under cultivation and 13,651,000 acres more suitable for cultivation. Wheat is raised extensively for export. Other products are wine, tobacco, flax, and silk. There were 7,060,300 sheep, 1,453,500 goats, and 441,000 hogs in 1892. Coal, iron, and salt are the principal mineral products. All mines belong to the Government. Greek, Roumanian, and Austrian merchants have most of the foreign trade. The

chief imports are textile goods, iron, and coal. The total value of the imports in 1895 was 69,020,295 lei, of which 22,552,000 lei stand for textiles, 7,805,000 lei for metals, 4,508,000 lei for colonial goods, 4,248,000 lei for timber and furniture, and 3,961,000 lei for machinery. The exports of grain to England, Germany, France, and Turkey amounted to 60,473,000 lei out of the total sum of 77,685,546 lei for all exports. The exports of live stock amounted to 5,082,000 lei. The attar of roses of commerce is largely made in Bulgaria. Other exports are butter and cheese, skins, flax, and timber.

The trade with foreign countries in 1895 is shown in the following table, which gives the values in lei:

COUNTRIES.	Imports.	Exports.
Great Britain.....	15,265,811	14,197,624
Turkey.....	8,019,475	22,505,506
Austria.....	21,765,848	3,222,501
Germany.....	8,758,935	13,428,148
France.....	3,005,396	13,026,076
Belgium.....	1,607,837	5,323,593
Russia.....	3,401,002	71,278
Italy.....	1,935,656	1,195,392
Roumania.....	1,922,605	596,796
Servia.....	1,077,671	97,990
Greece.....	546,648	2,996
Switzerland.....	143,182	91,494
United States.....	290,178	3,897,921
Other countries.....	.....	.....
Total.....	69,020,295	77,685,546

Navigation.—There were 767 vessels, of 457,902 tons, entered at the port of Varna during 1895, and 773, of 455,411 tons, cleared; at Bourgas 575, of 279,128 tons, were entered.

Communications.—There were 522 miles of railroad in 1896. The state telegraph lines have a length of 3,034 miles, with 6,042 miles of wire; in 1894 the number of messages sent was 1,203,094. The number of letters, newspapers, etc., that passed through the post office in 1894 was 9,617,000. The receipts of the postal and telegraph services were 2,303,474 lei, and expenses 2,534,264 lei.

Political Events.—While the trial of the murderers of Stambuloff was proceeding the widow of the murdered statesman, when brought reluctantly into court to testify, demanded why, instead of the miserable tools, the real assassins, the men who form the present Government of Bulgaria, were not placed on trial. The trial was concluded at the beginning of January, 1897, with the conviction of the actual perpetrators. On Jan. 2 the Sobranje passed a decree granting an amnesty to all Bulgarian officers who deserted and took service under the Russian flag after the deposition of Prince Alexander. A bill introduced by the Minister of War restores their pensions to officers who entered the Russian service subsequent to Aug. 9, 1886 and have served ten years in both armies. Pending the coming into operation of the new customs treaties on May 1, 1898, a provisional import tariff was imposed on all goods coming from abroad. The Minister of Finance, in presenting the budget, said that Bulgaria had no floating debt, and was under no necessity of contracting new loans, although an additional railroad would be built which will serve as a supplementary guarantee for the whole debt, consisting of the Russian occupation debt, the East Roumelian tribute, and three loans amounting to 169,814,404 francs, of which Bulgaria had received the net sum of 152,310,500 francs. The total assets of the state were 157,200,806 francs, consisting of completed railroads worth 92,368,523, railroads and harbors in the course of construction on which 22,846,430 francs had been expended, and 41,985,853 francs invested in the National Bank and laid out on public buildings.

During the Greek war some bands of Bulgarian

insurgents crossed the Macedonian frontier. The Government took prompt steps to check the agitation. The Bulgarian Government declined to recall its representative from Athens when called upon to do so by the Porte as suzerain. The Bulgarian agent in Constantinople demanded the issue of *berats* for five more Bulgarian bishops in Macedonia, threatening in the event of refusal that the Bulgarian army would be mobilized at once. The Sultan promised to grant the *berats*, but asked the Bulgarian Government to have patience until the termination of the war with Greece. The influence of Russia restrained Bulgaria from taking any advantage of Turkey's difficulty. When the war was ended the Austrian and Russian governments addressed an identical note to the Balkan states expressing satisfaction at their correct attitude during the crisis. In August Prince Ferdinand visited the Sultan in Constantinople, and received from him satisfactory assurances regarding the

berats. The Prince had previously visited other courts and had conferences with the Kings of Servia and Roumania. Capt. Boitcheff, the Prince's aid-de-camp, was convicted of murdering an Austrian actress, and a few days later newspapers printed interviews with Dr. Stoiloff, imputing political animosity as the motive of the Austrian Government for insisting on his punishment. The Austro-Hungarian agent, Baron Call, was consequently withdrawn from Sofia until the Bulgarian Premier denied the offensive expressions. A ministerial crisis was settled by the reconstruction of Dr. Stoiloff's Cabinet on Sept. 7. Gueshoff, Minister of Finance, retired, and Theodoroff, previously Minister of Justice, took his portfolio, being succeeded by Zgureff, his chief subordinate, while Velitchkoff was appointed Minister of Commerce and Agriculture, transferring the portfolio of Public Instruction that he held before to Vasoff, a Deputy.

C

CALCULATING MACHINES. Machines for simplifying arithmetical processes and for performing the mechanical work incidental to addition, multiplication, division, and subtraction have been employed for many years in astronomical observatories, institutions of learning, and business houses. The basic principle of mechanism in nearly all these is the gearing of wheels to the ratio of one to ten. Sometimes figures, from 0 to 9, are placed directly on these wheels and brought to an opening, so that the answers may be read; sometimes they are arranged to print at a certain point, so that the answer appears on a slip of paper; and sometimes the wheels direct pointers on dials to give the required visual results. The illustration shows a mechanism of the first-named character.

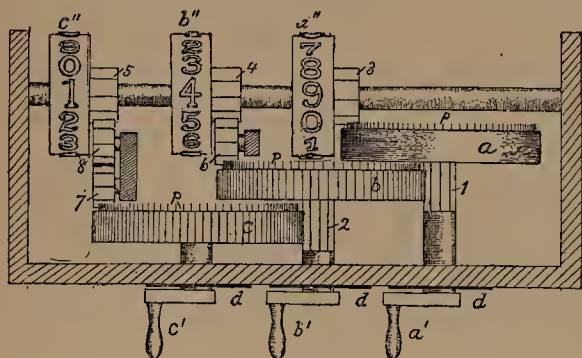


DIAGRAM SHOWING THE PRINCIPLE OF OPERATION OF FIGURE WHEELS FOR CALCULATING ADDITION AND SUBTRACTION.

The gear wheels, a , b , and c , each have 100 teeth and bear 100 pins, p, p, p , on their faces. The pinions 1 and 2 each have 10 teeth, as do also the pinions 3, 4, and 5 of the figure wheels, and the idle gears 6, 7, and 8. Circular graduated scales or dials are indicated at d, d , and d . One tenth of a rotation of the crank a' turns a one tenth of its circumference and brings 10 pins in contact with the pinion 3, causing the figure wheel a'' to make a complete rotation; at the same time the pinion 1 turns the gear b one tooth, and a pin on b turns the pinions 6 and 4 and causes the figure wheel b'' to turn one figure. A complete rotation of a' is required to turn the figure wheel c'' one figure. The figure wheels may be arranged with springs and stops so as to make one tenth of a rotation instantaneously when a pin bears on the pinion, so that

c'' , which represents hundreds, will turn only at the completion of 10 turns of b'' instead of turning one tenth of a figure at each turn of b'' . If it be desired to add, say 149 and 546, with these wheels, they are first set at 149, as here illustrated, and the dial of a' is set at zero. If, then, b' be turned around five times (or c' be given half a turn—either scores 500), and then b' turned to 46 on its dial, the figure wheels will be so rotated as to have carried around 546 more points, or to 695, which is the answer. It will be apparent that subtraction may be accomplished by a reverse process. By an extension of this principle some of the most difficult arithmetical problems may be solved mechanically.

One of the best known of these machines of recent design is that introduced by Dorr E. Felt, of Chicago, in 1889, and improved in 1896. This is in use at Cornell University and other scientific institutions. The operation is made extremely simple by the introduction of a keyboard, which may be manipulated like that of a typewriter. The keys are placed so as to form rows in two directions, numbered from left to right, and also to and from the operator. This machine will not only perform the four principal arithmetical operations, but will also extract a cube root. In no case is it necessary to strike more keys than there are figures in the problem given to the machine to solve, and in the latest machines the answer is delivered on a printed card. If there is any doubt in the mind of the operator as to whether he struck the keys correctly in setting up the problem, he has only to repeat the operation, and see whether he gets the same result. In adding, one set of figures is struck on a row in one direction, and the other set on a row at right angles. In multiplying three figures by three figures the operator has only to select three certain keys, which may be done very promptly as soon as the keyboard is memorized.

The Thomas machine is commonly used in France, and the Tate machine, which is an improved form of the Thomas, is much used in Great Britain. The Odhner machine has been used to some extent in Poland. Babbage's difference machine, which cost £20,000, is used in England for trigonometrical and logarithmic calculations. The machine devised by George R. Grant, of Cambridge, Mass., has found considerable sale. This, like most of the foreign machines, is operated by a small hand crank. It employs a series of adding rings, registering wheels, and pointers. Both add-

ing rings and registering wheels bear numbers from 0 to 9. In multiplying, the adding rings are set to read the multiplicand and the registering wheels the multiplier and then, by rotating the crank and shifting slides in accordance with certain rules, the answer may be read on recording wheels.

The Scheutz machine is used at the Dudley Observatory, Albany. It operates on the method of differences, and calculates to the fifteenth place of decimals, and can express numbers either decimally or sexagesimally, the answers being delivered in printed form.

The Hollerith electric tabulating mechanism is used in computing results from the United States census returns. The system includes three machines—one for punching holes in cards, a second for tabulating them according to the holes punched, and a sorting box. The punching machine has a keyboard of 240 characters, each representing one of the 240 answers to questions asked by census takers—as black, white, married, single, native born, foreign parentage. A pantographic guide is swung over the keyboard, connecting with a set of punches in the rear of the machine. A blank card being fed in to represent an individual in the return of some census sheet, the guide is placed over the proper keys, and the card is punched with holes, the position of which indicates the facts in the case of that individual. Although there are 240 possible facts in each case, the average to be recorded is but 15, so that the cards may be punched very rapidly as read from the returns. The cards of a single State are then fed into the tabulating machine, which has electric devices for making connections through the holes of each card and shifting the mechanism of dials as fast as the holes are thus noted. When a set of cards has been passed through the machine the dials record the totals of each of the 240 facts, so that it is only necessary to copy the records of the dials to know how many of the people in that State are blind, insane, married, foreign born, etc. The sorting box serves to obtain answers to all sorts of cross-questions—as, for instance, if it is desired to know how many State-prison inmates are of native birth, or how many single persons are white and how many colored, and so on through the whole range of possible combinations. Its work is accomplished by adjusting the electric connections to take note of every card in a set introduced which has answers to the two questions concerning which the cross inquiry is made. With this mechanism a great number of interesting statistics are compiled and added to the census reports at a nominal expense. The only chances of error are in the original punching of the cards, and such errors affect only one figure and not totals, so that the results obtained by this system of calculation are certainly more accurate than when clerical labor was employed in all the calculations.

CALIFORNIA, a Pacific coast State, admitted to the Union Sept. 9, 1850; area, 158,360 square miles. The population, according to each decennial census since admission, was 92,597 in 1850; 379,994 in 1860; 560,247 in 1870; 864,694 in 1880; and 1,208,130 in 1890. Capital, Sacramento.

Government.—The following were the State officers during the year: Governor, James H. Budd, Democrat; Lieutenant Governor, William T. Jeter, Democrat; Secretary of State, Lewis H. Brown, Republican; Treasurer, Levi Radcliffe, Republican; Attorney-General, William F. Fitzgerald, Republican; Comptroller, E. P. Colgan, Republican; Superintendent of Instruction, Samuel T. Black, Republican; Surveyor General, Martin J. Wright, Republican; Superintendent of State Printing, A. J. Johnson, Republican; Insurance Commissioner, M. R. Higgins,

succeeded in May by Andrew J. Clunie; Chief Justice of the Supreme Court, W. H. Beatty, Republican; Associate Justices, T. B. McFarland, Republican, C. H. Garoutte, Republican, R. C. Harrison, Republican, W. C. Van Fleet, Republican, F. W. Henshaw, Republican, and Jackson Temple, Democrat.



JAMES H. BUDD, GOVERNOR OF CALIFORNIA.

Finances.—The following statement of the condition of the general fund was made in February: Balance, Feb. 15, 1897, \$2,611,406.61. Anticipated receipts—property tax, second installment (estimated), \$756,543.84; railway taxes, second, \$48,083.11; State officers' fees, estimated, \$15,000; pay for inmates of Whittier School, \$12,000; pay for inmates of Preston School, \$4,000; total, \$3,447,033.56. Balance in available appropriations, Feb. 15, 1897, \$1,527,575.88. Appropriation for construction of *débris* dam, \$250,000; estimated expenditure for orphans, etc., \$250,000; Indian war bonds, \$116,782.17; contingent expenses, Assembly, \$20,000; contingent expenses, Senate, \$12,500; salaries of Commissioner of Public Works and secretary for four months, \$1,600; to meet ordinary expenses of State government for five months from July 1, at \$250,000 a month, \$1,250,000. Other items make the total \$3,429,124.70. Balance, \$17,908.86.

Two county treasuries, those of Sacramento and Modoc, suffered from peculations by officials; and it was charged that a loss from another, Sonoma, in December, 1894, supposed to have been by burglary, was by the dishonesty of the county treasurer.

Education.—The school census, completed in July, shows a gain of 10,179 over that of 1896; the figures this year are 340,888. The amount of money apportioned to the schools in January from the State treasury was \$1,904,883.84, being \$5.76 *per capita*.

On July 1 there was in the State treasury, to the credit of the schoolbook fund, \$3,297.83. In addition to this there were books on hand valued at \$119,975.45. Deducting the estimated value of the unsalable books, left a total of \$115,751.39 in cash and salable books.

The corner stone of the affiliated colleges was laid

March 27 on the college site south of Golden Gate Park. President Kellogg, of the State University, made one of the addresses, in which he said:

"Years ago an effort was made to provide our colleges of law, of medicine, of dentistry, and of pharmacy with a suitable common home. A request for aid was made to the State Legislature. Twice it received favorable treatment from the two houses, but was not welcomed at the executive threshold. Two years ago this request was repeated, and an appropriation of \$250,000 received the signature of Gov. Budd. Still a site was needed, and there was a further delay. Then came the offer of Adolph Sutro, which fixed the location of these colleges on this commanding and beautiful site."

The Board of Regents selected a site for the proposed Wilmerding Trades' School in the Potrero addition in San Francisco. There was lively competition between that city, Alameda, and Stockton for the school. The original donation of \$400,000 has been well invested, and amounts to \$435,000.

A deed of gift was made in February by Mrs. Jane Stanford to the university which bears her son's name, of her residence and grounds on the corner of California and Powell Streets, with all its valuable contents. Upon the deed becoming effective, the property "shall be dedicated and set aside as an affiliated college of the Leland Stanford Junior University, or as a library for the use of the students of the said university and the people of the city and county of San Francisco, or for some benevolent purpose for the instruction of the said students; but the same shall never be appropriated for the use of a clubhouse or boarding house, or place of undignified amusement." The residence and grounds are estimated as worth \$250,000, and the whole donation may be put down as equivalent to \$1,000,000.

The college of agriculture at the State University was destroyed by fire April 16. The flames consumed much valuable apparatus, records of many years' investigations, and manuscript and specimens representing the life work of Prof. E. W. Hilgard, head of the department and founder of the experiment-station system in the United States. Fire extinguishers were brought from various parts of the university, but were of no avail, from the fact that certain of the students, a few days before, for no further apparent reason than distinguishes many of their pranks, had emptied the contents and rendered the safeguards useless. The agricultural building is plentifully supplied with hose, but when the necessity for use arose it was found that none of it would fit the mains. The building was completely wrecked, and the loss, apart from valuable manuscripts and records, is estimated at \$25,000 to \$30,000. Prof. Hilgard's personal loss was great. It included his herbarium, containing over 10,000 specimens and manuscripts representing the work of forty-five years. The professor's geological data, gathered in the Mississippi valley and arranged by him for publication, the great work of his life, was reduced to ashes. A new building on the foundations of the burned structure was at once planned and was expected to be in readiness soon after the opening of the fall term.

State Institutions.—The appropriations for these were materially reduced in the legislative bill as it finally became a law. The State Board of Examiners passed a resolution in May declaring that "for the forty-ninth and fiftieth fiscal years the various State institutions, commissions, departments, and offices must be supported by the appropriations made by the Legislature for that purpose, as the State Board of Examiners will not grant deficiencies in the appropriations made for their support or for any other purpose."

Abuses were alleged to exist at the Preston School of Industry, at Ione, and an investigation was made by the Secretary of State, who reported that "it would be a great deal better that the school were abolished than allowed to go on as it is. There were two factions among the employees. Though called an industrial school, it has no machinery, tools, or implements for teaching useful trades."

The prisoners at San Quentin Penitentiary, of whom there are about 900, revolted in June and refused to work in the jute mill, demanding less work and better food. After several days' trouble they were subdued, those who were most refractory being brought to terms at last by the guards turning a hose into their cells and playing water upon them until they promised to return to their work. The revolt was said to have been incited by the opium eaters among the prisoners, from whom the rigorous rules recently enforced have shut off their supply.

Banks.—The reports of the Bank Commissioners show the condition of the banks, Feb. 27, to have been prosperous.

The total assets and liabilities of the 10 savings banks of San Francisco is \$110,343,677.47. The liabilities are as follows: Capital paid up, \$4,260,000; reserve and profit and loss, \$4,896,815.86; due depositors, \$100,049,095.11; other liabilities, \$1,137,766.50.

The total assets and liabilities of the 16 commercial banks of the city is \$62,773,707.98. The liabilities are: Capital paid up, \$14,317,883.67; reserve and profit and loss, \$10,701,993.70; due depositors, \$30,983,633.14; due banks and bankers, \$4,427,787.56; other liabilities, \$2,342,409.91.

The 20 private banks of the State reported: Total assets and liabilities, \$2,420,349.24. Liabilities—capital paid up, \$1,018,762.90; reserve and profit and loss, \$330,731.23; due depositors, \$956,088.72; due banks and bankers, \$24,199.31; State, county, and city money, \$49,135.71; other liabilities, \$41,431.37.

The 46 savings banks outside of San Francisco reported: Total assets and liabilities, \$31,372,061.97. Liabilities—capital paid up, \$3,894,025; reserve and profit and loss, \$1,326,328.28; due depositors, \$25,834,140.43; due banks and bankers, \$43,606.92; other liabilities, \$273,261.34.

The 157 commercial banks outside of San Francisco reported: Total assets and liabilities, \$53,143,603.98. Liabilities—capital paid up, \$19,139,847.50; reserve and profit and loss, \$6,811,118.81; due depositors, \$24,983,873.02; due banks and bankers, \$1,515,260.84; State, county, and city money, \$4,423.83; other liabilities, \$689,080.98.

The Randall Banking Company, of Eureka, failed in April, with liabilities of \$212,000.

Railroads.—Ground was broken in October for the Randsburg and Kramer road, which is to give Randsburg and the adjacent mining country access to the markets of San Francisco and Los Angeles. Starting from Kramer, a station on the Santa Fé Railroad, 35 miles southeast of Mohave, it runs over a gently undulating prairie 28 miles to Johannesburg and Randsburg.

The Sierra Pacific Railway, from Oakdale to Jamestown, was finished, and the event was celebrated Nov. 10.

The work on the San Joaquin Valley road has been pushed rapidly during the year. A long tunnel is to be bored on the section between Point Richmond and Stockton, a work which, it is estimated, will take not less than five hundred days.

Water Ways.—The board appointed by the President to decide upon the location of a deep-water harbor for commerce at either San Pedro or Santa Monica made its report to the Secretary of War

March 2. It definitely locates the harbor at San Pedro, at an estimated cost of \$2,901,787. The improvement contemplated is a stone breakwater beginning about 2,100 feet from the shore and extending in a straight line 300 feet; thence on a three-degrees curve about 1,800 feet; thence in a straight line 3,700 feet to the end.

The naval appropriation bill carried a large amount to be expended at Mare Island Navy Yard, of which a part was for dredging and work upon the sea wall.

Congress appropriated about \$60,000 for improvement of the San Joaquin river, for widening and deepening two cuts which have been a source of trouble to steamboat men.

Mining.—According to the report of Charles G. Yale, statistician of the branch mint, the State produced in 1896 precious metals to the value of \$17,604,026.30, of which \$17,181,562.70 was gold, and the remainder silver. Compared with the product of 1895, these figures show an increase of \$1,847,245.01 in gold, and a decrease of \$177,353.10 in silver.

The number of counties producing \$1,000,000 or more has increased from five to seven, the new comers being Siskiyou with \$1,091,917.47, and Tuolumne with \$1,070,470.13. The best showing is made by Nevada County, whose product of \$2,389,340.42 not only maintains that county in the first rank, but indicates an increase of \$599,124.76. Tuolumne comes next in growth, with an added product of \$403,403.36.

There is a discrepancy between the figures given above and those of the director of the mint, R. E. Preston, who placed the total field of gold at \$15,535,900. He based his estimates on the deposits of crude gold at the mints and assay offices, identified upon information given at the time of deposit as produced in California, and from the reports received from private smelting and refining works in the United States, giving the amount of their product derived from ores mined in California in 1896. It is claimed that even the larger figures fail to give full credit to all the counties, and fall short of the actual total.

The Randsburg district in the south continues to attract miners and prospectors, and rich strikes have been reported at other points, notably in Trinity County. A nugget was found in the Blue Jay pocket in that county worth about \$42,000. This is the most valuable one ever found in the State, with the possible exception of one found in Calaveras County in 1854, which was reported to have weighed 195 pounds troy, and to have been worth more than \$43,000.

The total mineral product of the State in 1896 is given as \$24,291,398. The minerals whose value rises into the millions, aside from gold, are petroleum, \$1,180,793, and quicksilver, \$1,075,449. The value of borax reported was \$675,400; of brick clay, \$524,740; of macadam, \$510,245; of asphaltum, \$362,590; of mineral water, \$337,434.

A report of the gold mills by the State mineralogist gives the following statistics:

There are in operation in California 754 mills and 109 arastras. These mills contain 6,221 stamps, an average of a little over 8 stamps per mill. The total number of concentrators in use is 757. Five mills are worked by electricity, 300 by water, 185 by steam, 2 by gas, 4 by gasoline, and 2 by horse power.

Coal mines were opened in March at Corral Hollow, 36 miles from Stockton. The veins have been prospected for 5 miles, and to a depth of 600 feet.

The State Miners' Convention met in San Francisco in October. J. H. Neff was elected president

for a sixth term. It was resolved that measures be taken to have plans made without further delay for expending the State and Federal appropriations for impounding dams and improvement of the navigable rivers, in order that hydraulic mining may be restored without injury to the streams or adjoining lands. Steps were taken toward the preparation of exhibits at the Omaha Exposition and at the Paris Exposition of 1900.

Other Products.—The following statistics of farming operations in the State were given for 1896:

The area seeded in cereals was about 10 per cent. greater than in 1895. The wheat crop of 1896 is estimated at 29,000,000 bushels, against 20,000,000 in 1895, showing an increase of 9,000,000. During the year India took 800,000 bushels of wheat from us, and Australia flour and wheat to the equivalent of 1,000,000 bushels.

In the horse market the report estimates a decrease of 10 per cent. in the number of our horses compared with 1895.

In respect to the sheep industry the report notes its decline from 1876, when 7,000,000 sheep yielded 56,550,970 pounds of wool, which at 15 cents in San Francisco brought in about \$10,000,000, to the present time, when about 2,500,000 sheep yielded a wool product last year of only 27,195,550 pounds, of a value hardly more than nominal.

In meats the report states that European demand has caused Eastern buyers to reach out much farther West than heretofore. The product of beet sugar in this State in 1896 is stated at 64,500,216 pounds.

The total pack of fruit in 1897 was estimated at 1,750,000 cases, or 42,000,000 cans, an increase of at least a third over that of 1896.

It is said that a citizen of Santa Rosa has found a method for producing at small cost a good substitute for India rubber. It is made from the gum of a tree which grows abundantly in Sonoma County and which has been named the *Oleo elastica* because of its yield of a considerable amount of this gummy substance. It vulcanizes readily, and can be put upon the market for less than one fourth the cost of the best rubber.

The wine crop of 1895 was about 16,000,000 gallons; that of 1896 was somewhat smaller; and that of 1897 was estimated to be smaller still. The crop of grapes tends to diminish year by year, as no new vineyards are planting, while the vine pests are constantly at work. Vine growers were discouraged by the low prices a few years ago.

Experiments with tobacco culture in San Diego County have proved quite successful. In one case lately reported three acres yielded \$1,000 worth in one season.

Protection for Sea Birds.—At the solicitation of the Committee on Bird Protection of the American Ornithologists' Association, the Lighthouse Board at Washington, which has the affairs of the Farallon Islands in charge, has issued a decree that the traffic in the eggs of the sea birds must cease. The mandate of the Lighthouse Board will bring to a close a unique industry of San Francisco. The eggs of the murre, or foolish guillemot, have been shipped to the markets of the city in great quantities ever since 1849, at which date they were almost the only fresh eggs to be had, bringing over \$1 a dozen. The birds were present in the breeding season from May until August on the islands in such countless thousands that although persistently taken their numbers seemed to show no appreciable diminution. In recent years, however, naturalists have noticed the effect of the annual persecution of the vast colonies and several had fears that they might become extinct.

A New Town.—Following is an account, given in September, of a town made to order:

"In the last three weeks there has sprung into existence up in Sierra County, close by the Nevada line, another such town as Pullman—a city built upon and around a great industry. Overton is the name of the town. It is the result of the proposed exploitation of the immense timber tracts in the vicinity which were acquired by the late Walter S. Hobart during the last thirty years of his lifetime and subsequently by his executors. They comprise 70,000 acres of white, yellow, and sugar pine and fir—all a virgin forest. Of this vast area of timber 40,000 acres are to be cut, sawed, and manufactured, an operation which it is estimated will occupy the time of a large force of men and the employment of much machinery for sixty years to come. A broad-gauge railroad has been built to Truekee on the Southern Pacific, 7 miles, as well as a standard spur of 2 miles to the timber belt, and 7 miles of narrow-gauge track are to be used as a logging road into the hills and mountains."

Centennials.—The hundredth anniversary of the founding of Mission San José by Friar Fermin Francisco de Lasuen was celebrated June 13. An altar was prepared on an elevated platform, and mass was celebrated in the presence of about 10,000 people, after a procession made up of a great number of companies and societies. After the religious services all who were in attendance were provided for at a barbecue in Spanish style in the beautiful Palmdale grounds, which date their beginnings from the foundation of the mission. To the substantial of the repast were added the pure wines of the Gallegos cellar.

An incident of the celebration was the presence of an Indian, Felipe José Marziano, one hundred and twenty years old, who was present when the mission was founded, and remembers the simple ceremonies of that occasion.

On June 24 a similar celebration marked the hundredth anniversary of the founding of the town and mission San Juan Bautista.

Los Angeles.—A tract of 3,000 acres has recently been given to this city for a park. It is just beyond the northern line of the city, and includes 2½ miles of frostless foothills bordering on Cahuenga valley, 5 miles of Los Angeles river bottom lands, and a beautiful little valley, which was called the Press Colony site; also, with these lands the improvements thereon, consisting of several buildings and water plant, with tunnels and piping. This park will include more than 2,000 acres of tillable land, and some of the most romantic scenery of any park in the world. The land is the gift of Mr. G. J. Griffith, formerly a newspaper man in San Francisco, and is to be called Griffith Park. The giver asks that no railroad that may be chartered to lead to the park shall have the right to charge a fare larger than five cents. The value of the land is between \$200,000 and \$300,000.

Legislative Session.—The Legislature convened Jan. 4 for its thirty-second session, and adjourned March 21. Thomas Flint was chosen president *pro tem.* of the Senate, Frank L. Coombs was Speaker of the House, and B. C. Kenyon Speaker *pro tem.*

In his message to the Legislature the Governor called attention to the need of economy in State affairs, the expenses of which had been steadily increasing during the past ten years. In regard to State institutions he said:

"The State Board of Examiners found salaries and wages for the same service exceedingly disproportionate; the number of employees excessive; that there was no uniformity in the system of keeping books, warrants, or checks; that attendants in the

various asylums vary greatly in their ratio to the inmates thereof; that employees frequently increased in number and the pay roll was augmented by thousands of dollars, while the number of patients remained stationary or decreased."

Some savings, however, have been effected, the Governor said, during his term, among which was the saving in the expenses of management of the State Insane Asylums of \$65,321.31 from their appropriations for the year ending June 30, 1896, and of \$20,070 for the five months ending Dec. 1. Other economies and reductions of expense to the State pointed out as accomplished, in accordance with his suggestion on co-operation, were the transfer of the duties of the Viticultural Commission to the University of California at a saving of \$30,000; the transfer of the offices of the Horticultural Commission to the State Capitol, saving \$20,000; the disapproval of appropriations to agricultural societies, aggregating \$193,000; the repeal of the law granting support to aged indigents, saving \$400,000 a year, and of the coyote scalp law, saving \$100,000 a year. The reorganization of the National Guard has also effected a great saving. The Board of Examiners has eliminated items amounting to \$66,362.74, and rejected claims aggregating \$682,639.

An election of a successor to George C. Perkins in the United States Senate being in order, Mr. Perkins was nominated by the Republican caucus, Jan. 5, and was elected, Jan. 12, by a vote of 74 to 45. The Democratic vote was divided among James G. Maguire, W. W. Foote, John J. Dwyer, B. F. Langford, and Charles Lane. The People's party vote went to T. V. Cator.

The session was conspicuous for accusations and investigations.

A scandal arose in the beginning of the session in regard to the temporary organization of the Assembly. It was charged that the chief clerk, who had the authority to appoint the necessary clerks, porters, etc., had put upon the list almost 100 persons more than are required by law for the House when fully organized; that these persons were placed upon the pay roll and allowed mileage and *per diem* for several days for the purpose of paying political debts. An investigation was ordered, and the committee reported that the charges were substantiated. The total amount expended needlessly was found to be \$4,215.

Still another scandal of the session was that concerning the "coyote scalp bounty claims." This bill appropriated \$287,000 for paying back claims for coyote scalps. "The bulk of the coyote claims," said the "San Francisco Chronicle," "has been known for years to be fraudulent, and on that account principally the bounty law was repealed in 1895. Thousands of coyote scalps were taken from county to county, certified in each, and not destroyed. Coyote farms were established, especially in Kern County, where, according to the report of Expert Moore, 20,000 fraudulent scalps were entered at a charge against the State of \$100,000. Eastern wolf scalps, or scalps collected among furriers in Eastern markets, were brought West during the years when the bounty was in force, and made to yield from \$5 to \$25 each by collusion with county officials." The bill passed the Senate by the casting vote of the Lieutenant Governor. In the Assembly it was defeated, but there was a call of the House and 15 men changed their votes. The Committee on Commissions, Retrenchment, and Public Expenditures was directed by the Speaker to investigate the charges of bribery. The committee took possession of the telegrams sent and received in Sacramento March 5 and after; among them were found 14 which had a direct bearing on the bribery charge; the committee submitted these

to the Assembly with the report that their belief was that money had been used to pass the bill. There was a protest in the House against the reading of the telegrams, because they were obtained by seizure; and threats of prosecution were made. They were read, however. Most of the dispatches were from lobbyists to interested men in Bakersfield and Tulare. The action of the committee in securing the telegrams was approved by vote of the House. The Governor did not sign this bill for coyote claims.

An investigation was also made of the State printing office. The Governor vetoed a bill for \$75,000 deficiency, and made charges of extravagance, which were investigated and pronounced unfounded. The bill appropriating \$275,000 for the work of the office for the coming biennium was vetoed; also those of \$6,000 for the printer's salary and \$40,000 for the support of the State school text-book department of the office.

The State printer said that, as the Board of Examiners can only grant for a deficiency where an appropriation has been made, nothing could be allowed him during this biennial period, and he should therefore close his office on July 1 for the remainder of his term.

Still another investigation was made in connection with a bill for the government of State normal schools. It was charged that the bill was tampered with at the instigation of the president of the Board of Trustees of the San José Normal School. The findings were that he had sent a telegram to the State printer asking him to blockade the bill, and a similar one to the chief clerk of the Senate, and had corresponded on the subject with the Assembly clerk. The bill twice reached the Governor improperly enrolled and with an amendment which did not belong in it. The strong point in the bill is that it provides for a continuous board of trustees, one to be appointed for one year and one each for two, three, and four years. As the law now is the entire board is changed at the will of the executive, and any teacher may be forced out of employment. The changes made in the bill were amendments which had been proposed in the Assembly but receded from, making the law operative in 1899 instead of 1897, and omitting the clause giving the president of a school the right to nominate teachers. The trustee was removed. The bill was finally approved in its correct form.

The San Francisco "Examiner" having published a communication charging Senators with having been bribed to pass a certain bill, the managing editor and two of the legislative correspondents were called before the Senate. They refused to disclose the source of the information, and two of them were committed to jail for contempt, by a vote of 26 to 12.

A bill involving the expenditure of \$300,000 provided for dredging Sacramento river. There was much opposition to this bill, on the ground that its real object was to benefit the owners of a patent dredger, the purchase of which was provided for in the bill, and to drain for private owners swamp lands that were acquired from the State for little or nothing, with the understanding that they were to be reclaimed by the owners themselves; and also on the ground that it is not the province of the State "to expend money upon the improvement of navigation in California."

In speaking in favor of the bill, a Senator said that all the bill sought to do was "to demonstrate with the \$300,000 what could be done, so that Congress would be stimulated to take up the work." A proposed amendment to make the bill general and extend its operation to all the navigable waters of the State, apportioned according to the amount

of commerce on them, was rejected, and the bill passed by a vote of 27 to 12 in the Senate and 41 to 36 in the Assembly, and was approved by the Governor.

Another bill of like character, which also became a law, appropriated \$250,000 for restraining dams for the *débris* from hydraulic mines. The National Government had appropriated \$250,000 for the purpose. It was charged that, as the amounts called for by these bills would do scarcely more than make a beginning, the ultimate intention was to secure much larger appropriations in future, which the State would be obliged to make in order that the work now to be done should be made available.

An act in relation to stray stock was passed, which will relieve farmers from the necessity of fencing cultivated fields for protection against estrays.

Another law of special interest to farmers provides for wide tires on vehicles, and prescribes the width for various kinds of wagons. The act is to go into effect Jan. 1, 1900.

An act was passed which embodied the main provisions of the Torrens land system. A bill making new provisions for primary elections, a county government act, a new law for the National Guard, and an act providing for a uniform system of road government in the various counties were also among the enactments of the session.

The political code relative to State normal schools was so amended as to make the Governor and Superintendent of Public Instruction *ex-officio* members of each normal-school board, and the president of each school an *ex-officio* member of the local board of the school with which he is connected. Teachers are to be elected upon the nomination of the president of the local board, instead of by the local board, as formerly. Training schools for the kindergarten are added. A joint board of normal-school trustees is provided for.

Among other bills passed were the following:

To create a department of highways. This is a re-enactment of the law of 1893.

Providing that persons residing in any county may organize and incorporate mutual fire insurance companies.

Providing for the funding and refunding of the indebtedness of levee and protection districts.

Providing for the cession of lands to the Federal Government for military purposes, including tide lands adjacent to Goat island and lands adjacent to Lime Point and Black Point.

Prohibiting a candidate for legislative office from giving pledges to others than his party convention.

Adding to the list of personal property subject to mortgage goats, the equipments of a livery stable, raisins, and dried fruits; also all boxes, fruit graders, drying trays, and fruit ladders.

Adding to property heretofore exempt from execution one piano, one shotgun, and one rifle. It limits farming utensils exempt to \$1,000 in value; exempts one fishing boat and net of \$500 in value; seamen and seagoing fishermen's wages not exceeding \$100 and all material purchased in good faith for use in the construction, alteration, or repair of any building, mining claim, or other improvement.

Providing that all instructions given to juries, except such as might incidentally be given during the admission of evidence, shall be in writing, unless both parties request the giving of an oral instruction or consent thereto.

Adding a new section to the civil code concerning the marriage ceremony.

Allowing counties and municipalities to grant franchises for the construction of paths and roads for the use of bicycles and other horseless vehicles.

Fixing the minimum rate of pay for laborers employed on public work at \$2 a day.

Providing that unoccupied town lots in Government town sites shall be open to mineral claims.

Repealing the law requiring the translation and publication of laws into Spanish.

Prohibiting a mining corporation from selling, leasing, or mortgaging any part of the mining ground owned by it, or of purchasing new ground, without the consent of two thirds of the stockholders.

Permitting the recording of notices of mining claims without acknowledgment or certificate of acknowledgment.

Repealing the act of 1874 regulating the sale of mineral lands belonging to the State.

Prohibiting divorced persons from marrying within a year after the granting of the divorce.

Fixing the age of consent at sixteen years.

Requiring that when goods are purchased for the use of the State or any city or county in the State, preference shall be given to those produced or manufactured in the State.

Extending the application of the law on trademarks to those which are copied or imitated, as well as to those which are forged or counterfeited.

Establishing a free market on the water front of San Francisco under the care of the harbor commissioners.

Amending the act providing for the organization of municipal corporations, so that cities mentioned may own and operate plants for water supply and street lighting.

Requiring every corporation doing business in the State to pay its employees at least once a month all wages earned by such employees.

Providing for a public-school teachers' annuity and retirement fund, and amending the law of 1895 relating to the same.

Perpetuating the office of the Public Works Commissioner, who is to have control of the expenditure of the \$300,000 for the improvement of Sacramento river.

Entitling railroad passengers to carry bicycles as luggage.

Providing for a commissioner to the Central American Exposition at Guatemala city and an exhibit there, and appropriating \$10,000; also for an exhibit at the Hamburg Horticultural Exposition \$6,000.

The following joint resolutions were passed:

Calling for a constitutional convention.

Memorializing Congress to reject the railroad funding bill.

Asking protection in the new tariff for California fruit interests.

Asking Congress for an appropriation of \$300,000 to be used for restraining barriers for mining debris, and one of \$300,000 for dredging the water ways of the State.

Constitutional amendments were passed relating to the appointment of the Lieutenant Governor; to consolidated city and county governments, the object being to exempt San Francisco from the county-government act, and allow the city a large measure of home rule upon the adoption of a new charter; to sessions of the Legislature; and to grammar schools.

The tax-levy bill fixed the rate at 43½ cents, besides a 2-cent tax for the university, which will increase its revenue \$224,000 a year. This will raise more than \$10,000,000 for the general fund for the two years. The general appropriation bill called for \$5,343,178, the schools for \$4,629,926, orphans and half orphans for \$675,000, and the sinking fund and interest \$282,870, which constitutes a total of \$10,939,974.

There was a large increase in the appropriation for the National Guard. Provision was made for 5 new companies at \$3,380 each for equipment, and 1 company of Naval Reserves at \$1,600.

The Governor struck out many items from the general appropriation bill, amounting in all to \$603,929.

The appropriation of \$10,000 for an exhibit at the Tennessee Centennial Exposition was vetoed, and the appropriation for the State librarian and his two deputies; also appropriations of \$10,000 for viticulture experiments and \$8,000 for forestry stations, on the ground that the State University can support them hereafter from its increased revenues. The \$5,000 allowed for its department of agriculture was also stricken out, as were the following: \$25,000 for dredging Alviso slough, \$100,000 for improvements to the asylum at Napa, \$20,000 for a water supply at Monticello Asylum, \$35,000 for the Santa Clara State School for Girls (not yet established), \$90,000 for the Yountville Home, \$75,000 to establish a polytechnic institute in San Luis Obispo County, \$75,000 for a heating and ventilating plant at the Capitol, appropriations for district agricultural fairs, and a bill providing for the sale of State bonds to raise a fund for the use of the harbor commissioners in building a sea wall.

A resolution to cede the Yosemite Valley to the United States was defeated.

The total cost of the Senate was \$75,600.40, including more than \$4,000 for contested election cases; that of the Assembly was \$120,177.40.

Decisions on State Laws.—The Supreme Court decided in May that the section of the county-government bill of 1895 which provides for levying an inheritance tax is unconstitutional, inasmuch as it is an attempt to levy an extraordinary tax, and also that it provides that the fee so collected shall be paid into the county treasury and used for county purposes, whereas the Legislature is forbidden to impose taxes for county purposes.

On application of the Comptroller as to the effect of the veto of the item in the general appropriation bill for the support of the State printing office the Attorney-General decided that the State printing can not be legally done at any other place, and that no deficiency can be created for support of the office. This, if it shall be sustained, will do away with all State printing till the next session of the Legislature.

By a decision of the United States Supreme Court, May 24, in the litigation over the Merritt-Garcelon estate, Oakland will receive for a general hospital about \$600,000.

According to a decision in the United States circuit court in June, the authority of the Government over the navigable waters of the State "is so absolute that the Federal power may legally intervene to prevent the passage into the Sacramento and San Joaquin rivers and their tributaries of even the light, flocculent matter which invariably escapes even the best impounding dams and makes its way downstream presumably to the sea." If this is sustained, the impounding dams to be built by the State, as provided by the Legislature, may be regarded as trespassing on the property of the Government, should it be found that injury to navigation results from the use of the dams by hydraulic miners.

In a case involving the ownership of San Pedro inner harbor, which was claimed by virtue of an old grant, the decision in May in the United States Supreme Court was against the title. The court holds that where a patentee of land accepts a patent and survey he has not recourse, in case of desire to contest, if the boundaries do not accord with the original lines.

CANADA, DOMINION OF. The year 1896-'97 marks an important period in the history of the Dominion. Not only has there been a change of government from the Conservative to the Liberal party, but a change in party policy and a distinct approximation toward Great Britain in fiscal affairs as well as in the sentiment evoked by the Queen's diamond jubilee. The ministry as constituted in December, 1897, was as follows: Premier, Sir Wilfrid Laurier; Minister of Trade and Commerce, Sir R. J. Cartwright; Secretary of State, Hon. R. W. Scott; Minister of Justice, Hon. David Mills; Minister of Marine and Fisheries, Sir Louis Davies; Minister of Militia and Defense, Hon. F. W. Borden; Postmaster-General, Hon. William Mulock; Minister of Agriculture, Hon. S. A. Fisher; Minister of Public Works, Hon. J. Israel Tarte; Minister of Finance, Hon. W. S. Fielding; Minister of Railways and Canals, Hon. A. G. Blair; Minister of the Interior, Hon. Clifford Sifton; Minister of Customs, Hon. William Patterson; Minister of Inland Revenue, Sir Henri Joly de Lotbinière; without portfolio, Hon. R. R. Dobell and Hon. C. A. Geoffrion.

The only important change during the year was the retirement of Sir Oliver Mowat from the Department of Justice and his acceptance of the lieutenant governorship of Ontario. The second session of the Eighth Parliament was opened in state by the Governor General on March 25, 1897. The speech from the throne outlined the policy of the party in power. The following are its significant passages:

"Immediately after the last session the Government of Manitoba was invited to hold a conference with my ministers on the subject of the grievances arising out of the act of that province relating to education, passed in 1890. In response to that invitation three members of the Manitoba Government came to Ottawa, and after many and protracted discussions a settlement was reached between the two governments, which was the best arrangement obtainable.

"A measure will be submitted to you for the revision of the tariff, which it is believed will provide the necessary revenue, and, while having due regard to industrial interests, will make our fiscal system more satisfactory to the masses of the people.

"You will be asked to give your support to a bill abolishing the present expensive and unsatisfactory franchise act, and adopting, for the election of members of the House of Commons, the franchises of the several provinces.

"My Government has determined that the advantages to accrue, both to our western producers and the business interests of the whole Dominion, from the completion of the works for the enlargement of the St. Lawrence canals, should no longer be deferred, and has, subject to the approval of Parliament, taken the initial steps for a vigorous prosecution of those works, and for the perfecting of the canal system by the close of 1898.

"Arrangements have been completed which, if you approve, will enable the Intercolonial Railway system to reach Montreal, and thus share in the large traffic centering in that city. Appreciating the difficulties encountered by our farmers in placing their perishable food products on the English market in good condition, my Government has arranged a complete system of cold-storage accommodation at creameries, on railways, at ports, and on steamers, by which these products can be preserved at the desired temperature during the whole journey from the point of production to Great Britain.

"It is desirable that the mind of the people of Canada should be clearly ascertained on the subject of prohibition, and a measure enabling the electors

to vote upon the question will be submitted for your approval.

"I regret that the receipts from the ordinary sources continue to be inadequate to meet the charges against the consolidated revenue. The proposed revision of the tariff and the application of strict economy in the administration of the Government will, I trust, restore the equilibrium between income and expenditure."

Of the measures mentioned, several of the most important were presented and discussed, but were ultimately withdrawn in order to facilitate the Premier's attendance at the jubilee in London. The Drummond railway bill, which proposed the purchase of a short line connecting Montreal with the Intercolonial Railway from Halifax, was the subject of active party hostility and severe criticism. Charges of corruption were freely made, and the Senate finally refused to ratify it unless a committee was appointed to investigate the whole matter. This compromise was accepted by the Government, and the measure went through. An arrangement was entered into with the Peterson Company, of London, to establish a fast Atlantic steamship line, with a Canadian subvention of \$500,000 annually. An alien labor act was passed, modeled precisely after that of the United States, but made enforceable only at the will of the Government as to time and place. The Comptrollers of Inland Revenue and Customs were raised to the rank of members of the Cabinet. The Northwest Territories were given complete provincial self-government. Arrangements were made for the regulation and registration of cheese factories, and the provision of cold-storage transportation facilities. A loan of \$15,000,000 was authorized, in order to pay for railway and other schemes, and the Government was given power to pay bounties upon iron and steel, and to levy export duties on logs and minerals. There was a good deal of private legislation connected with railway charters and projects, which was made subject to a railway commission which it was proposed by the Government to organize hereafter.

But the most important event of the session was the new tariff. It was introduced by Mr. Fielding in a long budget speech on April 22. He began with a summary of the financial position from the time of the late Government. The changes announced were unimportant in detail, but not in principle. They practically pledged the Government to do nothing injurious to vested interests or inimical to the maintenance of the protective tariff. Duties on iron were reduced considerably, to help the implement manufacturers in their competition with the American finished product, while bounties were given the iron smelters as a set-off to this reduction. On spirits and tobacco the excise and import duties were made very much heavier. Cigarettes were especially affected. In food products little change was made except in flour and sugar, upon which the duties were lowered one half. The duty on coal oil was reduced, and that on bituminous coal was maintained at 60 cents a ton, anthracite being free. It was promised, however, that if the United States Government would lower its duty to 40 cents (the Dingley bill was then pending) Canada would do the same. But the most important point in the tariff schedule, which was a great surprise to the country, was the enactment that when the customs tariff of any other country is made favorable to Canada the duties upon the products of that country shall at once be lowered one eighth, and after July 1, 1898, one quarter. This was at once made applicable to Great Britain and created a most favorable impression in the mother country.

Unfortunately, however, it was discovered that, under terms of special treaties with the German Zollverein and with Belgium, the goods of those countries would have to be admitted on the same terms given to England. As a result of Canadian pressure and partly as a consequence of the imperial spirit manifested during the jubilee year, the British Government a few months later gave to Germany and Belgium the necessary notice of its intention to abrogate the treaties. On the whole, the budget was well received, and the policy became popular. Mr. Fielding concluded his speech with the following review :

"We submit a tariff which largely abandons the specific duties that have been so unjust to the poorer classes. We submit a tariff in which the large free list is not practically disturbed, but has large additions made to it. We give to the country the great boon of free corn, which will have an important effect on the development of our farming interests, and particularly of the dairying interest. We give to the country a reduction of the duty on coal oil, and the removal of the burdensome restrictions respecting the sale of coal oil. We give to the farmer his fence wire at a low rate of duty for the present year, and place it on the free list from Jan. 1 next. We give him his binder twine on the same terms, a lower rate of duty for the present, and make it free from Jan. 1 next. We put all surgical and dental instruments on the free list. We recognize the great mining industry of the country by placing on the free list all machinery exclusively used in mining enterprises. We give the people the benefit of reductions on breadstuffs, flour, wheat, and cornmeal. We give the manufacturers the benefit of cheaper iron. We provide the necessary revenue, but protect to meet the great needs of the country by increased taxes on articles of luxury. And last, but not least, we give to the people the benefits of preferential trade with the mother country."

Postal Service.—The 9,103 post offices in the Dominion in 1896 were used for the transmission of 116,028,000 letters, 24,794,800 post cards, 3,505,500 registered letters, 4,803,800 free letters, 24,024,000 newspapers, periodicals, and circulars, 2,352,000 packages of printers' copy, deeds, policies, etc., 1,320,700 packages of merchandise, 331,700 parcels, post packages, 22,630 closed parcels for the United Kingdom. The mails were carried over 1,669 miles of railway, an increase of 206 miles over 1895. There has been a very great increase in the amount of correspondence between Canada and China and Japan; 229,738 letters went to these countries, an increase of 49,745 compared with 1895.

Finance.—The financial arrangements of the fiscal year 1896-97 did not pass without severe criticism. The expenditure was \$1,162,521 more than that of the previous year on current account, the deficit was \$525,739, and the addition to the net debt of the country was \$2,794,000. The following were the figures :

RECEIPTS.	1896.	1897.
Customs	\$19,833,279	\$19,478,236
Excise	7,936,005	9,170,765
Post office	2,962,014	3,226,482
Public works and railways	3,594,274	3,570,571
Miscellaneous	2,303,025	2,363,291
Totals	\$36,618,590	\$37,809,347
Current expenditure	36,949,142	38,335,086
Current deficit	330,500	525,739

The expenditure on capital account for the year ended June 30, 1897, was \$3,705,611.

In most of the current services there was an increase of expenditure, although the defense was that this included payment of debts of the late ad-

ministration. During the session annual payments were pledged by the Government to the extent of \$1,055,000—for the Atlantic service, the Crow's Nest Railway, the intercolonial extension, the deepening of the canals, etc. In October, 1897, Mr. Fielding went to London and placed a loan of £2,000,000. The issue price was 91, which made the bonds yield about 2½ per cent. The whole loan was taken up at once, more than half of it by Canadian banks and investors. Half the amount was to pay off floating indebtedness.

The estimates for 1897-'98 included a total expenditure of \$44,607,238. In this were two items of \$5,000 each for statues, opposite the Parliament buildings, to the Queen and the late Alexander Mackenzie.

Elections.—During the year several by-elections were held, which (as usual in Canada) went with the Government. Winnipeg, St. Boniface, and Macdonald, in Manitoba, a constituency in Prince Edward's island, Colchester in Nova Scotia, Champlain and Bonaventure in Quebec, and Centre Toronto in Ontario, seemed to indicate that the tide still ran strongly with the Liberals.

The Manitoba School Question.—This vexed problem was settled for the time being. Mr. Laurier, the French Catholic Liberal Premier of the Dominion, went into consultation with the English Protestant Premier of Manitoba, and the two governments evolved the following agreement :

"Legislation shall be introduced and passed at the next regular session of the Legislature of Manitoba embodying the provisions hereinafter set forth in amendment to the public schools act, for the purpose of settling the educational questions that have been in dispute in that province. Religious teaching to be conducted as hereinafter provided : 1. If authorized by resolution passed by a majority of the school trustees; or 2. If a petition be presented to the board of school trustees asking for religious teaching, signed by the parents or guardians of at least 10 children attending the school, in the case of a rural school district, or by the parents or guardians of at least 25 children attending the school in a city, town, or village. 3. Such religious teaching to take place between the hours of 3.30 and 4 o'clock in the afternoon, and to be conducted by any Christian clergyman whose charge includes any portion of the school district, or by a person duly authorized by such clergyman, or by the teacher when so authorized. 4. Where so specified in such resolution of the trustees, or where so required by the petition of the parents or guardians, religious teaching during the prescribed period may take place only on certain specified days of the week, instead of on every teaching day. 5. In any school in towns and cities where the average attendance of Roman Catholic children is 40 or upward, and in villages and rural districts where the average attendance of such children is 25 or upward, the trustees shall, if required by the petition of the parents or guardians of such number of Roman Catholic children respectively, employ at least 1 duly certified Roman Catholic teacher in such school. In any school in towns and cities where the average attendance of non-Roman Catholic children is 40 or upward, and in villages and rural districts where the average attendance of such children is 25 or upward, the trustees shall, if required by the petition of the parents or guardians of such children, employ at least 1 duly certificated non-Roman Catholic teacher. 6. Where religious teaching is required to be carried on in any school in pursuance of the foregoing provisions, and there are Roman Catholic children and non-Roman Catholic children attending such school, and the schoolroom accommodation does not permit of the pupils being placed in

separate rooms for the purposes of religious teaching, provision shall be made by regulations of the Department of Education (which regulations the Board of School Trustees shall observe) whereby the time allotted for religious teaching shall be divided in such a way that religious teaching of Roman Catholic children shall be carried on during the prescribed period on half of the teaching days in each month, and the religious teaching of the non-Roman Catholic children may be carried on during the prescribed period on half of the teaching days of each month. 7. The Department of Education shall have the power to make regulations not inconsistent with the principles of this act for carrying into effect the provisions of this act. 8. No separation of the pupils by religious denominations shall take place during the secular work. 9. Where the schoolroom accommodation at the disposal of the trustees permits, instead of allotting different days of the week to the different denominations for the purpose of religious teaching, the pupils may be separated when the hour for religious teaching arrives, and placed in separate rooms. 10. When 10 of the pupils in any school speak the French language (or any language other than English) as their native language, the teaching of such pupils shall be conducted in French (or such other language) and English, upon the bilingual system. 11. No pupils to be permitted to be present at any religious teaching unless the parents or guardians of such pupils desire it. In case the parents or guardians do not desire the attendance of the pupils at such religious teaching, then the pupils shall be dismissed before the exercises, or shall remain in another room."

The next point was to obtain acceptance of the compromise by the clergy and hierarchy of Quebec and Manitoba. Archbishop Langevin, of Winnipeg, at once denounced the whole affair, and so did other prelates. Hence a petition was sent to the Pope, signed by Messrs. Laurier, Tarte, Fitzpatrick, Scott, and Geoffrien, members of the Government, and by the Speaker of the Senate and 36 other members of Parliament. Its essential passages were these:

"Your Holiness has already been made aware of the conduct and attitude of certain prelates and of certain members of the secular clergy, who, during the general elections in this country, in the month of June last, intervened in a violent manner in restraint of electoral freedom, taking sides openly for the Conservative party against the Liberal party and going so far as to declare guilty of grievous sin those of the electors who would vote for the candidates of the Liberal party.

"We respectfully represent to your Holiness that these democratic institutions, under which we live and for which your Holiness has many times expressed sentiments of admiration and confidence, can only exist under a perfect electoral freedom. Far be it from us to refuse to the clergy the plenitude of civil and political rights. The priest is a citizen, and we would not for a single instant deprive him of the right of expressing his opinion on any matter submitted to the electorate; but when the exercise of that right develops into violence, and when that violence in the name of religion goes to the extent of making a grievous sin out of a purely political act, there is an abuse of authority of which the consequences can not but be fatal not only to constitutional liberty, but to religion itself.

"An active and violent intervention of the clergy in the domain of political questions submitted to the people must of necessity produce among the great mass of the Catholic population a degree of irritation manifestly prejudicial to that respect which religion and its ministers should ever inspire and command. Some twenty years ago his Holiness

Pius IX, your illustrious and lamented predecessor of the pontifical throne, acting through the Sacred Congregation of the Propaganda, deemed it his duty to put a stop to certain abuses of a similar character, and forbade the intervention of the clergy in politics. This prohibition was generally respected so long as his Eminence Cardinal Taschereau was able to guide the Church in Canada, but since old age and infirmities have paralyzed his guiding hand the abuses to which your illustrious predecessor had put a stop have begun again, and threaten once more to create trouble among us and to compromise not only Catholic interests in this country but the peace and harmony which should exist between the various elements of our population.

"We beg that your Holiness will renew in our behalf the most wise prescriptions and prohibitions of your predecessor, protect the consciences of the Catholic electors, and thus secure peace in our country by the union of religion and liberty."

The result of this step was the appointment of Monseigneur Merry del Val as a papal delegate to inquire into the whole matter. He made a tour of the Dominion, held meetings of the archbishops and bishops of the Church of Rome in Canada, communed with party leaders of all kinds, and returned at the end of two months to submit his report to the Pope. This had not been made public at the end of 1897.

Militia.—The report of the Minister of Militia and Defense, submitted to Parliament April 13, dealt with the arming of the militia with new Lee-Enfield rifles and the erection of important new armories in Toronto, Kingston, and Halifax. It included Gen. Gascoigne's report as commander of the militia, in which he insisted upon the necessity of an annual training for the whole force, urged the rearming of the field batteries, the strengthening of the fortifications at Quebec, and the general reorganization of the forces.

Important changes regarding commanding officers and honorary appointments in the militia were promulgated in general orders. Provision was made for the retirement of commanding officers after five years' service, and for the appointment of honorary lieutenant colonels and chaplains. The regulations regarding commanding officers are amended to provide that all appointments as commanding officers are for five years. Any extension of tenure will be for three years, and will only be granted on the recommendation of the district officer commanding.

By these regulations seventy colonels were retired at one sweep. On June 30, the permanent militia (or regular troops) numbered 802, and the active militia 30,085. The expenditure for the year ending June 30, 1896, was \$2,136,713.

Insurance.—The premiums received by fire companies in 1896 were \$7,079,794, and the losses paid were \$4,157,154. The risks taken by Canadian companies were \$114,379,430; by British companies, \$459,959,398; and by American companies, \$93,175,556. The life insurance effected in this year by Canadian companies was \$195,317,542; by British companies, \$34,838,914; and by American companies, \$97,658,009. The premiums were respectively \$6,075,454, \$1,138,206, and \$3,390,917. Accident insurance was taken out to the amount of \$81,668,838, with premiums of \$419,629 and losses paid of \$231,903. Guarantee insurance was effected to the amount of \$13,542,175, with premiums of \$69,054, and losses paid of \$12,809.

Criminal Statistics.—Particulars are given by the Minister of Justice in his report for the year ending June 30, 1896. The total penitentiary population was as follows: Kingston, 605; St. Vincent de Paul, 383; Dorchester, 192; Manitoba, 80; British Columbia, 101; total, 1,361.

The increase during the year was 6·5 per cent., and in the past two years more than 10 per cent. The record of pardons during the past three years was 49 in 1893-'94, 73 in 1894-'95, and 52 in 1895-'96.

Fifty per cent. of the sentences are for terms of less than five years. Life sentences constitute 4 per cent. Of the total number of prisoners, 126 were under twenty years, 625 between twenty and thirty, 348 between thirty and forty, 161 between forty and fifty, 81 between fifty and sixty, and 20 over sixty. The proportion of convicts of the various large religious denominations was: Roman Catholics, 47·25 per cent.; Church of England, 21·17 per cent.; Methodists, 14·63 per cent.; Presbyterians, 8·23 per cent.; Baptists, 5·36 per cent.; Buddhists, 1·03 per cent. Of the total number of convicts, 937 were natives of Canada, 136 of the United States, 132 of England, 57 of Ireland, and 34 of Scotland. There were 122 total abstainers, 706 temperate persons, and 533 intemperate in the penitentiaries. Although many of the convicts were colored, Indian, or Chinese, only 235 of them could not read, while 1,046 could both read and write. The net cost of the penitentiaries was \$292,286 in 1895-'96, compared with \$344,559 in 1894-'95. The cost *per capita* was reduced from \$269.82 to \$232.44.

Trade and Commerce.—The trade of Canada for the fiscal year ending June 30, 1897, showed a marked expansion. In 1896 the exports were \$118,140,000, and the imports \$110,588,100. In 1897 they were respectively \$133,621,000 and \$111,731,000. The following is the classification of the exports :

ARTICLES.	1896.	1897.
Minerals.....	\$8,401,760	\$11,563,359
Fish.....	11,183,698	10,629,328
Animals and products.....	37,404,396	40,290,584
Forest.....	27,324,894	31,500,063
Agricultural.....	17,974,011	25,809,504
Manufactures.....	10,222,877	10,169,167
Miscellaneous.....	473,854	673,034
Coin and bullion.....	4,699,309	3,478,940
Total.....	\$117,684,799	\$134,113,979
Product of Canada.....	106,586,284	120,156,771

Of the products of the mine, \$175,512 went to Great Britain and \$7,482,984 to the United States; of the fisheries, \$4,462,000 went to Great Britain and \$3,501,671 to the United States; of the forests, \$12,081,253 went to Great Britain and \$15,516,961 to the United States. Of animals and their products, \$32,488,801 went to Great Britain and \$3,385,261 to the United States. Of miscellaneous farm produce, \$9,551,011 went to Great Britain and \$3,242,632 to the United States. The total export was \$58,695,579 to Great Britain and \$31,129,509 to the United States.

Mineral Development.—The central feature of the year in a material sense was the rush to the Klondike and the stories of immense gold discoveries there and on the Peace river. Meanwhile, gold was being steadily produced in British Columbia and in the gold mines of Ontario and Nova Scotia. The great Yukon district of Canada, which borders upon the Yukon district in Alaska, contains the Klondike region and most of the gold so far discovered. During the year the Dominion Government made every possible arrangement for administering the newly populated regions under its control. Regulations were made as to mining which were very liberal to the Americans who were flocking into the region, as they placed the latter upon exactly a level with Canadians, and gave them the right to take the gold away to a foreign country. Major Walsh, of the Northwest Mounted Police, was appointed Administrator of the Territory, and with him went

Judge McGuire as magistrate. In October Mr. Sifton, Minister of the Interior, visited the Yukon in his official capacity, and made further arrangements for the management of those who might settle there. Mr. William Ogilvie, who has spent some years in the region prospecting and investigating for the Dominion Geological Survey, made his official report during the summer, and declared that there was \$77,000,000 worth of gold in sight.

Railways.—The report of the Grand Trunk Railway for the half year ending Dec. 31, 1896, was most satisfactory; it showed a surplus of \$489,957. The net deficit of its two American systems—Chicago and Grand Trunk, and Detroit, Grand Haven and Milwaukee—amounted, however, to \$870,114 for the half year. The half year showed a decrease of 170,765, or 5·09 per cent., in the number of passengers carried compared with the corresponding half of 1895, and a decrease of £233,182, or 5·11 per cent., in the receipts under that head. There was, however, an increase in the mail and express receipts, so that the net decrease in the receipts from passenger trains was \$104,468. It was in the freight and live-stock traffic the advance was made. The total traffic for the half year was 4,725,368 tons, an increase of 239,114 tons compared with the traffic of the corresponding half of the previous year. The receipts from this branch of the traffic for the half year showed an increase of £126,973, or 10·37 per cent., compared with the figures for the December half of 1895. The ratio of working expenses to gross receipts has been reduced from 72·57 per cent. to 70·3 per cent., and the working expenses per train mile have been reduced 6·3 per cent. The American branches operated by the Grand Trunk Company are still a heavy drain on the road's yearly returns, but the year 1896 showed an improvement.

The annual meeting of the Canadian Pacific Railway Company was held in Montreal on April 7. Sir William Van Horne declared the property of the road to be in an excellent condition, and that there was an increase of \$345,000 in the gross revenue.

The question of building the Crow's Nest line by private initiative with Government aid, by the Canadian Pacific Railway alone or with Government help, or as a distinct Government road, caused wide and bitter discussion. Finally a compromise was effected by which the Canadian Pacific Railway was to build the road as a part of its own system, but subject to certain defined rates, and in return for Government help was to lower its rates for transportation of Western grain to the seaboard.

The position of the Intercolonial was also a subject of much discussion in connection with a proposed bridge across the St. Lawrence at Montreal, and the purchase of the Drummond Railway as a branch line connecting it with Montreal from Quebec. At the end of 1896 the mileage of the Canadian Pacific Railway was 6,216, the Grand Trunk Railway 3,161, and the Intercolonial 1,360. The total mileage of Canadian railways was 16,387. The total number of passengers carried during the year was 14,810,407, an increase of 800,000; the tons of freight were 24,266,825, an increase of 2,700,000; the earnings were \$50,545,569, an increase of \$3,800,000; the working expenses were \$35,042,655, an increase of \$2,300,000. The total capital of private lines was \$840,800,290, and that of Government lines \$59,017,610. The Canadian Pacific in 1896 carried 3,036,619 passengers and 4,576,632 tons of freight; the Grand Trunk, 5,077,671 passengers and 7,587,148 tons of freight; the Intercolonial, 1,594,452 passengers and 1,426,013 tons of freight. The receipts of the first were \$20,175,385, and expenses \$12,202,360; of the second, \$16,506,878 and \$11,544,625; of the third, \$3,104,117 and \$3,237,966.

Marine and Fisheries.—The report of the marine section of this department up to Jan. 1, 1897, shows that the amount voted by Parliament for marine was \$835,640, and the expenditure for the fiscal year was \$43,326 less than the amount voted. The number of persons employed by the marine branch of the department in the outside service was 1,736. The number of lights in the Dominion is 766, against 625 ten years ago. The expenditure for maintenance and repairs of the Dominion steamers was \$150,599. The total number of wrecks and casualties during the year of British and Canadian seagoing vessels reported to the department was 273, with a loss of \$1,266,761. The number of lives reported lost was 43. The registered merchant shipping on Dec. 31, 1896, was 7,279 vessels, measuring 789,299 tons, being an increase of 17 vessels and a decrease of 36,537 tons compared with 1895. Assuming the average value to be \$30 a ton, the value of the registered tonnage of Canada would be \$23,678,000. During the year 227 new vessels were built and registered, of a value of \$726,000, estimating the tonnage at \$45 a ton.

The fisheries report was submitted on May 27, and was not satisfactory in many respects. While the salt-water inshore area of Canada, not including minor indentations, covers more than 1,500 square miles, the fresh-water area of that part of the Great Lakes belonging to the Dominion is computed at 72,700 square miles, not including the numerous lakes of Manitoba and the Territories, all stocked with excellent fish. For 1896 the value of the Canadian fisheries was computed at \$20,199,338, being a decrease of over \$500,000 compared with the previous year.

With the exception of British Columbia, which shows a surplus of nearly \$500,000, and New Brunswick, which shows a slight increase, all the provinces have yielded less than last year. The figures above do not include the large quantity of fish consumed by the Indian population of British Columbia and the Northwest Territories, estimated at over \$2,000,000.

For the first time in the history of Canadian fisheries salmon, an anadromous fish, has supplanted in the graduated table his deep-sea cousin, the cod. While the value of the latter has declined by over \$500,000, the value of the former has increased by about the same amount, thus reversing the difference of \$1,000,000 which existed in 1894 between the two species. Other most important fluctuations are the large increase in herring and sardines, and the falling off in mackerel and lobsters.

CANNING INDUSTRY. About \$72,000,000 worth of canned goods are put up annually by the canneries of the United States, about one third of this value being in meats, and the remainder in fruits and vegetables. The annual output in cans of all sizes is about 700,000,000, and in car loads about 60,000. There are about 2,000 canned-goods-packing firms in the country, and a little more than 2,000 canneries. Maryland is the center of the industry, about 500 canneries being within that State. Maine, New York, and California, in the order named, are the States next most productive of canned goods, but there is hardly a State in the Union that has not some share in the industry. Ohio, Illinois, Virginia, and Indiana are largely represented. During the busy season employment is given to about 1,000,000 persons, directly and indirectly. The number regularly employed is fewer than 70,000.

The history of the industry begins about 1850, when the introduction of machinery began to supplant the hand labor that had been employed in a small way. Shortly after the civil war the Ferracute Machine Company, of Bridgeton, N. J., and

other concerns began the manufacture of presses, dies, and fruit-can tools, and since then a long line of labor-saving machinery has been developed. The organization of members of the trade for their own protection began in 1883, with the formation of the Canned Goods Exchange, in Baltimore. In 1885 the Western Canned Goods Packers' Association was formed in Chicago. As a result of this came the National Association of Canned-Goods Packers, organized in Indianapolis in 1889; the Peninsula Packers' Association was formed at Dover, Del., in 1894; and the Atlantic States Canned Goods Packers' Association at Baltimore in the same year.

The list of edibles canned includes nearly every perishable food product, being headed by tomatoes, which is the staple in Maryland and the Middle States. Beef is canned mostly north and west of Ohio river. Sardines and lobsters are the principal features of the pack in Maine, while salmon is put up mostly in California, and oysters in New Jersey, Delaware, and New York. About 3,000 fishing vessels and 25,000 fishermen find employment in supplying the canneries, while 2,000 oyster boats and 20,000 men are engaged in raising oysters for the same purpose. Peas are packed largely in Maryland, New York, Ohio, Indiana, and Delaware. Massachusetts is the State where the most beans are packed, New York being a close second. Corn, milk, apples, pears, pineapples, small fruits generally, pumpkins, squashes, etc., are put up in large quantities wherever they are plentifully grown.

About \$30,000,000 of capital is invested in the canning industry in the United States, and about \$12,000,000 is paid out annually in wages. The raw material costs about \$40,000,000. Almost all the goods packed are for domestic consumption, though the export trade is increasing, the canned-fruit export for 1896 being \$1,346,281, against \$871,465 the previous year. The canned-meat export is known to be larger than that of the fruit, but the exact figures are not obtainable, owing to the method of classification of the exports. Great Britain takes the greater part of the export. Canneries engaged in packing fruit and vegetables are obliged to do most of their work during a few months of the summer, being comparatively idle the remainder of the year. They generally engage all the floating cheap labor in the vicinity during their busy months, paying from \$2.50 to \$1 a day in wages, a great deal of the work being done by women and children, who are paid by the piece.

A large portion of the tin plate produced in the country is used in making cans, and many of the tin-plate concerns are also manufacturers of cans. The cans are mostly round, though square and oblong cans are common. All the work is done with automatic machinery, the tin being stamped out with presses and dies, and put together with seamers and headers. For many years it was necessary to use hand labor for sealing or closing up the cans after filling, but a practical mechanical capper was introduced about 1883, and there are now several capping machines in the market. An efficient capper will solder 40,000 cans in a day.

The machinery of a canning factory devoted to fruit and vegetables includes usually a steam boiler for heating a water bath, this being connected by pipes with various tanks and kettles used in scalding and blanching. Scalding assists the skinning operation, and tomatoes or the like, held in wire baskets, are dipped in the kettles just before skinning. Cookers are made in a great variety of forms, according to the nature of the goods and the capacity required. They usually have a siruper as an attachment, for supplying a definite amount of sirup to each can, and frequently an automatic can-filling attachment constitutes a part of the

mechanism. A double-filler cooker, with siruper, should have a capacity of about 5,000 cans an hour. Process kettles or tanks are used in "proeessing" or cooling the fruit. Exhaust tanks and kettles are employed to exhaust cold air from the cans just before the final closure. Crates, formed of strap iron and arranged to be hung from cranes, are used for handling the cans in the operations of processing, exhausting, etc. For special work there are such machines as green-corn cutters, which will handle 4,000 ears an hour; corn mixers; corn-silking machines, for removing silk and refuse from the corn after its separation from the cob; pea-hulling machines, some of which will hull 100 bushels in an hour; rotary pea separators, grading the peas into half a dozen sizes, at the rate of 60 bushels an hour; pea sieves, for grading peas in small quantities; pea blanchers; pumpkin fillers; pumpkin grates; pumpkin peelers; besides various wipers, parers, corers, graters, seeders, etc.

CAPE COLONY AND SOUTH AFRICA. The Cape of Good Hope was settled by the Dutch in the seventeenth century. In 1806 the colony was annexed by Great Britain. It then extended eastward as far as the Great Fish river. Many of the descendants of the original Dutch and Huguenot settlers, dissatisfied with British rule, founded a new colony in Natal, on the east coast, in 1835. Other discontented Boers migrated northward across the Orange river in 1836 and succeeding years and established the settlements that were declared independent and organized into the Orange Free State in 1854. The Natal settlements were annexed by Great Britain, and the Boer colonists abandoned their farms and traveled far into the interior, where they established, in 1849, on the farther side of the Vaal river, a new commonwealth called the Transvaal Republic, whose independence was recognized by Great Britain in 1852. Natal was separated from Cape Colony and erected into a colony in 1856. British Kaffraria was incorporated in Cape Colony in 1865, and Tembuland, East Griqualand, the Transkei territories, and the harbor of Walvisch Bay, on the southwest coast, were annexed subsequently. Griqualand West was originally a part of the Orange Free State, but after the discovery of the diamond mines it was annexed by Great Britain, and now forms an integral part of Cape Colony. Basutoland was annexed to Cape Colony in 1871, but was detached in consequence of difficulties with the natives, and was placed under direct British imperial administration in 1884. In 1884 Germany declared a protectorate on the southwest coast of Africa over Damaraland from Cape Frio, the southernmost point of Portuguese West Africa, to Walvisch Bay and over Namaqualand from Walvisch Bay to the Orange river. British Bechuanaland was annexed by Great Britain in 1884 after the suppression of the Government established in Stellaland at Vryburg by Transvaal Boers, and in 1885 a British protectorate was proclaimed over independent Bechuanaland, the country still ruled by Chief Khana. Zululand was divided after the Zulu war, a section next to the Natal border being set apart as a reserve for loyal Zulus who aided the British in the war. The rest was restored to Cetewayo in 1883. In 1887 about two thirds of this territory, together with the Zulu reserve, were formally declared British territory and were placed under the administration of the Governor of Natal. The Transvaal Republic was annexed by Great Britain in 1877, and a British administrator was appointed, but in 1880 the Boers took up arms after expelling the British officials, and after successfully resisting the British troops that were sent to conquer them obtained by the treaty of 1881 the restoration of self-government in

internal affairs, the control of external affairs being reserved to the British Government under the title of suzerain. A subsequent convention, signed at London in 1884, recognized the new style of South African Republic adopted by the Transvaal and abandoned the assertion of suzerainty, but reserved to Great Britain the right to review and reject any treaty made by the Government of the republic with foreign powers or with independent native chiefs to the north or east of the Transvaal. The new republic, founded by Boers in Zululand, was subsequently incorporated as the district of Vrijheid in the South African Republic with the assent of Great Britain. By the convention of 1890 a part of Swaziland also was added to the republic. All the territories north of the Transvaal, including Matabeleland, ruled by King Lobengula, with the neighboring countries of the Mashonas, Makalakas, and other tribes paying tribute to him, and comprising all the region north of 22° of south latitude, east of 20° of east longitude, and west of the Portuguese province of Sofala, were declared to be within the British sphere of influence. In 1889 a royal charter was granted to the British South Africa Company, which was authorized to organize an administration for these territories. The company was empowered to take under its administration, subject to the approval of the Imperial Government, the regions north of the Bechuanaland protectorate, and west of it to the German boundary. Portugal claimed the banks of the Zambesi and a continuous zone of territory across the continent from its colony of Mozambique, on the east coast, to Angola, on the west coast, but, yielding under threat of war to superior force, agreed in 1891 to recognize as a British protectorate the countries south of the Zambesi, including the Manica plateau, and also the Barotse kingdom and all the regions north of the Zambesi up to the border of the Congo State, including the Lake Nyassa region, where British missionaries were active. In 1891 the British Government extended the field of operations of the British South Africa Company so as to include all the territories north of the Zambesi, known as Northern Zambesia or British Central Africa, with the exception of the Nyassaland districts, which had been declared in 1889 to be within the British sphere, and were now proclaimed a British protectorate. Pondoland was annexed to the Cape in 1894, and in 1895 the Crown colony of Bechuanaland was incorporated in Cape Colony.

Cape of Good Hope.—Cape Colony has possessed responsible government since 1872. The legislative power is vested in a Legislative Council, elected for seven years and containing 23 members, and a Legislative Assembly of 79 members, elected for five years. The colony is divided into 7 districts, each electing 3 members to the Council, while Griqualand West and British Bechuanaland are each represented by 1 member. Members of the Assembly are elected by single country districts and towns. The members of both houses are elected by voters able to register their names, occupations, and addresses and qualified by the occupation of house property worth £75 or the receipt of a salary of £50. The law of 1892 provided that elections should be held by ballot after July 1, 1894. The number of registered electors in 1895 was 91,875.

The Governor is Lord Rosmead, formerly Sir Hercules Robinson, who was Governor before from 1881 till 1889, and was reappointed in 1895. The ministry in the beginning of 1897 was composed as follows: Prime Minister and Treasurer, Sir J. Gordon Sprigg; Colonial Secretary, Dr. T. N. G. Te Water; Attorney-General, Sir Thomas Upington; Commissioner of Public Works, Sir James Sivewright; Secretary for Agriculture, P. H. Faure.

Area and Population.—The area of Cape Colony, with Griqualand West and British Bechuanaland, is 248,187 square miles, and the population in 1891 was 1,112,596, of whom 371,819 were whites. The area of the dependencies of the colony is about 16,000 square miles, and the population 690,000, of whom 10,379 are whites. The population of Cape Town, the capital, was 83,718 in 1891, including suburbs. There were 7,356 marriages in 1895. The net immigration in 1892 was 4,788; in 1893, 7,695; in 1894, 7,845; in 1895, 15,410. The Government granted £181,371 in aid of education in 1895. Of 99,280 European children returned in the census, 22,080 were taught in Government-aided schools, 17,697 in private schools, and 20,223 at home or in Sunday schools only; of 316,152 native children, 34,133 were taught in Government-aided schools, 4,561 in private schools, and 5,021 at home or in Sunday schools. There were 2,200 aided schools and colleges in 1895, with 106,683 pupils enrolled, and 78,621 in average attendance. Only 28 per cent. of the European population could read and write in 1891.

Finances.—The revenue of the colony for the year ending June 30, 1895, was £5,416,612, of which £1,902,860 came from taxation, £3,069,567 from services, £337,272 from the colonial estate, £80,472 from fines, stores, etc., and £26,441 from loans. The total expenditure was £5,388,157, of which £1,244,749 went to pay interest and sinking fund of the debt, £1,552,445 for railroads, £158,584 for defense, £317,913 for police and jails, £140,448 for the civil establishment, and £236,423 under loan acts. The budget of expenditures for 1897 is £5,827,662.

The debt of the colony on Jan. 1, 1896, amounted to £27,533,978. The debts of the divisional councils amounted to £43,949, and those of municipalities to £1,411,143. The municipal revenues were £457,629 in 1895, and the expenditures £596,048.

Commerce and Production.—The product of wheat in the year ending May 31, 1896, was 2,187,648 bushels; of oats, 1,654,503 bushels; of barley, 668,490 bushels; of mealies, 1,728,231 bushels; of Kaffir corn, 1,009,503 bushels; of rye, 607,536 bushels; of tobacco, 4,579,759 pounds; of wine, 5,687,232 gallons; of brandy, 1,264,512 gallons; of raisins, 1,636,566 pounds; of wool, 45,521,508 pounds; of mohair, 7,210,915 pounds; of ostrich feathers, 294,479 pounds; of butter, 3,204,440 pounds. There were 387,590 horses, 94,570 mules and asses, 2,303,582 cattle, 14,409,434 sheep, 4,939,258 goats, and 224,953 ostriches in the colony in 1896.

The total value of the imports in 1895 was £19,094,880. The merchandise imports amounted to £13,285,005. The total exports were £16,904,756 in value; the exports of colonial produce, £16,798,137. The imports of textiles and apparel were £4,080,865; of food and drink, £2,449,788. The exports of gold were £7,975,637, not including specie; of diamonds, £4,775,016; of wool, £1,695,920; of Angora hair, £710,867; of ostrich feathers, £527,742; of hides and skins, £475,398; of copper ore, £246,597; of wine, £20,289; of grain and meal, £6,565. Of the total imports, £10,427,201 came from Great Britain, £736,584 from British possessions, and £2,448,620 from foreign countries; of the exports, £16,316,001 went to Great Britain, £68,011 to British possessions, and £414,125 to foreign countries.

Navigation.—During 1895 there were 851 vessels, of 1,974,576 tons, entered in the ocean trade, of which 641, of 1,777,417 tons, were British; and there were cleared 810, of 1,905,500 tons, of which 617, of 1,725,027 tons, were British. In the coasting trade 1,167, of 3,141,932 tons were entered, and 1,170, of 3,153,895 tons, cleared.

The merchant marine of the colony in 1896 con-

sisted of 8 sailing vessels, of 598 tons, and 22 steamers, of 2,322 tons.

Communications.—The Government owns all the railroads except 205 miles. The Government railroads have been built since 1873, when there were only 63 miles. In 1883 they had a length of 1,089 miles, and on Jan. 1, 1896, the total length was 2,253 miles. The system extends into the South African Republic through the Orange Free State and from Kimberley northward to Mafeking, where the line is being continued for the British South Africa Company. The section from Vryburg to Mafeking, 96 miles, was also built for this company, and is operated for it by the Cape Government. The capital expended in the Government railroads to Jan. 1, 1896, was £20,487,072. The gross receipts for 1895 were £3,390,093, and the expenses \$1,596,013. There were transported during the year 6,703,098 passengers and 1,158,614 tons of freight.

The number of letters passing through the post office in 1895 was 16,609,576; of newspapers, 7,562,400; of postal cards, 518,560; of books and samples, 1,533,720; of parcels, 360,020; receipts, £331,637; expenditures of postal and telegraph service, £341,703. The receipts from telegrams were £97,453, not including Government messages worth £90,705 to dispatch at regular rates; expenses, £90,603. The telegraph lines have a length of 6,316 miles. The Government acquired from the telegraph company 781 miles in 1873, and has built the rest of the system. The number of dispatches in 1895 was 1,798,061.

Politics and Legislation.—Cape Colony has enjoyed great prosperity through the development of gold mining in the Transvaal and the influx of capital into South Africa and of a new population to consume its products. The depression of the gold-mining industry reacted on the commercial and agricultural interests of the Cape, and in 1897 the expansion received a sudden check. The imports at the South African ports in 1896 amounted to £36,000,000, and the exports to only £19,000,000. As capital ceased to flow in the balance could only be settled by shipments of specie, which began in the spring and continued at the rate of \$4,000,000 a year. The rinderpest, in spite of quarantine regulations, at last invaded the colony. The railroads still paid 8½ per cent. in 1896, and the Government felt justified in extending the system. By an agreement with Mr. Rhodes, the Cape Government obtained the exclusive right to work all railroads in Rhodesia, with the exception of the Beira road, for three years, with the option of four years more. A railroad convention was concluded whereby the Orange Free State took over the lines built within its borders of the Cape Government.

In the Parliament, which began its session on April 2, bills were introduced to amend the mining laws, to encourage the development of the resources of the country, to promote public health, to amend the lunacy law, and to give greater responsibility to communities for the support of education and grant more liberal aid toward the maintenance of certain public schools. The customs union act was ratified. The scab act was extended to the Transkei, and opposition to the measure was diminishing throughout the colony.

On April 15 Mr. Du Toit, President of the Afrikaner Bond, moved a resolution deprecating war between European peoples, expressing the conviction that peace can best be attained by the faithful and reciprocal observance of all obligations under treaties and conventions, and suggesting that means should be devised to obtain a settlement of any differences arising as to the interpretation of those obligations, so that by the adoption of a policy of

moderation, mutual conciliation, and fairness the peace of South Africa might be secured. Mr. Rose-Inness, leader of the regular Opposition, presented as an amendment a moderate declaration of imperial policy and a demand for the redress of the grievances of the Uitlanders in the Transvaal. In the end the Bond resolution was adopted by 41 votes to 32, but with an amendment deprecating the intervention of any foreign powers in disputes between the Imperial Government and the South African Republic. In the Legislative Council this resolution in the interest of peace in South Africa and non-interference in the affairs of the Boer Republic was carried by a two-third majority. A few days later Mr. Merriman, representing the friends of the Transvaal Government, offered a motion of no confidence in the Government. Although Mr. Rose-Inness and 14 of his party now voted with the extreme Dutch party, most of his English followers supported the ministry, and 8 members of the Progressive Dutch party also stood by the Government. The result was a tie vote of 36 votes on each side, and the speaker gave his casting vote to retain the Government in office. Mr. Rose-Inness then resigned as leader of the Opposition, taking, with his immediate supporters, an independent position, while the Dutch party, which for years under Mr. Hofmeyr's lead, had been able to control legislation and dictate policies by giving or withholding its vote, became the regular Opposition under the leadership of Mr. Sauer. The Assembly resolved to limit the introduction of undesirable immigrants. A bill was carried giving licensing boards power to prohibit the sale of liquor to natives, but it was thrown out by the Legislative Council. The surplus revenue for the past year was £500,000, and for the coming one Sir J. Gordon Sprigg estimated a revenue of £6,715,000 and an expenditure of £6,488,000, leaving a surplus of £227,000. He asked that the whole surplus be reserved for the extinction of the rinderpest, which had already consumed £667,000. The cost of suppressing the Bechuanaland revolt was estimated at £95,000. A resolution was passed authorizing the Prime Minister, who was about to depart for England to represent the colony in the diamond jubilee, to take provisional steps to arrange some basis of contribution by the colony toward the imperial navy. Accordingly, Sir J. Gordon Sprigg offered the gift on the part of Cape Colony, subject to ratification by the Cape Assembly, of the cost of a first-class battle ship to be added to the British navy without conditions.

Basutoland.—The native territory of Basutoland, lying between Cape Colony, Natal, and the Orange Free State, has been administered by a Resident Commissioner under the direction of the High Commissioner for South Africa since March 13, 1884. The area is estimated at 10,293 square miles, and the population at 250,000. European settlement on the land is prohibited. There are 99 Europeans in Maseru, the chief town. The natives raise wool, wheat, mealies, and Kaffir corn, and have many horses and cattle. The exports, consisting of grain, cattle, and wool, were valued at £139,500 in 1896. The revenue is derived from a hut tax of 10s., trading licenses, and the post office, and is supplemented by a contribution of £18,000 from Cape Colony. The whole amount was £45,653 in 1896, and the expenditures amounted to £42,970. The Resident Commissioner is G. Y. Langden.

Kaffir Disturbances.—As soon as the Cape mounted rifles departed from Bechuanaland a body of armed and mounted natives collected at Umzimkulu and presented their demands to the magistrate. When the unruly chief at the head of the movement was arrested, the natives assembled at Kokstad to discuss a plan of action, while the whites

and trusty natives guarded the magazine, and a force of Cape mounted rifles was dispatched to the spot from the south. The threatened disturbance was thus averted. On June 21 the Cape Assembly passed a bill under which a disobedient chief or any dangerous white can be arrested by proclamation. The followers of Sigcau in Pondoland became restless and insubordinate, and in Basutoland serious troubles were threatened. Tribal quarrels had resulted in bloodshed, and the contending chiefs were accordingly summoned by the Resident Commissioner, Sir Godfrey Langden, to appear before him. One chief refused to attend, but ultimately appeared with an imposing cavalcade of followers.

Bechuanaland Protectorate.—The area of the Bechuanaland Protectorate is about 386,200 square miles. When British Bechuanaland was annexed to Cape Colony in November, 1895, new arrangements were made for the government of the protectorate. The chiefs Khama, Sebele, and Bathoen rule their respective tribes under the supervision of a resident commissioner. The chiefs receive the hut tax. Outside of the boundaries fixed for them the administration was committed to the British South Africa Company. The natives are peaceable and industrious, devoting themselves to agriculture and the rearing of cattle. The Resident Commissioner is F. J. Newton.

Native Rebellion.—The natives of the British Bechuanaland reserve, reduced to a deplorable condition by locust plagues, rinderpest, and other disasters, persuaded themselves, or were persuaded, as they afterward said, by a Boer intriguer named Bosman, who was, however, fully exculpated by his Government after an investigation, that the Cape Government intended to take their lands, which the annexation act of 1895 declared should not be alienated or in any way diverted from the purposes for which they were set apart. The forcible killing of their cattle, as a precaution against the spread of the rinderpest, they were led to believe was nothing but a device for wiping out the people. The relaxation of the liquor regulations and other actions tolerated by the Cape Government strengthened their suspicion that they were to be got rid of in order to hand over their lands to white settlers. Rendered desperate by distress and this belief in their impending doom, they began to plunder the outlying farms, and committed several murders, and soon the tribes concerned in these outrages found themselves in open rebellion against the Government. This movement spread till it involved about one seventh of the Bechuana nation. First, in December, 1896, the chief Galishwe, in the Taungs reserve of British Bechuanaland, revolted. His tribe numbered 2,000 fighting men, and against them were sent 165 Cape police, 384 mounted riflemen from Kimberley, and 400 Cape volunteers, while the burghers of the disturbed district defended themselves. Lukas Jantje's followers joined the rebels, who murdered several settlers and storekeepers. Molalla, who disputed the supremacy with Galishwe, offered his aid to the Government, while Tooti and the rest of the Batlaros tribe joined the rebellion and committed outrages southwest of Vryburg. These natives, who had never been troublesome before, were quickly defeated by a strong force of burghers and volunteers. The natives of East Griqualand also became restless, and the farmers throughout these regions placed their families in security and went into *laager*. A field force was organized at the Cape, but volunteers were not summoned from the eastern districts, for there also there was danger of native disaffection. Meanwhile Galishwe's following increased largely. The colonial force, numbering 1,067 men, advanced on his position in Langeberg, toward the end of March,

in three columns. Lukas Jantje's village of Gamasiep, at the foot of the mountains, was burned by Col. Dalgety's column, and the kraals of the whole district were destroyed and the natives driven into the mountains in order to starve the rebels into surrender. The rebel chief Toto's stronghold was captured on May 10. The rebels in the mountains were short of food, but they still held out. Galishwe's position was once surrounded, but he slipped out with his followers and escaped northward. In June a larger expedition was organized for the purpose of a simultaneous advance on the five *kloofs* in Langeberg held by Galishwe, Toto, and Lukas Jantje. The re-enforcements consisted of 600 Cape volunteers, 400 of the Cape mounted rifles, and 400 natives. The burgher force of 500 men, operating with the troops already in the field, was disbanded as being unfit for this kind of warfare, some of them having fired on friendly natives. Active operations were not begun till late in July. The field force attacked Langeberg at all five points, the principal attack being on Galishwe's town. Gamasiep and Gamaluce were taken. Lukas Jantje was killed, and Dokwe, his successor, surrendered. The commander of a corps from Cape Town was afterward punished for having the head of the chief Lucas Jantje cut off for the purpose of presenting the skull to a museum. Galishwe was wounded, but escaped. Twaai's *kloof*, to which the rebels retreated in confusion, was stormed on Aug. 1. Toto surrendered unconditionally. The mountain column, 1,000 strong, marched upon Pudu-husche, the last stronghold in Langeberg, and found it deserted. Galishwe was captured after several weeks and placed on trial at Kimberley.

Sir Gordon Sprigg brought in a bill to confiscate the land of the rebellious Bechnanas and devote it to European occupation, collecting the natives into three locations small enough to enable the Government to keep them under supervision. The bill was passed on June 10. The area taken from the natives was 483,000 acres, about one sixth of the Bechuanaland reserves, with a population of about 8,000 out of the total native population of 57,000. After the rebellion was crushed by the storming of Langeberg, the Government made provision for the Bechnanas, who were likely to starve in their own country, having lost everything in consequence of the rinderpest and the failure of the crops. It was decided to place them as indentured laborers with Cape farmers to work for stipulated wages. Government agents were to visit the farms to see that the men were treated humanely. The rebels had in many instances surrendered on condition that they be allowed to return to their homes. The Government of Cape Colony, however, resolved that there should be no more wars in Bechuanaland, decided to deport the population of the disturbed district. Several thousands were carried off to the south and distributed among the farmers on five years' contracts with wages at the rate of 10s. a month for able-bodied men. Philanthropic societies in England protested against this form of veiled slavery as a violation of the emancipation act of 1834.

German Southwest Africa.—The German protectorate, extending 930 miles along the coast and inland to 20° of east longitude in the south and 21° north of 22° of south latitude, with a strip running along the Chobe river down to the Zambesi north of 18° of latitude, has an estimated area of 320,000 square miles and a population of 200,000 Hottentots, Bushmen, Damaras, and Kaffirs. The white population in 1896 was 2,025. The Imperial Commissioner is Major Leutwein. The revenue for 1895, including an imperial contribution of 1,000,000 marks, was 1,027,740 marks. The expenditure

was 2,457,580 marks. The budget for 1898 makes the revenue 3,015,000, and the expenditure 3,565,000 marks. The imports by sea in 1894 were valued at 944,695 marks; exports, 106,833 marks. The trade overland is much greater. A harbor is being built at Swakop river, north of the English port of Walfisch Bay, which is now the only practicable harbor. Copper and gold have been found, but they have not yet been worked with profit. The natives raise large herds of cattle in Damaraland. Sheep and native goats are bred also.

The native risings in Bechuanaland and other British territories stirred the warlike spirit of the Hottentots of Damaraland. On July 5 a band of 200 in a well-fortified *kloof* repelled a German force near the British border. Early in August the Germans attacked the position with artillery and dispersed the rebels. Their leader, Keviedo Afrikaner, fled into British territory, where he was arrested in September. The Government, by means of disciplinary and other measures, endeavored to prevent the entrance of the rinderpest, but in 1897 it swept through German Southwest Africa with disastrous effect. The dearth of cattle determined the Government to build light railroads on which the cars will be drawn by mules, hundreds of which were imported for the purpose from the Argentine Republic. A harbor is to be constructed at the mouth of the Swakop river that will render the Germans independent of Walfisch Bay, and from the new port to Windhoek, the capital, a line of railroad will be built.

Natal.—The Constitution of 1893 vests the legislative power in a Legislative Council of 11 members appointed for ten years, half being replaced every five years, and a Legislative Assembly of 37 members, elected for four years by voters qualified by possessing real property of the value of £50, or paying £10 rent, or having an income of £96. The number of electors in 1896 was 9,483. The assent of the Governor, revocable within two years, is required before any bill can become law. The Governor is Sir Walter Francis Hely-Hutchinson, appointed in 1893. The ministers at the beginning of 1897 were: Premier and Colonial Secretary and Minister of Education, Sir John Robinson; Attorney-General, Harry Escombe; Treasurer, G. M. Sutton; Minister of Native Affairs, F. R. Moor; Minister of Lands and Works, T. K. Murray.

Area and Population.—The area of Natal is estimated at 20,461 square miles. The population in 1891 was 543,913, consisting of 46,788 Europeans, 41,142 Indians, and 455,983 Kaffirs. Durban, the capital, had a population of 27,984 in 1894. The attendance in the aided and inspected schools for whites in 1896 was 7,840, and about 2,000 children attend private schools. About 96 per cent. of the white children receive instruction. The Government expenditure on education in 1896 was £41,000. The native schools have an attendance of 6,790 and receive £5,200 from the Government, which granted £1,825 to Indian schools with a daily attendance of 2,919 scholars.

Finances.—The revenue of the colony from ordinary sources in the year ending June 30, 1895, was £1,169,780, of which £536,409 came from railroads, £189,926 from customs, £20,349 from excise, £45,320 from land sales, £54,729 from the post office, £15,767 from telegraphs, £23,997 from stamps and licenses, and £84,868 from the native-hut tax. The total expenditure was £1,148,093, of which £303,176 represent railroad expenses, £64,796 public works, and £116,234 defense. The expenditure from loans was £147,487. The public debt on June 30, 1895, was £8,054,343. There is a body of 259 European mounted police, the cost of which and of the jails of the colony was £78,830

for the year, besides which the Government contributed £34,525 to the expenses of the volunteers, who number 1,531 men.

Commerce and Production.—There were 203,293 acres cultivated by Europeans in 1895. The leading crop for export is sugar, of which 20,401 tons were exported. Of tea 737,000 pounds were gathered from 2,297 acres. Corn, wheat, oats, and green crops are grown. The natives had 376,780 acres under cultivation. Europeans owned 27,758 horses, 229,512 cattle, 950,187 sheep, and 60,582 Angora goats, and natives 30,871 horses, 508,938 cattle, 19,282 sheep, and 285,517 goats. The coal output in 1895 was 160,115 tons. The total value of imports in 1895 was £2,469,303. The principal articles are haberdashery and apparel, iron manufactures, leather goods, flour and grain, cottons, woollens, machinery, and beverages. The value of the exports was £1,318,502. Gold, wool, and other products of the Dutch republics make the bulk of the exports. The export of wool was £452,412; of gold bars, £203,623; of coal, £72,315; of sugar, £56,961; of hides and skins, £46,270; of Angora hair, £28,610; of bark, £21,345.

Navigation.—During 1895 there were 540 vessels, of 788,495 tons, entered, and 536, of 781,571 tons cleared. The shipping of the colony consisted of 13 sailing vessels, of 674 tons, and 12 steam vessels, of 820 tons.

Railroads.—The railroads, which belong solely to the Government, have a length of 402 miles. There is a line from Durban to the border of the South African Republic, 307 miles, connecting with a railroad that runs through to Johannesburg and Pretoria, the total distance from the port of Durban to Pretoria being 511 miles. Branches have been built to Verulam, Isipingo, and Harrismith, in the Orange Free State. The capital expenditure up to the end of 1895 was £6,117,211; gross receipts for 1895, £526,494; expenses, £278,756, leaving a net revenue equal to 4.05 per cent. on the capital.

Cabinet Changes.—On Feb. 13 Sir John Robinson resigned the premiership on the ground of ill health. Harry Escombe, the Attorney-General, reorganized the ministry. In September the Government, in compliance with a request of the South African Republic, granted rebates amounting to the whole customs duty on numerous articles of the transit trade. The general elections took place near the end of that month, and the ministry sustained an unexpected defeat. Mr. Escombe and his colleagues resigned, and on Oct. 5 Mr. Binns formed a new ministry, in which he took the post of Colonial Secretary, with the premiership, Mr. Bale became Attorney-General and Minister of Education, Mr. Hime Minister of Public Works, Mr. Hulett Minister for Native Affairs, and Mr. Arbuckle Treasurer.

Indian Immigration.—The people of Natal were greatly excited at the beginning of the year by the arrival of two ship-loads of East Indians. The importation of coolies to work on the plantations on time contracts has long been permitted, but the settlement in the country of Indians whose contracts have expired or the immigration of free Indians has always been unpopular, and various restrictions and regulations, based ostensibly on sanitary or other legal grounds, have been adopted to deter Indians from remaining in Natal. An Indian is liable to be arrested at any time unless he can produce a pass to show that he is a free Indian and not an indentured laborer. An indentured Indian on becoming free pays a poll tax of £3 a year as long as he continues to live in the colony. Although British subjects, they are denied the electoral franchise under a law withholding it from natives of all countries not endowed with parliamentary institutions. The Government high schools

are closed to Indian students. To prevent the landing of the Indians from the ships the inhabitants of Durban organized themselves to obey leaders and to assemble at the wharves prepared to resist their landing by force. They demanded that the Government send them back to India at its own expense, and that a law be made forbidding the further immigration of free Indians. The ships were held in quarantine, and meanwhile a bill was passed conferring powers on the Government to impose quarantine indefinitely on ships with Indians on board. Another bill established new licensing restrictions upon traders on the pretense of preventing unsanitary conditions. A law to exclude undesirable immigrants was not directed exclusively against Indians.

Zululand.—The territory that was formally annexed by Great Britain in May, 1887, extending north of the Tugela river, the boundary of Natal, to the border of Tongoland and to the South African Republic on the northwest, has an area of about 12,500 square miles and a population estimated in 1895 at 1,246 whites and 165,121 natives. The Resident Commissioner, Sir Marshal Clarke, administers the country under the direction of the Governor of Natal, who is also Governor of Zululand. The police force is composed of 250 natives. The Zulus, who raise cattle and till the soil, pay a hut tax of 14s. Gold, silver, lead, copper, tin, iron, asbestos, and coal are found. Companies organized for gold mining have not yet met with success. There are 87 miles of telegraph. The revenue in 1895 was £51,746, and the expenditure £66,172.

Orange Free State.—The Constitution proclaimed on April 10, 1854, and amended on Feb. 9, 1866, and May 8, 1879, vests the legislative power in the Volksraad, consisting of 58 members, elected for four years, half of them retiring every two years, by the votes of the burghers possessing real property worth £500, or paying £36 a year for leased property, or having an income of £200, or owning £300 worth of personal property. The executive power is vested in a President elected for five years. The President is T. Steyn, elected Feb. 21, 1896.

The area of the republic is estimated at 48,326 square miles. There was in 1890 a white population of 77,716, consisting of 40,571 males and 37,145 females. The natives numbered 129,787, of whom 67,791 were males and 61,996 females, making the total population 207,503. Education is controlled by the Government, but is not compulsory, nor is it free, except for the poor. There were 162 Government schools in 1895, with 220 teachers and 4,867 pupils.

The revenue for ten months ending Dec. 31, 1895, was £259,589, and the expenditure £271,935. Of the receipts, £93,190 were import duties, £41,618 stamp duties, £28,576 transfer duties, £26,347 post-office and telegraph receipts, £10,425 quit rents, and £7,810 the native poll tax. Of the disbursements, £40,169 were for salaries, £40,000 for public works, £36,755 for education, £23,905 for posts and telegraphs, £10,043 for police, and £3,900 for the artillery.

Every able-bodied man in the country between sixteen and sixty years of age can be called into military service by the field cornet of his district in case of war. The number of burghers fit for service in 1896 was 17,381. There is an artillery corps, which was doubled in 1896, when a new fort was built for the protection of the capital, Bloemfontein. The present strength is 102 men, besides a reserve of 350 men who have served their term.

The land is divided into about 6,000 farms, having a total area of 24,675,800 acres, of which 250,600 acres are cultivated. Most of the land is only

adapted for grazing. There were 248,878 horses, 276,073 draught oxen, 619,026 other cattle, 6,619,992 sheep, 858,155 goats, and 1,461 ostriches in the country in 1890. There are good coal mines, and gold is found. The diamonds of the Orange Free State are usually of fine quality; the product in 1894 was 282,598 carats, valued at £428,039.

Foreign commerce passes through the Cape and Natal ports. The imports for 1895 were estimated at £926,567, of which £676,716 came from Cape Colony, £168,966 from Natal and the South African Republic, and £80,885 from Basutoland. The estimated value of the exports was £1,515,845, of which £519,987 went to Cape Colony and £931,860 to the South African Republic. Wool is the chief export, and hides, diamonds, and ostrich feathers come next in order. The railroad from Norval's Point, on the Orange river, to Bloemfontein, 121 miles, and the continuation to Viljoen's Drift, on the Vaal river, 209 miles, were built by the Cape Government, and have been transferred to the Government of the Republic. Bloemfontein is connected with the telegraph systems of Natal, the South African Republic, and Cape Colony by 1,500 miles of telegraph lines.

Politics and Legislation.—The railroad built through the Orange Free State by the Cape railroad administration, connecting the colonial lines with those of the South African Republic, became the property of the Free State Government for the price of £850,000, and passed into its possession on Jan. 1, 1897. An aliens bill revoking the franchise exercised by resident foreigners was discussed in May. The members of the Raad were equally divided on the question, though the bill involved an amendment of the Constitution, which conferred on aliens the full franchise denied to Uitlanders in the Transvaal. Another bill was passed in June granting the franchise to Uitlanders only after three years' residence, but not requiring them to forswear allegiance to their native country. To make this a law three fourths of the Volksraad must ratify it in the succeeding year. A treaty of amity and friendship with Germany was ratified. A commission was appointed to revise the Constitution and submit the proposed amendments at the next session of the Volksraad. The Raad agreed to the principles of closer union with the Transvaal, and afterward ratified the political treaty negotiated by the two Presidents. The customs union with Cape Colony was ratified on June 20.

South African Republic.—The legislative authority is vested in two houses, each consisting of 24 members elected in as many districts. The members of the First Volksraad are elected by the first-class burghers, comprising white male citizens who resided in the country prior to May 29, 1876, or who took part in the war of independence in 1881 or the Malaboeh war of 1894, and their sons from the age of sixteen. The Second Volksraad is elected by the second-class burghers, comprising naturalized aliens and their sons from the age of sixteen. A white alien can become naturalized after residing two years in the country by registering his name, taking the oath of allegiance, and paying a fee of £2. Naturalized citizens of twelve years' standing may be made first-class burghers by special resolution of the First Volksraad. Sons of aliens registered at the age of sixteen may become naturalized at the age of eighteen and acquire the rights of first-class burghers at the age of forty. Aliens entering the Republic since Jan. 1, 1897, must be provided with means of identification and prove that they can support themselves, and must further have traveling passports good for three months, or for one year if they intend to remain. The executive power is vested in a President, elected for five

years by the votes of the first-class burghers. He is assisted by an Executive Council, consisting of 4 official members and 2 nonofficial members, elected by the First Volksraad. The State President is S. J. P. Krüger, elected for his third term on May 12, 1896. The Vice-President is Gen. P. J. Joubert. The Executive Council in the beginning of 1897 was composed as follows: Commandant General, Gen. P. J. Joubert; State Secretary, Dr. W. J. Leyds; Superintendent of Natives, Commander P. Cronje; Minute Keeper, J. H. M. Kock; unofficial members, M. A. Wolmarans and S. W. Burger.

The revenue for six months in 1896 was £2,076,030, more than double that of the full year 1891. The increase is due to the receipts for licenses, royalties, etc., from the gold fields. The expenditure for the six months was £1,490,068, leaving a balance of £1,510,945 in the treasury on June 30, 1896. Besides the revenue from the gold mines, the income of the Government is derived from land sales and quit rents, customs duties, a native-hut tax, transport dues, and stamps. The revenue from the gold mines in 1895 amounted to £1,848,571 out of a total of £3,539,955. In the estimates for the full year 1896 the revenue was taken at £3,862,193 and the expenditures at £4,216,657. In the latter sum are included the extraordinary expenditure of £300,000 for preventing the spread of the rinderpest, £730,000 for public works, £943,510 for the purchase of war material, and £585,350 for other purposes. The public debt amounted in September, 1896, to £2,690,579, consisting principally of a loan of £2,500,000 contracted with the banking house of Rothschild and a debt of £156,662 due to the British Government on account of the British occupation in 1870-80. The only permanent military force is the horse artillery, numbering 32 officers and 368 men. There is a force of 1,170 volunteers. In case of war every able-bodied citizen is called to arms.

The area of the South African Republic is 119,139 square miles. The census of 1890, which made the white population 119,128, divided into 66,498 males and 52,630 females, was very incomplete. In 1896 the white population was estimated at 180,000 and the native population at 609,879. Pretoria, the capital, has about 8,000 inhabitants. Johannesburg, the center of the mining district of Witwatersrand, had a population on July 15, 1896, of 102,714, of whom 51,225 were whites, 7,093 of mixed race, and 44,396 natives. The Government schools, in which Dutch is the language of instruction, had 7,679 pupils in 1895, in which year the Government expended £63,778 on education. In Johannesburg and other places the alien residents maintain separate English schools.

The soil is well adapted for agriculture as well as grazing, but the latter has been heretofore the chief industry, while grain and other produce has to be imported. There are 12,245 farms, of which number the Government owns 3,636, resident owners and companies 6,997, and alien owners and companies 1,612. The principal exports are gold, wool, cattle, hides, grain, ostrich feathers, ivory, brandy, and minerals. The dutiable imports in 1895 were valued at £9,816,304, of which £6,440,215 came from European countries and £3,536,677 from the neighboring countries and others. The duties collected were £1,085,419. The incorporated mining companies in 1895 numbered 170, with a total nominal capital of £43,544,983 and a working capital of £12,037,225. The output of the gold mines, situated principally at Witwatersrand and Barberton, was £8,569,555 in 1895, against £7,667,152 in 1894, £5,636,122 in 1893, £4,638,879 in 1892, and £2,917,702 in 1891. In six months of 1896 the product was £4,067,976.

Coal is mined in the Witwatersrand district and in the eastern part of the Transvaal. In 38 mines, employing 286 whites and 3,702 natives, 1,152,206 tons were produced in 1895, valued at £516,215. Silver, copper, and lead have been found, but mining is not now carried on. Tin is obtained from alluvial deposits in Swaziland, the product having increased from 30 tons in 1893 to 246 tons in 1895.

There were 424 miles of railroad in operation, 384 miles in process of construction, and 381 miles projected in September, 1895. The railroad traversing the Orange Free State and connecting with the railroads of Cape Colony has been continued by the Cape Government, by agreement with the South African Republic, through Germiston to Pretoria, 78 miles from where it crosses the Vaal river and 1,040 miles from Cape Town. The railroad from Natal has been built through to Johannesburg and Pretoria. The Delagoa Bay Railroad, which has been continued for 295 miles from the Portuguese boundary to Pretoria, has been in operation since Jan. 1, 1895. Of the Selatje line of 191 miles, 54 miles have been completed.

There are 1,952 miles of telegraphs in the republic.

Constitutional Conflict.—A constitutional conflict arose out of the decision of the High Court in the case of *Brown vs. Dr. Leyds*, delivered on Jan. 22, 1897. The plaintiff, an American prospector, had staked out gold claims within what had been proclaimed as public diggings, but when he applied for the licenses, he was informed that the proclamation had been withdrawn, and this was subsequently confirmed by a resolution of the Volksraad. One of the judges held that the resolution had no *ex post facto* effect, and did not extinguish Brown's rights acquired under the proclamation before it was revoked. Chief-Justice Kotze and Justice Ameshoff found for the plaintiff on constitutional grounds. The Government attorney contended that the second proclamation, after it had been confirmed by a resolution of the Volksraad, could not be brought into question, and quoted a statute of 1890, according to which the legal validity of any law or resolution duly promulgated can not be questioned in a court of law. The Chief Justice laid down the proposition that a mere resolution of the Volksraad can not alter a law that has been properly passed, and the further doctrine that neither a law nor a resolution has binding force in so far as it is contrary to the *Grundwet*, or Constitution of the Transvaal. This doctrine, derived from the principles of the Roman Dutch law and the analogy of the United States Constitution, was new in the Transvaal, directly contradicting a previous opinion given by the Chief Justice in a similar case in 1884, and it was regarded by President Krüger and by Dr. Leyds, his State Secretary, and Dr. Coster, the Attorney-General, as an encroachment on the powers of the Volksraad, which had itself enacted the *Grundwet* in the same manner as all other laws. They drafted a bill setting forth that the Volksraad is the supreme power in the state, that its resolutions have the force of law, that it has power to alter the *Grundwet*, that courts of justice are bound to respect and enforce whatever it has enacted or may enact, that the power of the courts to test laws or resolutions by the *Grundwet* has not existed and does not exist, and therefore enacting that existing and future laws and resolutions shall be acknowledged by courts of justice, which shall have no right to refuse to apply any law or resolution of the Volksraad on the ground that either in form or substance it is contrary to the *Grundwet*; further, prescribing a form of oath for all future judges, by which they shall declare that they will not arrogate to themselves the testing power; providing that a

judge who does so is guilty of malfeasance in office; and empowering the State President to ask the present judges whether they deem it in accordance with their oath and duty to dispense justice according to the existing and future laws and resolutions of the Volksraad, and not to arrogate to themselves the testing power, and furthermore empowering him to dismiss those judges from whom he receives a negative or unsatisfactory answer or no answer at all. The judges addressed a letter to the President in which they collectively declared that the proposed measure was a violation of the independence of the High Court, and urging him to postpone action until the ordinary May session of the Volksraad. In spite of their remonstrance the President pressed the Volksraad to pass the bill immediately, arguing that Cecil Rhodes and other enemies of the Republic had been kept at bay for years only by Volksraad resolutions, and that if the supremacy of the Volksraad were undermined the convention with England might be broken and then war would ensue. The bill was passed on Feb. 25, and the President put the prescribed interrogatories to the justices, demanding an answer by March 17. Sir Henry de Villiers, Chief Justice of Cape Colony, went to Pretoria and arranged a compromise by which the judges undertook for the present not to test the constitutionality of laws and resolutions of the Volksraad by the provisions of the *Grundwet* on the promise of the President that he would introduce without delay a measure providing that the *Grundwet* can only be altered by special legislation in a special manner, similar to the provisions of the Orange Free State Constitution, and that guarantees for the independence of the judiciary should be inserted in the *Grundwet*. The President requested the Volksraad to appoint a committee to act in conjunction with the Government in drafting proposals for a revision of the *Grundwet* and a codification of all existing laws, but the judges would not accept this as a fulfillment of his promise, which was to draft one himself, with their assistance and as speedily as practicable. In deference to their remonstrance the President agreed that the revision of the *Grundwet* should precede codification, which would be a task of two or three years. The committee of the Volksraad invited the judges to appoint some of their number to advise with other experts as to the procedure of revision. Chief-Justice Kotze and one of his colleagues declined the invitation, on the ground that the experts whom they were asked to confer with were the authors of the bill attacking the independence of the judiciary. Judges Morice, Gregorowski, and Esser were willing to give every assistance to the commission.

The Uitlanders.—It is estimated that the deposits of gold already discovered in the Transvaal contain £700,000,000 of the metal, and still more mines are located every month in the Lydenburg, Zoutpansberg, and Barberton districts. Coal and iron exist in inexhaustible quantities. The coal may not compete with the Welsh for use on ocean steamers, except perhaps on freight steamers in the Indian Ocean, but it is good enough for railroads and iron foundries. The healthy climate and productive soil of the Transvaal are sufficient, with its extraordinary mineral resources, which include also silver, lead, copper, and other baser minerals, to attract a large immigration, to which gold mining has given only the first impetus, and make it in time the most populous state in South Africa. Its gold production has been of late years the chief support of Cape Colony and Natal as well as of its own inhabitants. The grievances of the Uitlanders on the Rand are often at direct variance with the interests and sentiments of the governments and people of the British colonies. For instance, to enable the

low-grade mines to pay dividends the Uitlanders would diminish freight rates on the railroads and abolish all import duties on necessities of life, and in these demands they are likely to have the support of the Transvaal Government. The agriculturists of Cape Colony and Natal, on the other hand, induced their governments, in June, 1897, to raise the railroad rate on imported grain 50 per cent. The Cape Colonists complain that under the pass law respectable colored people from their colony are required to wear badges and to be in their houses by nine o'clock at night, but the Uitlanders desire to apply the pass law more stringently. In August the Volksraad modified the pass laws by exempting ministers, teachers, and tradesmen from wearing badges, but requiring them to carry passes costing £3 a year. The Dutch Afrianders of the republics as well as of the British colonies find fault with the Transvaal Government for importing from Holland men to fill Government posts and to teach in the Government schools. Yet it would be impossible to find in South Africa many persons trained to official life and capable of carrying on correspondence in English, German, and French, as well as Dutch, or teachers who can teach all those languages, as the new school law for the Witwatersrand requires. Since the Government of the Republic has agreed to grant subventions to the English schools on the Rand, the great educational grievance of the Uitlanders has dwindled to small proportions. The Government paid out £46,893 for education in 1896, and school fees and voluntary contributions amounted to £18,413, making the cost of educating an average number of 7,738 children in 395 schools £65,305, very nearly £9 per pupil. Of the total number in average attendance 93 per cent. were in the elementary grades, leaving only 7 per cent. in the intermediate schools. Only 20 per cent. received instruction in English, showing the preponderant position of Dutch as the language of the country and of the courts of law. In pursuance of a law passed in the latter part of 1896 for the education of children of poor parents and foreigners in the gold fields, the Government offered to grant £30,000 for this purpose in 1897 in the way recommended by the Superintendent of Education after consultation with a committee representing the English, French, German, American, and Dutch nationalities, on condition that Dutch-speaking children receive their education in the national language, and that the whole scheme conform to the educational laws and resolutions of the Volksraad. It is proposed to teach English-speaking and other foreign children in their own language only in the primary grades. In the middle education Dutch will continue to be the medium of instruction. The total sum appropriated for education in 1897 was £150,000, giving four times as much to Boer children as to Uitlanders. The actual proportions of the British and Afriander nationalities are variously estimated. The French consul, M. Aubert, estimated the population of Johannesburg itself in 1897 at 136,000 persons, of whom 50,907 were whites. The number of actual Europeans, apart from immigrants from British South African colonies and the Orange Free State, was ascertained to be 24,489, of whom 16,265 were English, Scotch, and Irish, 3,335 Russians, 2,263 Germans, 819 Dutch, 442 French, 311 Swedes and Norwegians, 206 Italians, 139 Swiss, and 709 from other countries.

In the autumn of 1897 the Government decided to promulgate a law passed in 1896, establishing a municipality in Johannesburg, which had hitherto been held back at the request of the Uitlanders themselves, who were not satisfied with the act. Half the members of the municipal council are to

be burghers, and the burgomaster, who has the casting vote, is appointed and paid by the Government and has power to suspend the operation of any resolution deemed to be in conflict with the law of the land, the final decision resting with the Government, not with the High Court. The council has power to make regulations for safety, public order, morality, and health, to issue loans, and to enter into contracts for public works, subject to the sanction of the Government. A bill to prohibit the working of stamp mills and mines on Sunday failed to pass the Volksraad, to the disappointment of the Doppers, who charged members with receiving bribes to vote against the measure. Notwithstanding the decrease of revenue and the necessity of borrowing £600,000 to meet the year's expenses, the Volksraad increased the salaries of its members to £1,200 a year. The Uitlanders and others raised a protest against the granting of the full burgher franchise to 800 Johannesburgers who took up arms for the Republic at the time of the Jameson raid. The Volksraad adopted a motion for the alteration of the qualification of members, with a view to exclude undesirable and disloyal persons. A law introducing voting by ballot will come into force in 1898. The Volksraad resolved that no state official shall be a candidate for the presidency without first resigning office.

The commercial and financial crisis in Johannesburg, that was aggravated by the Uitlander revolution at the beginning of 1896, was rendered more formidable in 1897 by a heavy decline of mining shares in the market, and extended throughout the Transvaal, owing to the ravages of the rinderpest and scarcity in the northern districts. The primary cause was overtrading and overstocking, such as had preceded a similar crisis in 1890. The excessive competition of importers, encouraged by the unrestrained granting of credit, resulted in a commercial collapse, which involved the banks and mercantile houses of Cape Colony and Natal and reacted on the banking and mining concerns in London, depressing still more the speculative value of mining stocks. The check given to importations and mining activity affected the finances of the Transvaal Government, causing its surplus to disappear, and even necessitating recourse to temporary loans, for expenditures went on increasing and votes for the relief of burghers impoverished by the rinderpest constituted an additional drain on the treasury. There were 4,803,000 tons of ore extracted in 1896, yielding on an average a little less than half an ounce of pure gold per ton. Though this yield was slightly inferior to that of former years, it is not found that the ore of the deeper levels, except in some localities, is poorer than the surface outcroppings. The machinery represents 138,000 horse power and was valued at £5,330,000, an increase of 21·6 per cent. over 1895. All the Transvaal mines, gold and coal, represented at the end of 1896 a nominal capital of £67,333,000, of which only 37 per cent. had been actually invested in the purchase of the mines and plant.

An industrial commission was appointed to report to the Volksraad on the measures of relief required from the Government. This commission, which began its investigations on April 15 and made its report on Aug. 6, sifted out the practical grievances of the Uitlanders that affected the gold-mining industry. There were 183 gold mines in the Transvaal in 1896, of which 79 produced gold of the total value of £8,603,821, while 104 yielded no gold, most of them being in a state of development and equipment, and only 25 companies declared dividends, the total amount being £1,718,781. The high cost of production prevented many of the

mines from paying dividends and caused some to cease operations. The commission found that whatever had been the mistakes in the past, most of the mines were controlled and engineered by financial and practical men, who devoted their time, energy, and knowledge to the interest of the mining industry, and who had introduced the latest machinery and mining appliances and the most perfect methods and processes known to science. If the Government neglected to lighten the burdens of the mining industry and refused to co-operate in devising means to work lower-grade mines at a profit, there was danger that 100 mines, which had cost from £200,000 to £500,000 to equip and develop and averaged £10,000 a month in working expenses, would have to close down, taking the annual amount of £12,000,000 out of circulation. The encouragement of agriculture would have a beneficial effect on the industry by reducing the cost of living, but the granting of concessions hampered the industrial prosperity of the colony. The question of labor was a vital one for the mines, for the cost of labor is from 50 to 60 per cent. of the total cost of production. Miners earn from £18 to £30 a month, according to ability, and these wages are not excessive, considering the cost of living at the mines. In fact, they are only sufficient to cover daily wants, and consequently it can not be expected that white laborers will establish their permanent abode in the Republic unless their position is ameliorated. The commission recommended that labor contracts signed in Europe be recognized as legal in the Transvaal, and that the cost of living be reduced for the white miners by removing all import duties from necessities of life and transporting these to the mines at the cheapest possible rates. In respect to Kaffir labor, the industry must draw its chief supply from the Portuguese territory on the east coast, and the commission suggested that fares to the mines on the Kaffrersper Railroad be reduced by two thirds, the difference to be recovered from the laborers on the return journey, and that premiums be paid to Kaffir chiefs for the supply of laborers. The present requirement of the Witwatersrand mines is 70,000 black laborers, and within three years 100,000 will be needed on account of the development of deep-level mines. It is recommended that the native commissioners receive extra pay for the purpose of visiting Kaffir chiefs in the Transvaal to obtain laborers for them, and that laborers so obtained be conducted to the mines under supervision and lodged in compounds on the way. The Minister of Mines has recommended a law compelling all idle natives to work. The illicit sale of liquor to the natives at the mines constitutes a real grievance, and a much stronger application of the liquor law of 1896 is required. It is also desirable that the number of licenses be gradually reduced. Transit duties are unfair and ought to be abolished. Yearly the Republic pays £600,000 to the neighboring British colonies. It is recommended that the Government negotiate to have these duties abolished, previously removing its own duties on goods destined for the north. All import duties on food stuffs should be removed, as it is impossible to supply the population of the Republic from the products of local agriculture. The price paid at the mines for explosives of all kinds is twice as high as it might be, and the excess charge of 40s. to 45s. per case goes to enrich individuals for the most part resident in Europe. The commission recommends that the monopoly be canceled, if it can be done legally, and that in the mean time the Government avail itself of its reserved right to take into its own hands the importation of dynamite and other explosives and supply them to the mines sub-

ject to a duty of not more than 20s. per case; also that the manufacture of explosives in the Republic be allowed and protected by the same import duty, and that the importation of detonators be free.

On the matter of railroads, taking the gross revenue from traffic at about £2,000,000, as in 1896, the commission advised the Government to secure such a lowering of rates as will reduce the railroad earnings by £500,000, or 25 per cent., and not to proceed to the expropriation of the Netherlands company if such reduction can be obtained on its line. The reduction ought to be largest on the coal traffic, and the facilities for the delivery of coal and goods in general should be greatly improved on the Netherlands line. The greatest facilities should, moreover, be given to the transport of all agricultural produce at the lowest prices, and by night trains if required, to the principal markets of the Republic.

To check thefts of gold and amalgam, which are found to be on the increase, the commission recommended a stringent law on the model of the illicit diamond law of Kimberley. The pass law might be improved, but what is really required is that it should be applied more stringently, and it is suggested that its execution be placed under the control of a local board on the gold fields and the administration transferred from the Ministry of Mines to the Superintendent of Natives. The commission recommended the appointment of a board or commission in Johannesburg, consisting of 5 members nominated by the Government and 4 deputed by the mine associations and merchants of the city.

The people representing the mining interests of the Rand signed a petition urging expropriation of the Netherlands Railroad, abolition of the dynamite monopoly, vigorous administration of the liquor law, protection against gold thefts by a special detective force, better enforcement of the pass law and facilities for dealing with natives obtaining badges and arresting deserters, native locations for the procurement of a regular supply of labor, and a reduction of customs duties in order to cheapen the general cost of living. The Volksraad declined to receive this petition, as it has a rule forbidding the acceptance of memorials comprising more than one subject. It has been computed that under favorable laws the mining industry might save 40 per cent. in explosive gelatin and dynamite, 31 per cent. in coal, 15 per cent. in transport, 50 per cent. in native labor, and 37½ per cent. in white labor, representing a total annual loss of £1,600,000. The wages of white labor, including all employees from the manager down to the gangers in charge of the native boys, form on the average 30 per cent. of the total cost of production; native labor, 28 per cent.; explosives, 10 per cent.; coal, 8 per cent.; stores, 19 per cent.; general charges, 5 per cent. There are about 8,000 employes in the mines, receiving about £24 per month, while the black laborers, who outnumber the whites eight or ten to one, cost £4 a month each, including pay and food. Dynamite, which an American firm offered to deliver for 42s. 7d. per case of 50 pounds, costs from £5 to £5 15s. Coal costs 8s. per ton at the pit's mouth, and 20s. 8d. in the gold fields, about 30 miles distant. The Netherlands Railroad, with a capital of £1,165,000, earned £1,330,000 in 1896 over and above working expenses and the guaranteed interest on its loans. Of the profits the state received £514,000 as its share. The state can expropriate the railroad after a year's notice, and the company bargained for an extension of the concession for ten years as the price of a reduction in tariffs. In September the Natal Government removed most of the transit duties, practically rendering Durban a free port.

The South African Inquiry.—The parliamentary investigation of the Jameson raid promised by Mr. Chamberlain was put off for a year, and finally, at the beginning of the session of 1897, he moved for the appointment of a select committee to inquire into the origin and circumstances of the incursion into the South African Republic by an armed force, and into the administration of the British South Africa Company, and to report thereon, and further to report what alterations were desirable in the government of the territories under the control of the company. Before the inquiry began Cecil Rhodes returned to South Africa, and there received ovations from the South African League and other partisans of imperialism, while a large part of the Afrikaner population showed disapprobation by counter-demonstrations. Mr. Rhodes confessed that he had furnished money and arms for the rising in Johannesburg, and stationed the forces of the South Africa Company on the border for the purpose of invading the South African Republic and aiding in bringing about a revolution. Telegrams that were published showed that the design was to raise the British flag. He pleaded in justification that the Boer Government intended to introduce foreign, specifically German, influence into South Africa. The English directors of the company were not cognizant of the plot, nor was it shown that Mr. Chamberlain or Lord Rosmead was aware of it, though Dr. Rutherford Harris, the secretary of Mr. Rhodes, testified that in an interview with Mr. Chamberlain he spoke guardedly of an expected revolution in Johannesburg and of the desirability of there being a force on the border, but that Mr. Chamberlain demurred to the turn that the conversation had taken. Mr. Chamberlain hastened to give his version of the conversation, which was that Dr. Harris had offered to make a confidential communication relative to proceedings in Johannesburg, but that he had at once stopped him and refused to receive any confidential information. Letters of Mr. Fairfield, since deceased, who had to do with these matters in the Colonial Office, showed that he was partly informed of the revolutionary purposes of the Cape Premier. Sir John Willoughby and other British officers who took part in the raid were hoodwinked by Jameson and Rhodes into believing that the British Government was secretly abetting the design of overthrowing the Pretoria Government and annexing the Transvaal. The convicted officers were released before serving their full term of imprisonment, but they were deprived of their commissions. Sir John Willoughby pleaded with the War Office to restore the junior officers to the army, saying that he had guaranteed their commissions, having been informed by Dr. Jameson that the expedition was undertaken with the knowledge and assent of the imperial authorities. Other reasons for his belief that it was so Sir John Willoughby declined to tell the committee, on public grounds. There were people in England who knew of the plot, but whose names Mr. Rhodes refused to reveal. A number of cablegrams, believed to implicate men of high station, perhaps the heir to the throne, he and, after his departure, his counsel, B. F. Hawksley, refused to produce, nor did the committee exercise its power to compel their production. These telegrams Mr. Rhodes had in the previous year exhibited to Mr. Chamberlain; Sir William Vernon Harcourt was also aware of their contents, and it was stated by one of the counsel that it was owing to reasons of state that they were not made public. Henry Labouchere, after being challenged by Alfred Beit and Dr. Harris to prove his statements that the raid was accompanied by profitable bull and bear operations in mining stocks by its promoters, withdrew his accusations

because the stock brokers on whose evidence he relied refused to testify. On account of the missing telegrams Mr. Blake declined to join in the committee's report, while Mr. Labouchere gave a minority report. The report of the committee exonerates the directors of the British South Africa Company from complicity in the raid, with the exception of Alfred Beit and Rochfort Maguire, and with the further exception of Lord Grey, about whom the committee could form no opinion, owing to his absence in South Africa; but the committee considered that the board, in giving to Mr. Rhodes power of attorney to do what he liked without consulting his colleagues and committing to him the whole of the administration and everything connected with Rhodesia, did not fulfill the objects for which it was created nor offer sufficient security against the misuse of the powers delegated to the Chartered Company by the Crown. The committee found that grave discontent existed in Johannesburg, but that, whatever justification the Uitlanders may have had for action, there was none for the conduct of Mr. Rhodes, who as Prime Minister of Cape Colony, managing director of the British South Africa Company, and director of the De Beers and Gold Fields Companies had used his position and those interests to promote his policy in subsidizing, organizing, and stimulating an armed insurrection against the Government of the South African Republic, and had employed the forces of the Chartered Company to support such a revolution. He seriously embarrassed both the imperial and colonial governments, and his proceedings resulted in the invasion of a friendly state and in breach of the obligation in respect to the right of self-government of the South African Republic under the conventions. Although Dr. Jameson at the last moment invaded the Transvaal without his authority, it was always a part of the plan that those forces should be used in the Transvaal in support of an insurrection. Such a policy once embarked upon inevitably involved Mr. Rhodes in grave breaches of duty to those to whom he owed allegiance. He deceived the High Commissioner, he concealed his views from his colleagues in the colonial ministry and from the board of the British South Africa Company, and led his subordinates to believe that his plans were approved by his superiors. The committee expressed in conclusion an absolute and unqualified condemnation of the raid and of the plans which made it possible. The result caused for the time being grave injury to British influence in South Africa. Public confidence was shaken, race feeling embittered, and serious difficulties were created with neighboring states.

Diplomatic Disputes.—In October, 1895, the Government of the South African Republic closed the drifts which constituted the two ports of entry on the Vaal river to oversea goods in order to stop the illicit importation of arms, although the pretext put forward was that the Cape railroads were damaging other railroads leading into the Transvaal. Sir Jacobus de Wet, the British consul general, denounced this as an unfriendly act intended to divert trade from the Cape ports. W. P. Schreiner, then the Cape Attorney-General, considered it a violation of the London convention. When the British Government protested on this ground, President Krüger said that if the exception of colonial goods made the closing of the drifts a violation of the convention he would shut out colonial goods as well. Mr. Chamberlain telegraphed that the extension of the proclamation to colonial goods was almost an act of hostility, and he informed the Cape ministry that the British Government was determined to obtain a compliance with its demands, even if it should be necessary to

send a warlike expedition into the Transvaal, the cost of which the Cape Government would be expected to share. The Cape ministry acquiesced, agreeing to bear half the total expense and to furnish a fair contingent of the fighting force. The Prime Minister, Mr. Rhodes, believed that he could count on a majority of the Cape Parliament to support such action. In response to the threatening message of Mr. Chamberlain, the Transvaal Government opened the drifts on Nov. 6, 1895, and announced that they would not again be closed without consultation with the British Government, but protested in a subsequent communication that it had a right to regulate the ports of entrance, offering to submit the question to arbitration. The Cape ministers requested that the assurances they had given with reference to hostile action be regarded as strictly confidential. Nor was it ever known how ready the Cape Government had been to go to war with the Transvaal until Mr. Merriam on April 6, 1897, demanded the production of the papers in the Cape Parliament in order to show that the Rhodes ministry promised on a paltry matter of trade to support with arms an ultimatum of the Imperial Government.

When the British Minister for the Colonies, Joseph Chamberlain, finally proposed a parliamentary investigation of the Jameson raid and the South Africa Company he declared that the situation in South Africa had not improved, that President Krüger, though he had stated that his desire was "to heal sores, to forget, and to forgive," still withheld the promised full and favorable consideration to the friendly representations of the British Government, and that recent laws of the Volksraad were contrary to the London convention and would create, if they were enforced, a situation that would require "all our prudence, all our impartiality, and all our patience." The British Secretary of State affirmed that the raid was indissolubly connected with the discontent in Johannesburg, which was founded on the grievances of the Uitlanders, and any inquiry into the origin of the raid would be a sham unless it went carefully into this question of grievances and determined how far these afforded a justification for that discontent and agitation in Johannesburg which made the raid possible.

In consequence of the Jameson raid and the Johannesburg revolution the Volksraad had passed a law for the expulsion of any foreigner who by word or writing excites to disobedience or transgression of the law or takes any steps dangerous to public peace and order. Another law empowered the President to prohibit the circulation of printed or published matter the contents of which are in his judgment contrary to good morals or a danger to the peace and order in the Republic. There was also a law establishing a censorship over press telegrams. Another law required aliens traveling in the South African Republic to take out passports. An alien immigrants law, based more upon the economic conditions prevailing in South Africa, required of aliens intending to settle in the Republic that they should bring a certificate from their home authorities that they possessed the means or the ability to support themselves and would not become a burden upon the community.

Mr. Chamberlain found in these new laws violations of the convention of 1884. The alien immigrants law, he said, imposed a new condition on the entrance of British subjects into the Transvaal besides that of conforming to the laws of the Republic, which alone was defined in the London convention, and this new condition it would be difficult for many of the poorer though perfectly respectable immigrants to satisfy. The other alien

law imposed burdens upon aliens traveling or residing in the Republic in excess of the condition laid down in the convention. The State Secretary, Dr. Leyds, contended that these were police laws, but this Mr. Chamberlain would not admit. The State Secretary wrote that the Government of the South African Republic would be grateful if the British Government would propose some other practical measure for the exclusion of undesirable immigrants. Eventually the immigrant law was repealed without any admission that it was an infraction of the convention, after an agreement with the governments of Natal and Cape Colony, in conformity with which the latter enacted in the summer a law restricting immigration. Mr. Chamberlain, in the correspondence, alleged six violations of the convention. A treaty of extradition with the Netherlands, signed on Nov. 9, 1895, had not been submitted to the British Government for approval until attention was called to the omission after the exchange of ratifications. The extradition treaty with Portugal, signed on Nov. 3, 1893, had not yet been submitted for the Queen's approval. On Sept. 30, 1896, the South African Republic, without waiting for the invitation of the British Government, formally communicated to the Swiss Government its act of accession to the Geneva convention. The aliens expulsion law was, like the immigration law, declared to be contrary to the convention. Like exception was taken to the press law, and when the "Critic" and "Star," the Uitlander papers, were suppressed, the British Government demanded explanations.

The claim of the South African Republic upon the British South Africa Company for damages on account of Dr. Jameson's raid amounted to £1,677,938, of which £677,938 represented expenses connected with putting *commandos* in the field and compensation for the commandeered burghers, and £1,000,000 represented "moral or intellectual damage." President Krüger insisted on the right of the South African Republic to submit to arbitration the question of indemnity and other matters of controversy. Mr. Chamberlain asserted in Parliament that arbitration on the convention was out of the question, such being unprecedented between a suzerain and a subordinate power. This fresh assumption of suzerainty, which was expunged from the convention of 1884 by the omission of the clause contained in the convention of 1881, raised a storm of protests in Pretoria, and drew from President Krüger an explicit denial that the relation of suzerainty still subsisted.

Treaty with the Orange Free State.—In view of the menacing attitude of the British Government, President Krüger negotiated in Bloemfontein a defensive alliance between the South African Republic and the Orange Free State and the preliminary arrangements for a closer political union between the two Boer republics. One article of the treaty provides that the burghers of each state are to have the franchise in the other. If either state is attacked the other agrees to come to its assistance with its full fighting force, which would give a combined army of about 44,000 men between the ages of eighteen and fifty, the Transvaal contributing 27,000 and the Orange Free State 17,000. This treaty was ratified by the two Volksraads. Each state undertakes to help the other whenever its independence is threatened either from without or from within. Interstate laws about *commando* and other subjects connected with the alliance shall be passed by the legislatures of both countries. A federal council shall be created, consisting of 10 delegates, half of them nominated by the President of the Orange Free State and half by the President of the South African Republic, and this council is

to sit every year, alternately in Bloemfontein and Pretoria, for the discussion of subjects of common interest, especially the mutual protection, the commercial relations, and proposals touching the federal union of the two states and objections that may be raised thereto, recommendations tending to favor the unification of the laws of the two countries, and such other questions as the respective governments deem proper to submit. The State Presidents and their representatives shall always be able to take part in the deliberations. The decisions of this council of delegates are to be reported to the representatives of the two governments, to be submitted to the respective Volksraads for their action. The ultimate object of the new political treaty is to create a federal union between the two states.

Warlike Preparations.—At the same time that Mr. Chamberlain was demanding the repeal of Transvaal laws and discovering a series of breaches of the London convention in the acts of President Krüger's Government and defiance in his protestations, a menacing naval demonstration was made in Delagoa Bay, where a squadron of British vessels suddenly gathered in April without any known cause or object, unless it was to intimidate the President and Volksraad in the matter of the immigration bill. Mr. Goschen declared that they were there as a guarantee that British supremacy would be maintained. The sum of £200,000 was put into the military budget for an increase of the forces in South Africa, and it was announced that their strength would be permanently increased. The garrisons were largely augmented during the spring, and troops were stationed near the frontiers. The reinforcements consisted of 115 officers and 2,700 men, making the total force of imperial troops in South Africa 545 officers and 8,240 men. Meanwhile, the Transvaal Government proceeded with the construction of the two forts at Pretoria, and imported Krupp field and fortress guns, Maxims, hundreds of thousands of rifles, and millions of cartridges.

Cape Colony decided on the recommendation of English military experts to create a permanent military force of 11,500 men, including the already existing Cape mounted rifles, numbering 1,100 men. The colony is to be divided into 5 military districts, and service is to be compulsory on all white males between eighteen and sixty years of age. The forts are to be provided with heavy guns, and a burgher reserve of 2,000 men is to be formed.

The warlike feeling had subsided in England and South Africa when Sir Alfred Milner arrived in Cape Town in May to succeed Lord Rosmead, formerly Sir Hercules Robinson, as Governor of the Cape and High Commissioner for South Africa. The Transvaal Volksraad repealed the aliens bill on May 6, not in acknowledgment of an infraction of the London convention, but as an act of deference to the wishes of the Orange Free State and the British colonies. The outcome of the peace debate in the Cape Parliament showed that a forward policy would receive little support. On May 17 the British fleet in Delagoa Bay was dispersed.

On the occasion of the Queen's jubilee President Krüger ordered the release of W. D. Davies and Capt. Woolls Sampson, the two Uitlander prisoners remaining in Pretoria jail, who had declined to make application for pardon, holding that they were entitled to the protection of the British Government, which was promised by Sir Hercules Robinson when they laid down their arms, but was afterward denied to them. The attitude of the British Secretary of the Colonies, though less aggressive, did not grow less imperialistic. After the South African Committee made its report he said: "Though Mr. Rhodes was in about as great a fault

as a politician or a statesman can be, nothing has been proved, and, in my opinion, there is nothing which affects Mr. Rhodes's position as a man of honor."

Swaziland.—In accordance with the Swaziland settlements, arranged between the British and Transvaal governments on Dec. 10, 1894, and ratified on Feb. 14, 1895, by the Volksraad, Swaziland, which was declared independent in the convention of 1884 and placed by the convention of 1893, in respect to the white settlers, under a Swaziland government committee, was finally placed under the protection and administration of the South African Republic. The territory is not to be incorporated in the Transvaal, and the natives retain their right to govern themselves after their laws and customs, but after three years they must pay a hut tax to the Boer Government and other taxes borne by the Swazis within the limits of the Transvaal. Customs duties shall not exceed those of the Transvaal. English and other white settlers can obtain full burgher rights. The sale of intoxicants to natives is forbidden. Swaziland is about 8,500 square miles in extent, with a native population estimated between 40,000 and 70,000 and 750 white settlers. The people are closely akin to the Zulus, and speak a different dialect of the same language. Ngwane, or Uunu, the paramount chief, has an army of 18,000 men. The local revenue for 1896 was estimated at £3,000, the expenditure at £40,650.

British South Africa Company's Territory.—Rhodesia has proved disappointing as a gold-mining country, although indications of gold have been found over wide areas in both Mashonaland and Matabeleland, and innumerable claims have been filed and shafts have been sunk at Umtali, Salisbury, Victoria, Buluwayo, Gwelo, Tati, and other places. The whole amount of gold taken out from the beginning till 1897 has been less than 6,000 ounces, worth about £20,000. Machinery has been ordered, but the cost of transportation has been prohibitory hitherto. The railroad from Beira was completed to Massi Kessi in the beginning of 1897, and was expected to reach Salisbury by the middle of 1898. The railroad from Cape Colony through Bechuanaland to Buluwayo was opened on Nov. 4, 1897. Coal has been found near Salisbury, about 60 miles west of Buluwayo, and in Bechuanaland. The agricultural resources of the country are excellent, and water is abundant. But agriculture must depend entirely on the development of the gold-mining industry. Drought and locusts have affected agriculture here, as in other parts of South Africa, and there are peculiar endemic diseases that interfere with the raising of horses, cattle, sheep, and poultry. Malarial fevers make the low country almost uninhabitable for white men, but the elevated plateaus are cool and healthful. There are 26,500 square miles of territory, having an elevation of 4,000 feet or over, and 72,500 more over 3,000 feet above the sea. Companies have been formed to farm on a large scale. Cecil Rhodes, who has brought millions of capital into the country, and has large investments into railroads and other property, has given much attention to the development of agriculture and stock breeding. The rinderpest has almost exterminated the cattle.

After the suppression of the rebellion of the Matabele and Mashonas that began when Jameson's raid into the Transvaal left the country without military protection, Lord Grey, the Administrator who succeeded Dr. Jameson, and his new staff of officials decided on the policy of native administration for the future. The Matabele chiefs, 85 in number, were summoned to Buluwayo in the beginning of January, 1897, to hear how the country should henceforward be ruled. Instead of five dis-

tricts, as under Lobengula, there were to be twelve, over each of which would be placed a chief, who would be paid by the Government and be held responsible for the good conduct of the district. A native commissioner and assistant would be stationed in each district, and over all would be the chief native commissioner in Buluwayo. As the population of Matabeleland is about 150,000, the average population of a district is over 12,000. Some of the chiefs chosen were friendlies, and others had taken part in the rebellion.

The parliamentary investigating committee failed to report on the administration of the British South Africa Company, or to suggest any alterations in the government of Rhodesia, leaving the matter to be dealt with by Mr. Chamberlain, who called into consultation the directors and officers of the South Africa Company. Sir Richard Martin, who was commissioned to investigate affairs in Rhodesia, made a report so damaging that the board of the Chartered Company asked time to put in an answer. This answer was given in a report by Earl Grey, which in no way removed the gravamen of the charges. Sir Richard Martin reported that compulsory labor undoubtedly existed in Matabeleland, if not in Mashonaland. The native commissioners procured such labor for the various requirements of the Government, mining companies, and private persons, endeavoring to obtain it through the *indunas*, if they could, and, failing in this, using force. As regards the cattle question, Sir Richard Martin was of the opinion that the fatal mistake made by the company in claiming all cattle as the property of the king immediately after the war, and the uncertainty that must have existed in the native mind regarding the proprietorship of the cattle previous to the distribution, together with the irritation caused by the frequent drafts made by the native police, and finally the unsatisfactory division, could not fail to produce widespread discontent and distrust. Many who were entitled by native law to cattle were left without, though others received more than their share. In new regulations issued in 1885 the company deprived natives of a part of the cattle that had been given to them in the first division. The company had, contrary to the charter, granted a monopoly of the mealie trade to a single trader. The causes of the insurrection Sir Richard Martin believed to have been the fact that the Matabele had never been thoroughly subdued in conjunction with labor and cattle regulations and the rinderpest and forcible slaughter of cattle, while the withdrawal of the police by Dr. Jameson afforded the opportunity. At the close of the war of 1893 scarcely any arms were surrendered to the Government; most of them were buried by the natives with a view to utilizing them again in the endeavor to reassert their independence as soon as a favorable opportunity presented itself. After the war of 1893 certain of the chiefs agreed to supply labor, but soon ceased to do so, and the Government, finding the supply cut off, introduced the practice of seizing the natives and carrying them off to labor in the mines, which to the Matabele, a wild and unbroken people, seemed nothing less than slavery. The native police were guilty of many acts of cruelty and extortion. The officials were in some cases too young and inexperienced for the important posts they held, and men not calculated to inspire the natives with respect for themselves or the Government that they represented. A large section of the Matabele nation, notably the Matoppo natives, whose chiefs played an important part throughout the rebellion, were not dealt with at all in 1893, and the operations of 1896 might be considered, so far as they were concerned, a continuation of the war rather than a rebellion.

The company agreed in 1894 to return to the natives cattle sufficient for their needs, but this was never done. Instead of this the staff of native commissioners and police organized for the purpose of carrying out the system of compulsory labor, seized and branded cattle belonging to the natives, besides forcing natives to enter into the service of the whites, or compelling the chiefs to furnish laborers. Whenever a native commissioner went to one of the *indunas* and said that a certain number of men were required at a given place, the chief was obliged to require the men to go, and these were taken from their homes and compelled to go and to work for wages in the fixing of which they had no voice.

The chiefs who took part in the rebellion of 1896 were thoroughly conquered, and not likely ever to contend against Maxim guns again. Not only did they lose heavily in men killed, wounded, and taken prisoners, but their kraals were burned and nearly all their grain and cattle carried off or destroyed, so that they were left on the verge of starvation, and their people only saved from famine by the bounty of their victors.

In Mashonaland the rebels were not yet completely subdued. The police patrolled the country, punishing those who attacked friendlies or whites. Near the end of January Major Gosling captured and burned the kraal of the chief Seka, whose people fled to inaccessible caves. In the beginning of May more active operations were undertaken. Shangwe's stronghold, which the Matabele had always failed to take in their raids against the Mashonas, was captured by Col. de Moleyns. When the rebels were cleared from the plains the troops had to hunt them out of the caves in the hills, whence they descended to lift cattle and destroy crops. The transcontinental telegraph wires were torn down to be converted into bullets. The troops established cordons and built forts round the hills, as was done in Matabeleland, and demolished the caves with explosives. On July 10 Chicumba's kraal, on the Unyani river was captured, and the remaining rebels fled from this district. In the vicinity of Fort Charter fighting still went on. The Matabele at Marandella rose, but were soon suppressed. Sir Richard Martin took command of operations against Mashingombi, whose kraal was taken by a combined movement of police and hussars on July 25. The Hartley district was cleared and the rebels *trekked* northward toward the Zambesi. It was supposed that the Matabele, though generally quiet themselves, incited the Mashonas to rise. After some more vigorous fighting the rebellion exhausted itself early in September, when most of the rebel chiefs offered to surrender, and all were evidently anxious for peace. They were given to understand that they would be treated leniently if they surrendered promptly and gave up their guns.

Portuguese Possessions.—The Portuguese possessions in Africa south of the equator are reduced by the Anglo-Portuguese arrangement of June 11, 1891, to Angola and Benguela, on the west coast, with Ambriz, Mossamedes, and Portuguese Congo, having a total estimated area of 457,500 square miles and 2,000,000 inhabitants, and Portuguese East Africa, comprising the provinces of Mozambique and Lourenço Marques, which have an estimated area of 261,700 square miles and a population of 1,500,000. In Angola, which had in 1895 a revenue of 1,634,800 milreis, and expended 1,532,637 milreis, the imports amount to 2,870,000 milreis and the exports to 3,250,000 milreis. There are 180 miles of railroads in operation, and 230 miles more are partly built. The length of telegraph line is 260 miles. The boundary between Angola and the British sphere in Central Africa is the western limit of the Barotse kingdom. This kingdom is

included in the British sphere, and its boundary, according to the provisional agreement that has been extended till July, 1898, will be determined by an Anglo-Portuguese commission. The royal commissioner in Angola is A. de Brito Capello.

The boundary between British South Africa and Portuguese East Africa starts from a point opposite the mouth of the river Aroangwa, or Loangwa, runs directly south to 16° of south latitude, which it follows as far as its intersection with 31° of east longitude, runs thence eastward to the point where the river Mazoe is intersected by the thirty-third degree of longitude, which it follows southward to $180^{\circ} 30'$ of south latitude, and thence runs along the edge of the Manica plateau southward to the Sabi river, which it then follows down to the Lunte, and from the confluence of the two rivers strikes across in a straight line to the northeastern point of the boundary of the South African Republic, with which the province of Lourenço Marques is contiguous to the border of Amatonga. North of the Zambesi the Portuguese territory extends inland to Lake Nyassa, being divided from German East Africa by the river Rovuma, and extends up the Zambesi to Zumbo, but the British Central African protectorate, or Nyassaland, forms a wedge that takes in the eastern and southern shores of Lake Nyassa and the upper Shire country. The Governor General of Portuguese East Africa is Major Mousinho de Albuquerque. The estimated revenue for 1895 was £296,857; expenditure, £345,587. The imports at the port of Mozambique in 1895 amounted to £95,300, and the exports to £37,122. At Quilimane the imports were £94,537; exports, £76,344. At Beira the imports were £160,570; exports, £17,950; transit trade, £142,960. At Lourenço Marques, which has a European population of 1,700, the imports were £295,203; exports, £28,309; transit trade, £669,213. The principal imports are cottons, spirits, beer, and wine. The exports are oil nuts and seeds, caoutchouc, gum, ivory, and sugar. In Manica Englishmen and others have begun to mine for gold. The Mozambique Company obtained a royal charter in 1891 to administer for twenty-five years the districts of Manica and Sofala. The railroad from Delagoa Bay connecting with the Transvaal line to Pretoria has a length of 57 miles in Portuguese territory, and 290 miles in all. The railroad from Beira in the direction of Mashonaland is open from Fontesvilla to Chinoio, 118 miles. There are 300 miles of telegraph line connecting Beira with Salisbury and Lourenço Marques with the telegraphs of the Transvaal.

Native War.—In March an expedition was sent out against the rebellious tribe of Namarallos, who fled after two defeats. A few weeks later five native chiefs in Gasaland revolted. The revolt extended on both sides of the Limpopo, necessitating the dispatch of fresh troops from Portugal, and the departure of the Governor General, Major Mousinho de Albuquerque, to the scene of action with whatever troops could be spared from Mozambique. He dismissed the Governor of Lourenço Marques, and set out in July with a body of troops dangerously small for the purpose of quelling the rebellion. During his absence natives on the Zambesi under the chief Camuimba seized a Portuguese gunboat, massacring the crew, and also captured two cannon. On July 21 Major Mousinho de Albuquerque won a victory over the chief Maguimana near Chimbutu, the capital of Gasaland, routing 7,000 natives. On Aug. 10 he engaged the rebels again at the foot of the Lebombo mountains, and after severe fighting administered a crushing defeat that ended the rebellion, Maguimana being killed and all the other leading chiefs made prisoners.

CHEMISTRY. In his annual review of pure chemistry, July, 1897, M. A. Étard notices as one of the most important events of the year the liquefaction of fluorine by Messrs. Moissan and Dewar. Of other less important work the author sees nothing but a little more confusion, owing to the monotonous continuity of scientific productions of unequal value. The science of chemistry is extending every year in new directions. It now includes pressure, cold, electricity, etc. It is being enriched principally by the determination of volumes, the measurement of constants, and by more minute work striving to show whether what we have so long admitted is really true. After a long period, during which it has seemed as if science was getting so pure as to be useless, students are coming back to the traditions of Gay Lussac and Berthelot, and are endeavoring to adapt the modern lofty ideas to the wants of mankind. Thus, Lord Rayleigh proposes to make the direct oxidation of the nitrogen of the air commercially practicable by means of the electric current. Mr. Liversidge has tested various deposits of maritime origin for gold, and has found that the Stassfurt salts contain 0.13 of a gramme per ton. It is not only gold that is so widely disseminated, but also, as Mr. Hartley has shown, the rare earths and metals. In 93 different iron ores he found always either silver, rubidium, copper, gallium, iridium, or thallium. Mr. Shenstone has found that the halogens, chlorine, bromine, and iodine combine with mercury in a state of perfect dryness, but that ozone will not do so except in the presence of aqueous vapors. Many other interesting results have been obtained in detailed workings, the general hearings of which have not yet been sufficiently determined to make them of more than technical interest.

Chemical Theory.—The lecture of Prof. Richard Meyer before the German Association of Naturalists and Physicists, on the relations of theoretical chemistry and research to national industry, included a review of the metamorphosis of the theory of chemical types into that of the valence of the elements, which ultimately gave rise to the chemistry of the benzol derivatives. The practical and economical results of these theoretical doctrines were manifested in the rise of the coal-tar industries, which have exercised an immense influence and have contributed to progress in many branches of hygiene and medicine. The long series of coal-tar or aniline colors, "the introduction on a large and cheap scale of carboic and salicylic acids, and the ever-increasing array of synthetic, antipyretic, and other remedial agents, made their victorious and triumphant way to all countries, and the chemical industry of Germany rose to an unprecedented degree of magnitude and prosperity." One of the most remarkable changes in this evolution was that the laboratories of the manufacturing establishments and of the great color works participated with the chemical and clinical research laboratories in this race after scientific and practical achievement, and had important parts in the progress of chemical knowledge and production as applied to sanitary and therapeutical sciences and arts. More recently the discovery and employment of serum therapy have introduced an additional factor into the application of synthesized remedial agents. The influence of modern chemical research and application has been correspondingly great upon other important branches of chemical industry, such as photography, sugar making and refining, tanning, and brewing. As a novel and prospective branch of applied science, electro-chemistry is becoming more and more prominent.

Speculations tending to assign acid-forming properties to particular atoms or groups receive

some support from observations by Prof. Claisen of certain hydroxymethylene derivatives, which he describes as being all strong monobasic acids. They can all be accurately estimated by titration with normal alkali in aqueous alcoholic solution. They dissolve freely, even in the cold, in aqueous solutions of alkali acetates, liberating acetic acid. Among substances composed of carbon, hydrogen, and oxygen only, and not containing a carboxyl group, they appear to be the first that approach the monocarboxylic acids (except formic acid) in strength; and they even surpass some of them.

While it has been generally taught that the alcoholic fermentation of sugar by yeast was intimately associated with and dependent on the living action of the yeast cell, some investigators have believed that, notwithstanding the apparent impossibility of separating an alcoholic ferment from its organism, such a body nevertheless exists, and that alcoholic fermentation is thus, after all, only a special case of ordinary enzyme action, although one of peculiar complexity. These views receive confirmation from the researches of Dr. E. Buchner. By pounding up pure yeast with quartz sand and adding a certain amount of water, this author was able to squeeze out, under a pressure of between 400 and 500 atmospheres, a liquid which, when filtered, presented an opalescent appearance and an agreeable yeastlike odor. Care was taken to exclude all organisms from the liquid, and it was found, under such conditions, able to excite alcoholic fermentation in solutions of suitable sugars. The fermentative process was not inhibited by the addition of chloroform, even up to the saturation point, but a rapid precipitation of albuminous substances from the liquid was caused thereby.

Beginning in the "American Chemical Journal" a review of progress in the chemistry of the carbohydrates during 1896, W. E. Stone says that activity in that field is unabated, and it is becoming more and more evident to the student that the carbohydrates present opportunities for the study and illustration of chemical theories in no way exceeded by their very great practical and technical importance. The continued study and development of new reactions among them has been so fruitful that they may now be fairly regarded as among the most reactive of the general classes of carbon compounds. A large number of characteristic reactions have been well studied, involving the general principles of polymerization, condensation, oxidation, reduction, ether, and ester formations, etc. Contrary to the former view that the carbohydrates were extremely unstable and sensitive compounds, it now appears that they are capable of undergoing the most manifold changes, as regards both their chemical features and their physical properties. The sugars offer the best-known examples for illustrating the principles of stereo-chemistry, while the latest researches indicate that sugar molecules are unstable systems in which a variety of intermolecular transformations may be induced.

In some of his experiments on the formation and transformation of solid bodies Prof. Ostwald used homœopathic triturations, and determined their activity in a physical chemical matter. In them he applied the well-known property possessed by crystalline bodies of determining the crystallization of solutions of their own substance in the condition called "overcooled" when brought in contact with them. Seeking to discover how small a particle of the crystal substance would be sufficient to determine crystallization, he, in order to obtain very minute crystalline particles, triturated the crystals with powdered quartz or with milk sugar. The proportions of the triturated substance to the indiffer-ent vehicle in the several triturations are di-

minished by tenths from $\frac{1}{10}$ in the first trituration to $\frac{1}{10000000000}$ in the tenth. Crystallization was induced when no higher than the ninth trituration ($\frac{1}{1000000000}$) was used. Several substances, like salol, would work with this trituration only when freshly prepared; when older, the third trituration ($\frac{1}{1000}$) would still induce crystallization, but not the fourth ($\frac{1}{10000}$). Only a single exception to this general law was found in the case of borax, which induced crystallization as far as the seventeenth trituration. This result seemed so astonishing to Prof. Ostwald that he most carefully made another series of triturations, of which the ninth trituration ($\frac{1}{1000000000}$) was still active, while the higher triturations were not. Homœopathy goes far beyond the ninth trituration, but Prof. Ostwald's experiments are in favor of the activity of minute medical doses, for when the $\frac{1}{1000000000}$ part of a grain is sufficient to produce such visible results as the solidification of a solution by the formation of crystals, we can hardly say that the ninth trituration contains no more of the active substance.

A series of researches have been carried on for six years by Mr. A. E. Tutton into the relation that may exist between the chemical composition of solid substances and the nature of the crystals which they are observed to form. The author sought especially to determine exactly the differences presented by certain well-defined series of isomorphous salts. The investigation was one calling for the use of very careful methods. Certain series containing in their different members the alkali metals potassium, rubidium, and cesium, were chosen as the special objects of the study. The result of the investigation has been to show that all the morphological properties of each of the isomorphous series exhibit progressive variations that follow the order of progression of the atomic weights of the alkali metals which the salts contain. Hence it may be said that these variations are functions of the atomic weight of the alkali metals. Of course, the author explains, atomic weight is only one of the numerous properties of an element, and is employed simply as the most convenient reference constant that could be chosen to express fundamentally the difference in the essential nature of the atoms of different elements, and not because of any virtue in atomic weight *per se*. Expression is given to the principle deduced in the words, "The difference in the nature of the elements of the same family group which is manifested in their varying atomic weights is also expressed in the similarly regular variation of the characters of an isomorphous series of the salts of which these elements are the interchangeable constituents."

Prof. G. Linck had already called attention to the fact that the characteristics of crystals—that is, their geometric and optical constants—stand in direct relation to the atomic or molecular weights contained in them. This is most clearly shown in the eutropic series, by which is meant a series of substances crystallizing similarly, but differing only in that they each contain a different element, though the elements are yet similar according to the periodic system of Mendeleeff. If such a series is arranged according to increasing molecular or atomic weight, then the series, for all characteristics of the crystal, remains unchanged. The author has designated the fundamental law of these phenomena as "eutropy." Tables computed from data embracing the system to which the crystal belonged, its axial relations, the specific gravity, and the atomic weight lead to the conclusions that the actual volumes of the various chemical compounds, if formed into equivalent crystals, stand in a very simple relation to each other; the weights of these equivalent volumes stand in the same rela-

tions to each other as the molecular weight; the volumes in a eutropic series increase with increasing molecular or atomic weights; the weights of equivalent volumes always increase with increasing atomic weights; bodies which are isomorphous but not eutropic likewise stand in a very simple relation to each other according to their crystal volume or their actual volume, as the case may be; many crystals which have heretofore been considered eutropic or isomorphic are not so, since they probably possess a larger or smaller molecular weight, according to the number of atoms.

The presidential address of Prof. William Ramsay before the chemical section of the British Association was wholly devoted to an exposition of his reasons for supposing the existence of an undiscovered gas and to the story of his search for an element of the atomic weight 20, situated in the periodic system between argon and helium. The author observed that many "triads" are found in the periodic system, with a difference in atomic weight of about 36 between the extremes, as fluorine, chlorine, manganese; oxygen, sulphur, chromium; nitrogen, phosphorus, vanadium, etc. If argon has an atomic weight of 40 and helium of 4 a triad might be expected composed of them, with a middle element having an atomic weight of about 20. The search of Prof. Ramsay and his assistant was made for this element, which, it was assumed, would probably be found, like argon and helium, an indifferent gas, by examining the gases from various minerals and mineral springs, and by fractionating helium by diffusion through porous plates without result further than that after 180 diffusions of helium two fractions were obtained, one of which was pure helium and the other helium with a small proportion of argon. The nonexistence of gas is, however, not proved, for if it occurs it is probably in far less abundance than helium, and it will be a work of extreme difficulty to separate it.

Experimenting with argon in order to determine whether it is homogeneous, and using a system of methodical diffusion, Prof. Ramsay and J. Norman Callie found by comparison of the density of the extreme portions that the separation, if any took place, was small. With helium the separation was more distinct, and, while the spectra were identical, the densities of the extreme portions, oxygen being 10, were as 1.874 to 2.133, and the refractions to that of atmospheric air being 1, as 0.1350 to 0.1524. Helium, therefore, if it consists of a mixture of two gases, is formed either of two gases of the densities 2.366 and 1.874, or of two gases of the densities 2.133 and 1.580. "But although this explanation is the most suitable, there exists another which deserves our attention. The spectrum of these two fractions shows no difference. It is not probable that two gases exist the densities of which are so near each other. The different gases do not possess a refraction proportional to their densities. It seems to us that we might admit that we have effected a real separation of the light molecules from the heavy molecules. The idea that all the molecules of a gas are homogeneous has never been submitted to the test of experiment. We do not know of any attempt at a separation of this kind of a gas regarded as homogeneous into two different parts. But our experiments show that this question deserves to be studied. If it can yield us similar results we must change our ideas on the nature of matter."

It has been long observed that during the slow oxidation of a number of substances in oxygen gas, or air, part of the oxygen becomes endowed with peculiarly active properties. Concerning the philosophy of the phenomenon, the tendency of recent investigation has been to show that the oxygen molecules split up into atoms (probably with opposite

electrical charges), one of which brings about oxidation, while the other forms what is called active oxygen. From experiments of his own, which he has described together with previously published results, M. W. P. Jorissen, of Amsterdam, concludes that "a body undergoing slow oxidation converts the same quantity of oxygen into the 'active' state as it itself takes up in the formation of the primary product of oxidation."

M. L. De Launay puts forward the view that agglomerated iron carbonate has not been deposited as carbonate from water, as is generally held, but that, like calamine and cerussite, it has been produced by the action of limestone upon the salts arising from the destruction of iron sulphides. It is pointed out in confirmation of this view that while massive sulphide of iron is always found in schists, the carbonate occurs with limestone.

Chemical Physics.—Mr. Crookes, in his researches on molecular bombardment, demonstrated that on placing diamonds in one of his tubes they quickly lost their luster and were coated with a black layer. M. Moissan, having obtained one of these diamonds which had been completely blackened by the bombardment, heated it to 60° C. in an oxidizing mixture of potassium chlorate and fuming nitric acid prepared from sulphuric acid exactly monohydrated and potassium nitrate fused and free from moisture. The action on the black layer was very slow. Graphitic oxide was produced, which at an increased temperature yielded pyrographitic acid, and this was easily destroyed by nitric acid. Hence the variety of carbon that coated the diamond was graphite. The temperature at which the transformation of the diamond into graphite took place must have been very high. Mr. Crookes had already proved that platinum and iridium could be fused in his tubes, but the temperature obtained in the bombardment was much higher, since the transformation of diamond into graphite requires the high temperature of the electric arc. The higher the temperature to which graphite is raised the greater is its resistance to oxidation.

In his comparative observations on the behavior of oxygen under the influence of the silent discharge of electricity when saturated with water vapor, and when carefully dried, W. A. Shenstone found, contrary to the statements of previous investigators, that oxygen is most freely converted into ozone when wet, and that well-dried oxygen yields only a very minute percentage of ozone. The results obtained also show that the ozone in ozonized oxygen is far more stable in the presence of water vapor than in its absence—that is to say, the change by which ozone is converted into oxygen is very greatly retarded by the presence of moisture. When carefully purified chlorine, bromine, and iodine, dried by very thorough treatment with prepared phosphoric oxide, were presented to the action of mercury prepared for the purpose and thoroughly dried, the metal and the halogen in every case interacted instantly and rapidly. Highly purified chlorine, when submitted to the silent discharge of electricity, did not undergo condensation. The abnormal expansion of chlorine, which has been described by several observers, appears to the author to depend upon the presence of impurities in the chlorine. The results observed by Dr. Budde at Bonn, in which chlorine expanded under the influence of the violet and chemical rays, are regarded by the author as having almost certainly been affected by the presence of moisture in the chlorine.

In his studies of the phenomena of supersaturation and supercooling, William Ostwald found that the temperature range below the melting point in which spontaneous production of crystals is impos-

sible is limited, the liquid being in stable equilibrium except toward a ready formed crystal. To this condition he gives the name *metastable*. At lower temperatures no nuclei are necessary, and the crystals form spontaneously. He concludes that when a system passes from any given condition to a more stable one it will not pass into the state which under the circumstances is the most stable, but into that which is nearest to the original state.

Experiments by Zelinsky with two hydrocarbons obtained by reduction from hexamethylene iodide—one by means of zinc and hydrochloric acid, and the other by zinc and hydriodic acid—prove that the former is the true hexamethylene, while the second is identical with methylpentamethylene. The hexamethylene ring, therefore, under the influence of hydriodic acid at 230° C. changes into a more stable isomeric form. The nature of this change agrees with Baeyer's "tension theory," according to which the pentamethylene ring is more stable than any other.

Experiments on the relative transparency of the alkali metals to the Röntgen rays, recorded by Prof. C. Mavangoni indicate lithium as the most transparent metal; but its transparency does not increase with the thickness. An anomaly exhibited in the greater transparency of sodium relative to potassium suggests that the transparency for these rays is a function of atomic weight as well as of density.

Liquid sulphur at 440° C. absorbs hydrogen sulphide, and gives it out on solidifying. This, M. A. H. Pélabon observes, can hardly be a true case of a solution of a gas in a liquid, for it is found that the amount absorbed increases with the temperature, and is given out only on solidifying, while no gas is given out by the solution in liquid sulphur, even into a vacuum.

New Substances.—In his work on gadolinite and samarskite earths, Delafontaine came to the conclusion, published in 1878 and 1880, that the yellow oxide erbia discovered by Morander in 1843 contained two earths, which he called *terbia* and *philippia*. The individuality of philippia was denied by two English chemists; but M. Marignac mentioned it in a paper on the samarskite earths in 1880, and Mr. W. Crookes, who first rejected it, has mentioned it among some of his fractional products of yttria. The author has since made an investigation of the fergusonite earths, which, though incomplete, enables him, as he believes, to show that the characteristics of philippium are such as to deserve the attention of those who are discussing the periodic law and the necessary modifications to Mendeleeff's classification of elements. Philippium has been found in gadolinite, samarskite, and the Texas mineral described as fergusonite. It is more closely allied to cerium and terbium than to any other of the yttrium and cerium metals. Its equivalent, the color of its subnitrates and that of the philippic salts, and the solubility of its formiate, separate it from terbium. These characteristics and the solution of potassium-philippo sulphate in potassium-sulphate solutions distinguish it from the two ceriums of M. Brauner and M. Schützenberger. It appears in two sets of compounds, the philippous and the philippic, corresponding to a white acid and an orange oxide. The salts of the first series are colorless, quite stable, generally crystallize well, and correspond to the lanthanum and yttrium salts. Philippic oxide has a deep orange-red color. Although philippium shows a very close resemblance to yttrium and cerium, the constitution of its compounds remains to be established by crystallography or otherwise.

G. G. Boucher, of Ulverston, England, has published his reasons for supposing that a new element or new elements other than the substances usu-

ally found may exist in cast-iron and blast-furnace boiler dust. The substance in question obtained from cast iron is a black powder, slightly soluble in cold strong hydrochloric and sulphuric acids, and very little more soluble on boiling in those acids. It is soluble in dilute and strong nitric acid, and very easily soluble in aqua regia. Heated in a current of air it glows and is converted into a yellow oxide. Its properties are further described in the author's paper. The substance in boiler dust is similar to this in every respect but one. It has the same aspect and forms an oxide similar in appearance, which produces the same chemical changes with the reagents experimented upon, except with the bichloride of tin. It is present in boiler dust in so minute quantities as to be more difficult to separate than in the case of cast iron. Several chemists have pointed out similarities in properties and reactions of this substance as described by Mr. Boucher with those of certain other substances whose presence in cast iron is common, and are not disposed to accept the hypothesis of a new element.

The discovery of a new series of compounds of very great interest is announced by MM. Constam and A. von Haussen. It was known that on electrolyzing the alkaline carbonates, M_2CO_3 , we obtain hydrogen and the hydrate of the constituent base at the cathode, and at the anode oxygen and carbonic acid, which recombines with a part of the base to form bicarbonate. The authors have observed that if we electrolyze a saturated solution of carbonate of potash and gradually lower the temperature, the disengagement of oxygen gradually diminishes at the anode, and finally ceases about -10° C.; and further, instead of a crystalline bicarbonate being formed, we have a bluish amorphous powder, shown by analysis to consist of $K_2C_2O_6$; this is percarbonate of potassium. In explanation of its formation it is assumed that the carbonate of potassium in saturated solution first becomes dissociated into ions K and KCO_3 ; when electrolysis intervenes the two ions KCO_3 unite to form the body $K_2C_2O_6$. The phenomenon does not occur in dilute solutions, as the carbonate of potassium splits up into the ions K_2 and CO_3 . The carbonate obtained in the manner described above should be quickly thrown on a filter and dried over phosphoric anhydride. From certain reactions described in their paper the authors conclude that the new body is in reality the neutral carbonate of a higher oxide, peroxide of potassium. It besides produces in the presence of acids, like the higher alkaline oxides and the alkaline earths, peroxide of hydrogen.

L. Prunier observes that in the study of the preparation of ordinary ether by means of sulphuric acid and alcohol most workers have omitted to take any notice of the presence of sulphonic acids and their derivatives. This group of bodies is, however, to be found in notable quantities in commercial ethers. It is also found in considerable proportions in the oils that have been used in the rectification of the raw product. By direct experiment it is possible to prove the formation of several sulphonic derivatives, especially toward the end of the operation. To separate the derivatives actually formed by the action of sulphuric acid, it suffices to heat sulphonic acid with dilute sulphuric acid to 140° C., then add a little alcohol. By this means a small quantity of ordinary ether is formed, and several sulphonic derivatives of varying volatilities, some of which even distill over with the ether. They are formed in greatest abundance when the temperature exceeds 140° C., and, above all, if undiluted sulphuric acid is used.

Metallie rubidium, as observed in the experiments of A. W. Titherley, behaves like the other

alkali metals toward ammonia, displacing one atom of hydrogen, and forming rubidamide, RbNH_2 . Though not so energetic as in the case of lithium, the action is very rapid and begins in the cold. On heating in a silver boat to between 200° and 300° , oily drops of the amide quickly form and flow to a liquid in which the metal floats and partly dissolves in a deep-blue solution, at once decolorized and converted into rubidamide by the action of ammonia. Rubidamide crystallizes in plates, melting at between 285° and 287° F. , higher than sodamide and potassamide, but lower than lithamide. At 400° F. it distills undecomposed in a current of ammonia. With water it is violently decomposed, giving ammonia and rubidium hydrate. Alcohol also decomposes it, and its behavior with organic substances is very similar to that of sodamide or potassamide.

Sodamide in its reactions with organic haloid compounds was observed by Mr. Titherley invariably to give rise to complex decompositions without appreciable replacement of the halogen NH_2 . The hydrogen of the sodamide, and not the sodium, reacts, giving hydrochloric acid, which with the amide yields ammonia, while the group NaN remains more or less intact, being found afterward as sodium cyanide and sodium cyanamide. Charring inevitably occurs. Sodamide on treatment with organic substances possessing a weak acid tendency, such as oximes and hydrazines, readily reacts, giving ammonia and sodium derivatives. In benzene solution these are obtained usually as fine crystalline precipitates, which may sometimes be crystallized from boiling benzene. Sodium acetoxime, sodium hydrazobenzene, sodium phenylhydrazine, and other compounds have been thus obtained. A series of substitution derivatives of sodamide formed by the replacement of one or both hydrogen atoms in NaNH_2 have also been prepared by the interaction of sodamide with aromatic amines and with amides. Those formed with organic amides are soluble without decomposition in alcohol, and their solutions, on treatment with alcoholic silver nitrate, throw down bright orange-red precipitates of the silver compounds, which are very unstable. From the color of these silver derivatives and the difficulty with which they and the sodium compounds appear to react with alkyl iodides, etc., the author concludes that the silver and sodium atoms, respectively, are directly attached to nitrogen, and that therefore the derivatives are to be represented as possessing the ordinary amide and not the imido-hydroxyl formula; the amides themselves are most probably tautomeric substances.

Among the substances obtained by Prof. William L. Dudley from the action of fused sodium dioxide on metals is a hydrated oxide of nickel, $\text{Ni}_3\text{O}_4 \cdot 2\text{H}_2\text{O}$, which was formed by heating nickel with sodium dioxide in a nickel crucible to cherry red. The surface of the melted mixture becomes covered with sealy crystals having the composition indicated. These crystals are almost black, lustrous, apparently hexagonal plates, soft, and bearing a resemblance to graphite. They begin to lose water at 140° —a lower temperature than that at which the substance is formed. Apparently similar compounds are formed by other metals, which can not, however, be conveniently studied on account of the vigorous action of fused sodium dioxide on crucibles of porcelain, iron, silver, gold, or platinum.

Five compounds of nitrogen and hydrogen are described by Dr. J. E. Mackenzie as at present known: NH_3 , ammonia; N_2H_4 , hydrazine; N_3H , azoimide; N_4H_4 , ammonium nitride; and N_5H_5 , hydrazine nitride. All these substances except ammonia are of comparatively recent discovery, and our knowledge of most of them is due to Theo-

dor Curtius. In 1883 Curtius began a series of researches on amido-acids, in the course of which he obtained sulphate of hydrazine and other salts, from which hydrazin hydrate, $\text{N}_2\text{H}_4 \cdot \text{H}_2\text{O}$ was separated by distilling with strong bases. The hydrate is a colorless fuming liquid, which boils at 119° C. , destroys cork and India-rubber, and is a powerful reducing agent and poison. In 1895 Lobry de Bruyn isolated free hydrazine by processes which have been described in the "Annual Cyclopædia." This substance is one of the strongest reducing agents, takes fire spontaneously in chlorine with formation of hydrochloric acid and nitrogen, reacts with sulphur in the cold with production of SH_2 and N , displaces ammonia from solutions of ammonium salts, forms two series of salts with acids, and has important condensations with aldehydes and ketone. Other methods of preparing it are described by Pechmann, Thiele, and Duden. Azoimide as described by Curtius is a colorless liquid with an unbearable odor, boiling at 37° C. , capable of mixing with alcohol and water, and is frightfully explosive. Its metallic salts very much resemble those of hydrochloric acid, except that they are explosive; and ammonium nitride, N_2NH_4 , is the most perfect explosive known. Hydrazin nitride, $\text{N}_3\text{N}_2\text{H}_5$, is a crystalline substance which behaves like gun cotton, burning quietly on exposure to flame, but exploding on detonation or sudden heating.

In the electrolysis of a mixture of silver sulphide and silver chloride in an atmosphere of nitrogen, using platinum electrodes free from iridium, Theodor Gross found in the liquid a dark-gray powder insoluble in aqua regia and in ammonia. Melting this with alkaline carbonate, a substance resulted soluble in hydrochloric acid, which gave a brown precipitate with hydrogen sulphide. The presence was thus indicated of a new element, to which the author gave the name of bythium. A corresponding loss of sulphur occurring, and also of chlorine in a less degree, the author infers that bythium is formed by the decomposition of one of these substances.

In a paper on "The Chemistry of Methylene," read in the British Association, Prof. J. F. Nef, of Chicago, described the results obtained in studies of compounds containing dyad-carbon. The author has obtained a series of very unstable substances which he regards as acetylidene derivatives. All are violently poisonous. The monobromo derivative bears in its properties a remarkable resemblance to phosphorus, and is termed by its discoverer "vegetable phosphorus." It shines in the dark, burns on exposure to the air, and acts as a violent poison in the same way as phosphorus.

Naphthalenetetrabromide, the corresponding compound to naphthalene tetrachloride, already studied by several chemists, has been prepared by W. R. Orndorff and C. B. Meyer by treating naphthalene, in sodium hydroxide, with bromide. It appeared as a white crystalline substance, melting at 111° C. No isomeric compound could be obtained. The molecular weight was deduced only indirectly, and from this and by analysis the composition of the substance was found to be $\text{C}_{10}\text{H}_6\text{Br}_4$.

Pure carbide of iron, Fe_2C , has been prepared by M. Moissan by heating pure iron for three minutes in a carbon crucible with a current of 900 amperes, at 600 volts, and cooling as rapidly as possible by taking the mass from the furnace and pouring it directly into cold water. The ingot was crystalline in structure, and contained from 3 to 4 per cent. of combined carbon, but no graphite. From this the carbide was separated in brilliant crystals of exactly the composition Fe_2C . Water has no action upon this substance, even at 150° C. , but hydro-

chloric acid gives a mixture of hydrogen and methane.

A substance described by G. de Chalmot as a silicide of copper, having the composition Cu_2Si_3 , has been found in further experiments to be a mixture of silicon, copper silicide, and copper. It forms apparently homogeneous pure crystals. A silicide of iron, $FeSi_2$, has also been obtained by the author.

The chlorobromides of tin are formed by M. A. Besson by the action of hydrogen bromide upon stannic chloride, or by the action of hydrogen upon anhydrous stannous chloride in carbon tetrachloride solution, the latter method giving the best yield. $SnCl_3Br$, $SnCl_2Br_2$, and $SnClBr_3$ are thus isolated.

A gold phosphide, Au_2P_3 , has been obtained by A. Granger. It is gray, very brittle, is easily destroyed if heated in contact with air, and is readily attacked by chlorine and aqua regia.

The preparation of alkali cobaltates is described by A. H. McConnell and E. S. Hanes, who show that cobalt forms an oxide, CoO_2 , an acid, H_2CoO_3 , and a series of alkali salts of the type of potassium cobaltite, K_2CoO_3 .

New Processes.—The physical properties of a large number of mineral and organic compounds of fluorine indicated theoretically that the liquefaction of that substance could be effected only at a very low temperature. Experiments for the production of that result were made in May by M. Moissan and Prof. Dewar at the Royal Institution, which possesses unrivaled appliances for the production of intense cold. Liquid oxygen, of which several litres were required, was used as the refrigerant. The apparatus having been cooled down to the temperature of quietly boiling liquid oxygen ($-183^\circ C$), the current of fluorine was passed through it without becoming liquefied, but at this low temperature the element had lost its chemical activity, and no longer attacked the glass. A vacuum having been made above the oxygen, a liquid was seen, as soon as ebullition took place, collecting in the glass envelope, while gas no longer escaped from the apparatus. Stopping with the finger the tube by which the gas had been escaping, so as to prevent air from entering, the glass bulb soon became full of a clear yellow liquid—of the same color as fluorine gas when examined in a stratum one metre thick—possessed of great mobility. According to this experiment, fluorine becomes liquid at $-185^\circ C$. As soon as the little apparatus was removed from the liquid oxygen the temperature rose and the yellow liquid began to boil with an abundant disengagement of gas, having all the energetic reactions of fluorine. Advantage was taken of the experiments to study some of the reactions of fluorine on bodies kept at extremely low temperatures. Silicon, boron, carbon, sulphur, phosphorus, and reduced iron did not become incandescent, and fluorine did not displace iodine from iodides. Its chemical energy was, however, still great enough to decompose benzene and essence of turpentine with incandescence as soon as their temperature rose to $-180^\circ C$. It thus seems that the powerful affinity of fluorine for hydrogen is the last to disappear. When a current of fluorine gas was passed through liquid oxygen, a flocculent white precipitate was rapidly formed, which quickly settled to the bottom. When separated, it was found to possess the property of deflagrating with violence as soon as the temperature rose.

In a subsequent paper ("Chemical News," Oct. 22, 1897) the authors (Moissan and Dewar) express the conclusions that fluorine gas is easily liquefied at the temperature of boiling atmospheric air. The boiling point of liquid fluorine is $-187^\circ C$. It is soluble in all proportions in liquid oxygen and in liquid air. It does not solidify at $-216^\circ C$. Its density is 1.14, its capillarity is less than that of

liquid oxygen. It has no absorption spectrum, and is not magnetic. Finally, at $-210^\circ C$. it has no action on dry oxygen, water, or mercury, but it reacts, with incandescence on hydrogen and oil of turpentine.

A modification of M. Moissan's apparatus for preparing fluorine, introduced by M. Meslans, will probably render it possible to include the preparation of the element in the course of ordinary lecture experiments, and may even lead to its economical production on a large scale, if any industrial application of it should be found desirable. The apparatus is of copper, larger than M. Moissan's platinum apparatus, is charged in the usual way, and is then connected with the positive terminal of a battery, the two electrodes being made the negative pole. Fluorine is thus evolved at the internal surface of the apparatus, and a thin, nonconducting layer of copper fluoride is deposited upon it. The apparatus, after this preliminary treatment, is employed in the same way as Moissan's platinum apparatus, but may be simply cooled by ice and salt. The presence of the nonconducting layer of copper fluoride prevents the passage of electricity from the electrode to the side of the vessel, and thus avoids the consequent loss of fluorine, so that the yield in the new modification of the apparatus is much greater than in the original form.

It is observed by L. Gournitsch that the action of electrolysis on the salts of the fatty acids nearly always gives rise to the formation of alcohols, ethers, acids, etc., in quantities variable according to the conditions of the experiment. Iodoform is now prepared electrolytically by substitution, by passing the current through a solution of iodide of potassium in alcohol or aqueous acetone, and neutralizing the excess of potash formed by carbonic acid; the iodine and the potash formed by the action of the current react with the solvent and form crystals of pure iodoform. The nitrified derivatives of the aromatic series seem best for studying the reduction by electrolysis. In 1882 Kendall patented the manufacture of aniline and toluidine by the action of the electric current on mixtures of nitrobenzene and nitrotoluene with concentrated sulphuric acid; but the return was bad, and the process was of no practical value. Twelve years later the subject was again taken up, and it was shown that aniline was formed even in acid solution. The platinum electrodes were strongly attacked in the experiments on carbonate of ammonia, and a complicated platino-ammoniacal base was formed.

In the chrome tannage process, patented by G. W. Alder, the chrome solution is prepared by dissolving potassium or sodium bicarbonate in an excess of sulphuric acid diluted with two volumes of water, reducing the chromium salt by the addition of sugar or alcohol; then neutralizing and precipitating chromium hydrate and "chromium oxycarbonate" by the addition of sodium carbonate, and dissolving the precipitates without filtering by the addition of hydrochloric acid to the mixture. The resulting liquor is supposed to contain chromium chloride, chromium sulphate, sodium and potassium sulphates, sodium chloride, and either formates or acetates of these metals. The patented process of Hugo Schweitzer consists in the reduction on the animal fiber of bichromate of potash by means of hydroxylamine compounds. Sulphoacids of hydroxylamine are produced, whereby the use is permitted of neutral, weakly acid, or weakly alkaline solutions for the second bath is permitted. In the one-bath processes of Robert Wagner and J. J. Maier chrome alum, saltpeter, muriatic acid, salt, and whiting, in proportions which are specified, are mixed with water.

Great interest was manifested at the Toronto

meeting of the British Association in a demonstration by Prof. Andrews of the plaster-of-Paris method of blowpipe work. In this method charcoal is replaced by a thin, oblong tablet of plaster of Paris, mixed with a little boric acid, which can be employed for all the ordinary tests that are conducted on charcoal or platinum wire. Prof. Andrews has further elaborated a series of delicate and characteristic tests for several metals, which depend on the colored films produced when compounds of these metals are treated with a solution of iodine in potassium thiocyanate. The films consist partly of oxide and sulphide, partly of iodide and oxyiodide, and are of very brilliant color. These iodide films afford a ready method for the detection of the constituents of a metal in the field.

Prof. Dewar has devised an apparatus for ascertaining the proportion of any gas in air that is not condensable at about -210° C. under atmospheric pressure, or is not soluble in the liquid air produced; the air to be examined is cooled in a tube immersed in a reservoir, which can be continuously replenished with liquid air boiling under diminished pressure. The gas which does not condense under these circumstances can be subsequently collected and examined, or the liquid portion of the air can be boiled in the condensing tube and the gas collected over mercury. On thus condensing 70 litres of the gas issuing from the King's well at Bath, which Rayleigh had shown to contain 0.12 per cent. of helium by volume, a liquid was obtained which, when boiled, gave off first a gas containing about 50 per cent. of helium. It is concluded that helium is less soluble in liquid nitrogen than hydrogen is in liquid air, and that by proceeding as above helium can be separated from a gas in which it is present to the extent of only one part per thousand. It would seem, further, that hydrogen and helium have about the same volatility.

John J. Sudborough has obtained benzil as one of the products of the action of zinc dust and acetic acid on benzoïn. If the action is continued the benzil disappears and the chief product is deoxybenzoïn. The formation of an oxidation product of benzoïn by the action on it of zinc dust and acetic acid appeared so remarkable that the author has studied the action of acetic acid alone on benzoïn, and he finds that small quantities of benzil are formed if benzoïn is heated with six times its weight of glacial acetic acid on the water bath for eight or nine hours. Other reactions, especially those of phosphorus pentachloride on various derivatives of benzoïn, are studied. The nature of the oily compounds formed has not yet been determined. The author describes a method by which he proposes to find whether they are merely slightly impure forms of the solid compound, true stereo-isomerides, or structurally isomeric with solid compounds.

In manufacturing albumen from duck's eggs at Chin-Kiang, China, the whites, the yolks having been separated, are stirred until they are uniformly mixed and are then dried in shallow tin pans at a temperature of from 40° to 50° C. The drying occupies about seventy hours. Sometimes the albumen is put into vats and allowed to ferment. The process is sometimes hastened by the addition of some chemical. The impurities rise in the froth or settle, and the clear albumen is drawn off and dried. The yolks are stirred through sieves and mixed with salt, borax, etc., and sent to market for leather dressing. Salt borax, acetic acid, ammonia, boracic acid, and calcium chloride, are used in the process, but how is not described in the United States consular reports.

Among the new uses found for acetylene, now that it has become so easily procurable, is its employment by H. G. Söderbaum for the quantitative

precipitation of copper in ammoniacal solution, and the separation of copper from metals like zinc, which are not precipitated by ammonia. Acetylene presents the advantage over sulphuretted hydrogen for such use, in that it yields a precipitate that can be filtered and washed very rapidly, and which does not easily become oxidized and pass into solution. The washed precipitate is finally decomposed by dilute nitric acid, the solution is filtered and evaporated to dryness, and the residue is ignited and weighed as oxide.

For drying substances, like soap and wood pulp, C. C. Parsons recommends an oil bath, putting the substance directly into the hot oil, and weighing before and after the hot oil has driven off the moisture. In practice the best results have been obtained with a straight paraffin oil, with a high fire test—in order that the oil may be so freed from volatile matter—that none of it will be carried off with the moisture in the substance to be dried. Ordinarily the whole operation may be completed in twenty minutes.

The use of coke is suggested by H. W. Clarke as a more efficient material than sand for the removal of iron from certain classes of waters. The results of experiments made in Provincetown, Mass., are cited in favor of the efficiency of the method. For removal of iron from a water which does not yield to simple aëration and filtration Lewis M. Bancroft recommends the use of iron and alum.

A method of coloring crystals of haloid salts of potassium and sodium by purely chemical means, through the action of the vapor of those metals upon them, has been found by Giesel. The color is readily developed by heating in a close tube, and is independent of the particular metal employed. The heated potassium bromide and iodide are colored deep blue, potassium chloride dark heliotrope, and sodium chloride yellow to brown. The color appears to permeate the whole crystal, and is permanent in the air and also in water so long as the crystal is undissolved. The solution is colorless and gives a colorless residue. On heating the color disappears.

The indigo prism, used for the detection of potassium by the flame test, is defective because it transmits the red rays given by lithium, strontium, calcium, and barium compounds, as well as those of potassium salts. An instrument invented by Mr. S. G. Newth, is, however, opaque to the red rays of lithium, strontium, calcium, and barium, while it is transparent to those of potassium salts.

In the Seyfert process for making artificial silk from cotton yarn, the cotton is treated with a cold solution of caustic soda, and then dried on a stretcher reel, under strong tension. The yarn is afterward thoroughly washed and dried. The new artificial silk is very strong and noninflammable; and it is claimed that washing does not injure its luster.

A thermochemical method is proposed by Berthelot, by means of which the equivalent of an acid or a base may be determined, even when the compound is of unknown composition.

Atomic Weights.—The results of 64 determinations of the atomic weight of tungsten from the trioxide, made by W. L. Hardin, show a maximum deviation of one and a half unit—from 183.55 to 184.87. The author believes that a discussion of these results, with a view of arriving at the true atomic mass of tungsten, would be useless, that to take the mean of all the results would be unsatisfactory, and that there seems to be no reason why one result should be accepted in preference to any other. It is added that nothing definite was established in regard to the occlusion of hydrogen by the metal. The results obtained by cooling in a vacuum were

practically the same as those reached when the metal was cooled in hydrogen. It was shown in the observations that tungsten attacked the vessels in which the determinations were made, that the oxidation of the tungsten was either slightly volatile, or that a small portion was carried mechanically by the water formed in the reductions, and that the supposed trioxide of tungsten contains nitrogen, and probably hydrogen. "In view of these facts and of the fact that more than 150 determinations have been made of this oxide and nothing definite established, it is evident that the method usually employed in determining the atomic mass of tungsten must be regarded as unsatisfactory."

The atomic weight of tellurium has been identically determined at 127.6 by Brauner, working with the element in combination with metals; Masumi Chikasige, using specimens occurring in native sulphur of high purity, except for the presence of tellurium and selenium; and by Standenmaier, working by an entirely different method from Brauner. The occurrence of tellurium in Japan in association with selenium in native sulphur is noticed by Mr. Chikasige as a fact of great significance in settling the place of this substance in a natural classification of the elements, showing, as it does, so close a habitude existing between the three elements.

A. Scott remarks upon the unsatisfactory nature of the experimental evidence on which the determinations of the atomic weight of carbon rest; erroneous determinations of the expansion produced by the absorption of carbonic dioxide by potash solutions have been employed. When this and other sources of error have been allowed for, the recalculated values of the atomic weight of carbon are 12.008 from the combustion of carbon and 12.050 from the conversion of the monoxide into the dioxide.

By operating on products strictly pure and employing methods free as possible from error, M. Wyronboloff and A. Verneuil find an atomic weight for cerium, of whatever origin, very close upon 92.7. Considering the indirect character of the method employed, this figure can be considered only as approximative to about 0.2 or 0.3.

The values $Ni = 58.69$ and $Co = 58.93$ have been obtained for the atomic weights of nickel and cobalt from analyses of the very carefully dried and purified bromides of those metals. The separate determinations are represented as having agreed admirably among themselves.

Using the process of the oxidation of the double ammonium oxalate, Prof. Brauner has obtained as the atomic weight of thorium 232.5 ($O = 16$), a number considerably lower than that obtained by Cleve.

In their revision of the atomic weight of magnesium, T. W. Richards and H. G. Parker, with four series of determinations, get results in their final experiments that agree surprisingly with Mari-gnac's value obtained from work upon magnesic oxide and sulphate. They make the value $O = 16$, $Mg. = 24.962$.

Joseph Gillingham Hibbs, in his estimates of the atomic weight of nitrogen, finds as the mean of the values given by potassium and sodium nitrates 14.0003.

The atomic weight of arsenic is determined by the same observer, using the hydrogen-chloride method of experiment, as 74.9158.

Chemical Analysis.—In the residual and secondary products resulting in the manufacture of beet-sugar raffinose, by crystallizing with the sugar and modifying its form and increasing the specific rotation, has long caused serious and unexplainable errors. Numerous methods have been proposed for

the isolation of this substance, of several of which W. E. Stone and W. H. Baird have found a combination that has proved successful. From the results of its application the authors conclude that raffinose occurs in appreciable quantities in the juice of the American beet. Certain peculiarities in the crystallization of mixtures of sucrose and raffinose are pointed out in the paper of the authors, who find, when examining crystals under the microscope, that frequently solutions containing apparently but a very small amount of raffinose will completely crystallize into forms that can hardly be distinguished from pure raffinose. This modification of crystalline forms seems to afford a ready means of detecting the presence of small amounts of raffinose.

A very convenient mineral ferment for the destruction of organic matter in toxicological research is described by A. Villiers as produced by the aid of salts of manganese. The material to be treated is placed in a flask with dilute hydrochloric acid. Add a few drops of a solution of a manganese salt and a little nitric acid, which must be renewed as it becomes used up. The mixture must be gently heated. The gases produced are carbonic acid and nearly pure nitrogen, and no disagreeable odors are evolved. Such materials as liver, lungs, etc., are dissolved in a few minutes; muscular fiber takes about an hour, and a fatty mass, seeming to contain products of substitution, remains resisting the oxidizing action of the mixture.

The adoption of albumen in several industries as a clarifier has brought a number of different brands into the market. Some of these can be used with confidence, but others are carelessly made, and even adulterated. Some samples have been found by P. Carles to contain from 12 to 25 per cent. of insoluble coagulated matter, having no clarifying power; gum, dextrine, and gelatin are also used as adulterants. The solution of albumen in water should be transparent if free from coagulated particles. When treated with tannin solution, bitartrate of potash, and grenatine, pure albumen solution should show no change. If the grenatine gives a precipitate, it shows tannin is in excess, and that the albumen is adulterated with some inert body or is overheated in making. If, however, the tannin gives a precipitate in the test tube, it proves the presence of gelatin in the sample.

In samples of fire damp examined by M. H. Le Chatelier for the determination of its chemical composition, the incombustible parts varied from 3.1 per cent. to 44.4 per cent. in volume, and contained from 0 per cent. to 4 per cent. of carbonic acid, 0 per cent. to 0.9 per cent. of oxygen, and 2.2 per cent. to 39.8 per cent. of nitrogen. Nitrogen is invariably present in quantities varying from 0.74 per cent. to as much as 30 per cent. In all cases the nitrogen contained argon, varying in proportions from 0.74 per cent. to 3.28 per cent. of the total nitrogen and argon together. It was concluded that argon in fire damp is not derived from the coal, but is only probably present in fossil air of the Carboniferous period, either absorbed directly or carried in by water.

In a study of the very volatile portions of petroleum obtained by distilling the crude product during the cold winter months the different hydrocarbons were identified by converting them into their chlorine substitution products—an object which was effected by bringing the vapor of the hydrocarbon product together with chlorine. It was found that the petroleum contained no normal butane, but iso-butane; that in isolating the octanes a long series of distillations had to be carried on to obtain pure products, the octanes not beginning to accumulate with any degree of purity until the

twentieth distillation. The petroleum contained no octane boiling above 125°. The distillations in some cases proceeded from the heat of the atmosphere, and were regulated by cooling the still.

As a simple and rapid test whereby chlorine, bromine, and iodine may be recognized with certainty in their organic combinations, J. H. Kastler and W. A. Beatty describe a method by heating such compounds with a mixture of silver and copper nitrates, whereby the organic matter is oxidized and any halogen present is held back by means of silver. The authors have obtained excellent results with this test, and claim for it the advantages of rapidity and certainty; that it makes it possible to determine at a glance which halogen is present; that only very small quantities of the substances are required for its application; and that the reagents needed may be obtained free from halogens without difficulty.

In George Heid's method for determining carbon in iron the sample is treated with copper ammonium chloride and the separated carbon is collected on an asbestos filter, where it is washed successively with water, alcohol, and ether; it is then dried in a crucible and weighed. A stream of oxygen is led into the crucible, which is heated over a Bunsen flame, and the carbon is burned off. The difference in weight is the total carbon. The graphitic carbon is obtained by dissolving the iron in dilute hydrochloric acid, and determining the separated carbon as before.

Experiments by MM. Berthelot and B. Andrée upon the decomposition of sugars under the influence of acids, and especially with production of carbonic acid, were partly conducted in sealed tubes at 100° C., and partly in open flasks at the boiling point. Estimations were made of carbonic acid, carbon monoxide, formic acid, levulic acid, humic acid, and unattacked glucose. Besides glucose, experiments were carried on with levulose, galactose, and maltose. The principal reaction appears to be the formation of humic acid; carbonic acid is also formed in not inconsiderable quantity.

Coloring matters of coal in white wines are distinguished from those of caramel in the process of Alb. d'Aguiar and W. da Silva by the fact that the colors of caramel give, by the usual treatment with amyl alcohol, results very doubtful and sometimes negative, while the coal-tar yellows present a group of very distinct and characteristic colors.

Miscellaneous.—Dr. A. J. Ewart has found that colored bacteria under certain circumstances possess the power of evolving oxygen in greater or less amount. In some the oxygen appeared to be absorbed from the air by the pigment substance excreted from the bacteria. The author did not consider the process a vital one. The substances contained in an alcoholic extract were found to have the same power, though less marked, of excluding oxygen, but the property was soon lost. The purple and green bacteria, in which the pigment forms an integral part of the bacterial plasma, when exposed to radiant energy showed a very weak evolution of oxygen, continuing, under favorable conditions, for an indefinite period. The assimilatory "pigments" are, according to the color, "bacterio-purpurin" and "chlorophyll." The process in this case is a vital one, and the oxygen evolved is apparently derived from the assimilation of carbon dioxide.

Experiments made under the direction of the United States Department of Agriculture to determine in what way the humus of soils influences the nitrogen contents of cereal crops have shown that oats grown on soils rich in vegetable mold contain a larger percentage of nitrogen both in the grain and in the straw than that grown in other soils. The increase was largely in amide nitrogen,

while the percentage in proteids was not greatly augmented, and is therefore not so interesting from an economical as from a chemical point of view. The experiments were suggested by the observation of a large increase in the nitrogen in sugar cane grown in the muck soils of Florida. Since these soils are rich in nitrogen, while they are deficient in nitrifying organisms, the conclusion is drawn that at least a part of the excess of nitrogen which they contain is assimilated directly from the vegetable mold without previous oxidation to nitric acid. The addition of phosphatic fertilizers tended to diminish the actual percentage of nitrogen in the crop harvested.

Thomas slag, or that resultant from the basic Bessemer process, is considered by F. E. Thompson a mixture of chemical compounds, and is regarded as but slightly inferior as a fertilizer to dissolved bone or phosphate rock, and as superior to all insoluble phosphates. Its value as a fertilizer is increased if it is exposed to the weather several years before grinding; but it may be ground as soon as it is cold. The fertilizer value depends on the quantity of phosphoric acid present and on its condition.

In experiments by Prof. C. F. Mabery and L. Goldsmith on the influence of varying quantities of alum on the peptic digestion of blood fibrin the digestive action was retarded in every case by alum, even when it was present in very small quantity. In order to test the action under actual conditions, two loaves of bread were prepared, one with alum baking powder and the other with cream-of-tartar soda powder. Peptic digestion was retarded after taking the bread containing alum. While retardation also took place in experiments made with salicylic acid, boric acid, and formalin, the effect was slight compared with that produced when alum was used.

From experiments on the action of water of various degrees of purity upon lead pipes, U. Antony and T. Benelli have found that the greatest solvent action was with distilled water, and more when saturated with air, while aëration with carbon dioxide retarded the action one half. Water containing calcium or sodium sulphate had about half the solvent power of pure air, and its action was retarded when carbon dioxide was present. Aëration with carbon dioxide, on the other hand, nearly doubled the solvent power of bicarbonate of lime, which without it was only about one fourth that of pure water. Common salt also had little action except when carbon dioxide was present, and seemed often slightly to diminish the solvent powers of other salts. The results, reported in the "*Gazzetta Chimica Italiana*," are somewhat at variance with the generally accepted ideas.

The antiseptic powers of formic aldehyde, commercially known when dissolved in water as "formalin" or "formol," are described by Dr. Winter Blyth as "extraordinary." One part in 10,000 suffices to preserve milk, soup, and similar articles for a considerable time; and this fact suggested that it might have true disinfecting powers. The aqueous solution called formalin does not give very satisfactory results when exposed in open dishes, as it has the peculiar property of changing by polymerization into a white solid substance, which is far less efficient as a disinfectant. It has been found, however, that when the gas is dissolved in a solution of calcium chloride and afterward heated under pressure, practically dry formic aldehyde is driven off. A comparative trial under similar conditions with sulphurous acid, employing the method commonly used for disinfecting with sulphurous acid, lasting nineteen hours, gave the results; no growth under either disinfectant of diphtheria bacillus, and no growth of typhoid bacillus and anthrax bacillus un-

der formic aldehyde, while the growth of both bacilli under sulphurous acid was good. After the experiments the formic-aldehyde room could be entered with but little inconvenience in a very short time, while an hour was required to make the sulphurous-acid room habitable. Dr. Blyth considers formic aldehyde greatly superior to sulphurous acid as a disinfectant.

In the investigation of the behavior of bacteria toward chemical reagents, by T. Paul and B. Krönig, a definite number of organisms were exposed to the action of a solution of the disinfectant for a definite time; the disinfectant was then completely removed, and the number of organisms still capable of development was determined. The spores of the anthrax bacillus were used in most of the experiments. The different salts of a metal possessing a specifically poisonous character, as, for instance, those of mercury, were found to be very unequally deadly. Other things being equal, those salts most fully susceptible of electrical dissociation are the most active. A solution of mercuric chloride contains many more mercuric ions than a mercuric-cyanide solution of the same concentration, and is correspondingly more deadly. The disinfecting power of a solution of mercuric chloride is greatly diminished by the addition of sodium chloride, a fact of importance in view of the frequent addition of salt to mercuric-chloride solutions to increase their solubility. Similar results are obtained with silver salts. The disinfecting power of solutions of bases or of acids depends, on the whole, on their strength—that is to say, on their degree of electrolytic dissociation. The specific action of the anion and of the undissociated molecule is, however, not to be neglected. Silver nitrate shows the greatest disinfecting power when dissolved in 50-per-cent. alcohol and mercuric chloride in 25-per-cent. alcohol. Solutions of these salts in absolute alcohol are practically without effect on anthrax spores.

In a discussion on "The Teaching of Chemistry," in the International Congress on Technical Education, at London, Dr. Otto N. Witt, of Berlin, said that he could not admit any fundamental difference in the methods of research of pure and applied chemistry, consequently he could not admit the necessity of a difference of instruction for the two. A well-organized instruction in pure chemical science would be the best preparation of any young chemist for his future career. Schools for producing specialists are not wanted; specialism comes as a matter of course in later life. Chemists are needed who embrace their science as a whole, and who are incapable of separating practice from theory or theory from practice.

In their experiments on the direct union of carbon and hydrogen Messrs. Bouc and Jordan found that at a temperature of $1,200^{\circ}\text{C}$. or thereabouts carbon unites directly with hydrogen to form methane, while no acetylene or other unsaturated hydrocarbon is found at this temperature; that when the electric arc is produced between carbon terminals in an atmosphere of hydrogen methane and acetone are to be found. On continuing the passage of the arc a state of equilibrium between hydrogen, methane, and acetylene is finally established; and that the same state of equilibrium is produced when the electric arc is passed in an atmosphere of either methane or acetylene under similar conditions.

By fractional distillation of pentane from American petroleum, S. Young and G. L. Thomas have obtained pure normal and iso-pentane, the boiling points of which under normal pressure are 36.3 and 37.95°F . respectively. The critical data of normal pentane (temperature, pressure, and volume) as

found by Mr. Young are 197.2° , 25.100 millimetres and 4.303 cubic centimetres; the thermal and other data obtained lead to the conclusion that in the liquid state and at the critical temperature the molecules of pentane are simple ones, as in the gaseous state.

M. Berthelot has found that sulphuric acid absorbs hydrogen completely at 250°C ., and even in the cold. During two months, 75 per cent. of the hydrogen present was absorbed, with production of a corresponding amount of sulphur dioxide. This reaction does not take place with the diluted acid. A thermochemical study shows that the dilution of the acid changes the thermal sign of the reaction.

Investigations by Prof. F. H. Storer, of the Bussey Institution, on some of the chemical substances in the trunks of trees show that other substances besides starch are stored up in large quantities as reserve food material in the winter, to be converted into sugar in the spring.

The investigation of the formation of organic bases by plants of the orchid family, begun by M. de Wildemann, has been continued and extended by Dr. E. de Droog. Of the 104 species of orchids examined nine are regarded as producing alkaloids, some in all their parts, and others locally. The function of these alkaloids is believed to be defensive.

The useful products obtained from garbage, where utilization processes of disposal are employed, are, according to W. E. Garrigues, grease and tankage. Grease is used chiefly in the manufacture of glycerin and candle stock, but makes only a very poor soap. Three methods of extraction are in use: By steam, by means of sulphuric acid, and by the use of naphtha. Tankage is used by manufacturers of fertilizers.

The results of studies of the presence of tin in canned goods by J. R. K. Cowan confirm those of previous investigators of the subject. Tin was found present in every can examined, in quantities of from 60 to 150 milligrammes per kilogramme. Granting that this tin is present in a form that can be acted upon in the human system, and considering the large consumption of canned goods, it seems to follow that tin is less toxic than has been supposed, and that it can not be a cumulative poison. The presence of lead was not detected in any instance.

M. C. Friedel, remarking upon the analysis of some fatty matter found in an Egyptian tomb at Abydos, consisting chiefly of palmitic and stearic oxide, and doubtless the tallow of beef or mutton, observed in the French Academy of Sciences that it was interesting to find that the fatty acids, and even their glycerides, have been capable of preservation for thousands of years. Among the substances found in the small vases were pulverized lead sulphide mixed with a quantity of fatty matter, evidently a cosmetic used as antimony sulphide is still employed in the East.

The sanitation of the manufacture of matches with white phosphorus is regarded by M. Magitot as a problem simple and easy of solution. The method of sanitation contemplated by the author consists of two orders of means based on the two factors of injury, which are phosphorism and necrosis. To phosphorism he would oppose the ventilation of the work by artificial means, powerful enough to withdraw the poisonous emanations from the workers. To necrosis he would oppose the principle of selection: that of recruitment and maintenance from the hands of persons entirely free from any injury of the mouth or the jaws which might furnish an opening for the chemical mischief.

While the carbides obtained from the alkaline earths acting with water produce acetylene, some

other metallic carbides, like those of aluminum and beryllium, give methane, and others, like those of chromium, molybdenum and titanium, are not acted upon at ordinary temperatures. M. Moissan, having prepared uranium carbide, C_3U_2 , finds that, while it does not differ to any marked extent in its other general chemical and physical properties from other substances of the same class, it gives with water a complex series of solid, liquid, and gaseous hydrocarbons. Of these, only the gaseous compounds have been completely examined. They give from 13 to 15 per cent. of hydrogen, from 78 to 80 per cent. of methane, from 5 to 7 per cent. of ethylene, and a trace of acetylene. The author ascribes the presence of the hydrogen to a secondary reaction depending on the power of the lower oxide of uranium to decompose water, and that of the acetylene to the existence of a little calcium carbide as an impurity.

The scope of the work of Dr. L. Marchlewski on "The Chemistry of Chlorophyll" is limited to the consideration of the phase of chlorophyll as a green compound capable of dyeing green. It is not, however, as the author shows, a unitary coloring matter, but a mixture of two pigments with a fatty acid. Pure chlorophyll—that is, the substance which is extracted by alcohol from the green parts of plants—has not yet been isolated. The substance called pure crystallized chlorophyll described in chemical literature consists probably of derivatives of pure chlorophyll. Foremost among such derivatives stands chlorophyll as obtained by the action of weak, especially organic, acids upon chlorophyll. By treatment with stronger acids it is transformed into phylloxanthin and phylloeyanin, which have recently been studied by Schunck. Phylloeyanin, again, by treatment with concentrated acids or by alkalis, is transformed into phyllotaonin, the best characterized derivative of chlorophyll. The original unmodified chlorophyll may be transformed by alkalis into alkachlorophyll, and this, on treatment with acids in the presence of alcohol, yields an alkylether of phyllotaonin. On heating phyllotaonin with alkalis at a high temperature we obtain phylloporphyrine. Each of these products is described in full in the book, with the method of its preparation, its properties, its chemical composition, its spectroscopic behavior, and its fission products.

It is found by M. E. Vigouroux that the alkali metals, zinc, aluminium, lead, tin, antimony, bismuth, gold, and silver dissolve silicon more or less, but do not combine with it directly. Iron, chromium, nickel, cobalt, manganese, copper, and platinum, on the other hand, form definite silicides.

In his investigations of the physiological chemistry and coagulation of milk, Dr. D. Fraser Harris has found that the small globules, as well as the large, contain fat in direct, and "caseinogen" in indirect proportion to their size. Milk that was heated nearly to boiling point gave the best results with artificial digestion.

The combustion of acetylene in an ordinary fish-tail burner is, according to M. N. Grehant, complete, not the least trace of a combustible gas containing carbon being found in the products. With mixture of acetylene and air, the most violent explosion was produced in the author's experiments, when the volume of air was nine times that of acetylene.

CHILI, a republic in South America. The Constitution is modeled after European parliamentary government rather than the system of the United States that other South American countries have copied. The legislative power belongs to the national Congress, consisting of a Senate and a House of Deputies. The Senate has one third as many

members as the House of Deputies, in which each province is represented by as many members as there are multiples of 30,000 in the number of its population, with one additional member for a fraction over 15,000. Senators serve six and Deputies three years. Every adult male citizen who can read and write has a vote. The proportion of electors is about 1 in 18 of the population. The President is elected for five years by an electoral college chosen by ballot. The President elected on June 25, 1896, is Federico Errazuriz. The Cabinet at the beginning of 1897 was composed as follows: Premier and Minister of the Interior, A. Zanartu; Minister of Foreign Affairs and Worship, H. de Putron; Minister of Justice and Public Instruction, A. Ibanez; Minister of Finance, F. Fabres; Minister of War and Marine, M. Bulnes; Minister of Industry and Public Works, Francisco Baiza.

Area and Population.—The area of Chili is 293,970 square miles. The population at the beginning of 1895 was estimated at 2,963,687, on the basis of the imperfect census of 1885. The corrected official estimate is 3,413,576, including 50,000 Indians. The Chilians are mostly of pure Spanish descent. Immigration is encouraged by the Government, which appropriated 867,000 pesos for the purpose in 1896. The number of immigrants is small, however, numbering from Jan. 1, 1894, to July 31, 1895, only 871, consisting of Italians, French, Spanish, and a few Germans and English. The number of marriages in 1895 was 14,779; of births, 110,154; of deaths, 92,197; excess of births, 17,957. Education is furnished free by the Government. The university and professional schools had 1,190 students in 1894, the provincial colleges 8,710 in 1895. There were in that year 1,248 primary schools, with 2,145 teachers, 114,565 enrolled pupils, and 71,901 in average attendance.

Finances.—The revenue in 1894 was 83,436,000 pesos, and the expenditures 78,482,000 pesos. For 1895 a revenue of 77,354,000 pesos was counted on, and for 1896 it was estimated at 91,010,000 pesos, and expenditure at 86,989,000 pesos (1 peso = 91 2 cents). For 1897 the estimate of revenue is 79,200,000 pesos, of which 22,500,000 pesos come from import duties, 38,600,000 pesos from export duties on nitrate, 14,000,000 pesos from railroads, 1,500,000 pesos from sales of public property, 1,000,000 pesos from posts and telegraphs, 550,000 pesos from stamps, 400,000 pesos from rentals, etc., 250,000 pesos from the export duty on iodine, and 400,000 pesos from miscellaneous sources. The expenditures for 1897 were estimated at 79,155,971 pesos, of which 20,013,340 pesos are for public works and industry, 18,035,083 pesos for finance, 11,864,456 pesos for war, 9,348,000 pesos for justice and public instruction, 8,905,713 pesos for the interior, 8,546,983 pesos for marine, and 2,442,396 pesos for foreign affairs, worship, and colonization. The foreign debt on Dec. 31, 1895, amounted to £13,539,760. There was an internal debt, including municipal loans, of 36,624,581 pesos. A new loan of £4,000,000, bearing 5 per cent. interest, was raised in London in July, 1896, to build railroads and public works.

The Army and Navy.—The law of Nov. 22, 1895, fixed the strength of the regular army at 9,000 men, organized in 9 infantry, 8 cavalry, and 5 artillery regiments, and a corp of engineers. The militia system was reorganized in 1896, and every able Chilian between the ages of twenty and forty is enrolled in the National Guard. About 25,000 men a year thus receive some military training.

The Chilian navy consists of 4 ironclads, 5 protected cruisers, an efficient torpedo flotilla, and 13 small cruisers and gunboats. The latest accessions are the powerful first-class cruisers "Esmeralda," launched in 1896, and "Congresso," built in France.

There were 2 second-class cruisers building in 1897. The belted cruiser "Esmeralda" has a coal capacity of only 550 tons, but is engined for a speed of 23 knots and has as formidable a battery as any cruiser twice her size. The new second-class cruisers "Presidente Errazuriz" and "Presidente Pinto," built in France, have a displacement of 2,080 tons and a speed of 19 knots. The cruiser "Blanco Encalada," built in England to replace the vessel of that name which was sunk in the civil war, has a displacement of 4,500 tons and a speed of 22 knots. The torpedo fleet comprises 4 new destroyers, constructed in England, 5 first-class and 8 third-class torpedo boats, and some smaller ones for harbor defense.

Commerce and Production.—About half the population is supported by agriculture. The wheat crop is about 28,500,000 bushels a year. Over 500,000 cattle and 2,000,000 sheep are raised annually. Chili is an important mining country, producing 400,000 quintals of copper, 160,000 quintals of silver, 500 kilogrammes of gold, and 10,000,000 tons of coal every year, with manganese and minor products. Most important of all is the nitrate industry. The nitrate fields, embracing 89,177 hectares, are estimated to contain 2,316,000,000 quintals of nitrate. The product was 1,082,285 quintals in 1894. The total value of imports in 1894 was 54,483,616 pesos; of exports, 72,040,420 pesos. Of the former sum 12,058,135 pesos represent articles of food, 10,438,528 pesos raw materials for manufactures, 9,150,441 pesos machinery, 7,352,791 pesos textile manufactures, 3,223,041 pesos domestic articles, 2,629,262 pesos railroad materials, 1,899,417 pesos articles of clothing and personal adornment, 892,820 pesos wines and beverages, 891,311 pesos objects of art and taste, 686,222 pesos drugs, 4,727,477 pesos miscellaneous merchandise, and 489,171 pesos specie and bank notes. The exports of nitrate were 44,727,513 pesos in value; iodine, 3,332,780 pesos; other minerals, 13,265,987 pesos; wheat, 3,302,014 pesos; other agricultural produce, 5,798,032 pesos; manufactures, 36,223 pesos; miscellaneous merchandise, 341,442 pesos; specie, 529,068 pesos; foreign exports, 707,361 pesos. Duties were imposed on 34,007,263 pesos worth of the imports and 48,060,293 pesos of exports. Of the exports of nitrate 39 per cent. goes to Germany, 17 per cent. to France, 13 per cent. to the United States, 11 per cent. to Great Britain, 11 per cent. to Belgium, and 9 per cent. to other countries.

The division of the foreign trade among foreign countries in 1894 is shown in the following table, giving the value of imports and exports in pesos:

COUNTRIES.	Imports.	Exports.
Great Britain	25,491,859	53,255,112
Germany.....	12,376,327	9,672,403
United States	3,784,456	1,667,745
Peru.....	3,587,930	1,479,820
France.....	2,281,334	2,002,852
Argentine Republic.....	4,169,891	59,999
Italy.....	556,341	176,487
Brazil.....	140,053	117,545

Navigation.—The number of vessels in the foreign trade entered at Chilean ports during 1894 was 1,761, of 2,269,860 tons; the number cleared was 1,681, of 2,555,540 tons. The tonnage entered in the coasting trade aggregated 6,254,836. The commercial marine on Jan. 1, 1895, comprised 146 sailing vessels, of 75,711 tons, and 42 steamers, of 29,931 tons.

Communications.—The railroads of Chili in 1894 had a total length of 1,782 miles, of which the Government owned 686 miles, and 600 miles will revert to the Government. The capital expended on Government lines was 64,459,179 pesos, and on

aided lines 13,080,832 pesos. There were 436 miles of new railroads in process of construction in 1895.

The Government telegraph lines had a total length of 6,965 miles on Jan. 1, 1895, with 8,330 miles of wire. The number of dispatches in 1894 was 1,044,065. Railroad and telegraph companies had 4,500 miles of telegraph lines.

The postal traffic of 1894 comprised 22,249,296 letters, 2,092,672 circulars, and 28,537,020 newspapers, etc.; receipts, 849,139 pesos; expenses, 894,688 pesos.

Political and Financial Affairs.—At the beginning of 1897 a general improvement was noticeable in the commercial situation, and a return of confidence that had been wanting since the revolution of 1891. The conversion of the paper money had a favorable influence, especially on the foreign community, although some of the landowners had been obliged to sacrifice their property. The settlement of all the remaining English claims arising out of the revolution removed a source of irritation both to the waiting claimants and to the Chileans, who felt annoyed that foreigners, owing their fortunes to the favorable conditions of the country, should demand compensation from the Government which no Chilean could claim for like injuries. The vexed question of frontiers with the Argentine Republic made marked progress toward an amicable settlement. By the treaty of April, 1896, any dispute arising between the commissioners engaged in marking the boundary line was to be referred to the Queen of England for arbitration. Although the people of each country held tenaciously to their different interpretations of the old boundary treaty, they were disposed to rely on the award of jurists rather than appeal, as they were wont, to the arbitrament of war to bear out their pretensions. The new war ships arrived from England made Chili once more the chief naval power of South America. Both exports and imports had been increasing, and considerable foreign capital was brought into the country. This recovery, however, was of short duration. Before a third of the year had passed stagnation in business and contraction of credits ensued, and the Government had to face a probable deficit. The owners of the nitrate mines had ceased shipping for three months, on account of the low price in Europe, which was due partly to overproduction and partly to a decrease in consumption, the place of nitrates being taken in Europe and the United States by artificial manures. As the export duty on nitrates has furnished half the revenue of the Chilean Government, it created embarrassment when this source of income was cut off altogether. To aid in discovering new outlets for this product, the Government remitted the duty on cargoes sent to China and Japan, sent special agents to the United States, and promised to spend \$75,000 a year or more in making its usefulness known in fresh markets. A new commercial treaty was concluded with Brazil in May. By the conversion law all bank notes were to be withdrawn before the end of the year. As a serious restriction of the circulating medium was feared, the Minister of Finance proposed to Congress to allow banks to issue notes against deposits with the Government of 20 per cent. of their face value in gold and 80 per cent. in bonds, while the Government should undertake to redeem any of these notes on demand in gold.

When Congress was opened on June 1 the President of the republic said that there were ample funds to meet the estimated deficit of \$6,000,000. The budget for 1898 showed a prospective surplus, expenditure being cut down by \$3,000,000 to \$79,100,000, while revenue was calculated at \$79,700,000, an increase of \$3,700,000. The currency conversion was already practically completed, the state

notes alone remaining unredeemed. The banks had reduced their debt to the Government from \$24,000,000 in November, 1896, to half that amount. The economic crisis was attributed to want of capital. Just as the congressional session began four of the banks closed their doors. On June 20 the ministry resigned, and five days later a coalition Cabinet was formed by Señor Orrego Luco, in which the Liberal element largely predominated. It was composed as follows: Minister of the Interior, Augusto Orrego Luco; Minister of Foreign Affairs, Carlos Morla Vicuña; Minister of Finance, Juan E. Tacornal; Minister of Justice, Amunategui Rivera; Minister of War and the Navy, Benjamín Vergara; Minister of Industry and Public Works, B. Prats.

Owing to the balance of parties, the new Cabinet was not a strong one. It promised to follow in the main the policy of its predecessors, and, above all, to maintain the conversion, to which the good faith and credit of the country were declared to be bound. The banking crisis had led to many foreclosures, and a great fall in the value of property was experienced. With the falling off of imports, and the consequent loss of duties collected from them, and the large decrease of nitrate duties, a deficit of at least \$8,000,000, instead of a surplus, was anticipated at the end of the year. On Aug. 9 the ministry resigned. Valdes Cuevas organized a new one, composed of Liberals, which promised to maintain the conversion and to protect national industries.

CHINA, an empire in eastern Asia. The Government, as defined in the collected regulations of the Tsing dynasty, is based on the Government of the family. The Emperor exercises supreme paternal authority. The acts of the Government are largely regulated by precedents extending back thousands of years. The chief governmental body is the Grand Council. The imperial administration is directed by the Cabinet, consisting of 2 Chinese and 2 Manchu members, assisted by 2 members chosen from the Hanlin College, who watch against any contravention of the regulations of the dynasty or the laws of Confucius. Subordinated to the Cabinet are the Boards of Civil Appointments, Revenues, Rites and Ceremonies, Military Affairs, Public Works, Criminal Justice, and the Admiralty, each having a Chinese and a Manchu presiding jointly over it. The Board of Censors, consisting of 40 to 50 learned mandarins with a Chinese and a Manchu at their head, acts as a supreme advisory body, and the censors are privileged individually to present memorials of criticism or remonstrance to the Emperor on any public matter. One censor must be present at all meetings of Government boards. The reigning Emperor is Kwangsu, born Aug. 2, 1872, son of Prince Chun, the seventh son of the Emperor Taokwang, who succeeded his nephew, the Emperor Tsaichun, on Jan. 12, 1875, and reigned under the regency of his aunt and adoptive mother, the dowager Empress Tshui, till March 4, 1889, and then assumed full powers of Government.

Area and Population.—The area of the Chinese Empire is estimated at 4,218,401 square miles, and the population between 350,000,000 and 400,000,000. Official estimates for the provinces of China proper are given in the table above. The dependencies of China are Manchuria, having an area of 362,310 square miles and about 7,500,000 inhabitants; Mongolia, the area of which is 1,288,000 square miles and the population perhaps 2,000,000; Tibet, with an area of 651,500 square miles and an estimated population of 6,000,000; Tsungaria, with an area of 147,950 square miles and 600,000 inhabitants; and Chinese Turkestan, estimated to cover 431,800 square miles, with 580,000 inhabitants. The prevailing religious system

PROVINCES	Square miles.	Population.
Pechili.....	58,949	17,937,000
Shantung.....	53,762	36,247,835
Shansi.....	56,268	12,211,453
Honan.....	66,913	22,115,827
Kiangsu.....	44,500	20,905,171
Nganhwei.....	48,461	20,596,288
Kiangsi.....	72,176	24,534,118
Che-Kiang.....	39,150	11,588,692
Fukien.....	38,500	22,190,556
Hupoh.....	70,450	34,244,685
Hunan.....	74,320	21,002,604
Shansi.....	67,400	8,432,193
Kansu.....	125,450	9,285,377
Szechuen.....	166,800	67,712,897
Kwangtung, with Hainan.....	79,456	29,706,249
Kwangsi.....	78,250	5,151,327
Kweichow.....	64,554	7,669,181
Yunnan.....	107,969	11,721,576
Total.....	1,312,328	388,253,029

is that of Confucius. Buddhism and Taoism are also widely expanded. Islamism counts about 30,000,000 adherents in Yunnan and the northeast. In the mountainous districts are savage tribes of aborigines, who practice nature worship. The Roman Catholic Church in 1881 had 1,092,818 parishioners under the ministration of 41 bishops, 664 European priests, and 559 native priests. The number of Protestant converts in 1887 was estimated at 33,750. Education is very general. A knowledge of the literary language and the Chinese classics is not general, but is assiduously cultivated by a numerous literary class, for appointments to public office are bestowed on those who pass the annual examinations for literary degrees. Since 1887 aspirants to office and honors have been examined in mathematics as well as in the Chinese language, literature, and laws. There are many schools in which the Western languages and sciences are taught. In the foreign college at Peking, which is supported by the Imperial Government, European and American professors teach English, Russian, French, German, mathematics, astronomy, meteorology, physics, chemistry, anatomy, and physiology. The Government has also established military and naval schools for the training of officers in modern warfare. The number of foreigners residing in the open treaty ports on Dec. 31, 1895, was 10,091, comprising 4,084 British subjects, 1,325 Americans, 875 French, 812 Germans, 805 Portuguese, 669 Japanese, 461 Spaniards, 373 Swedes and Norwegians, 125 Danes, 116 Russians, 108 Italians, 75 Austrians, 71 Belgians, 43 Dutch, and 149 of other nationalities.

Finances.—The revenue is mainly collected by the provincial authorities. The Imperial Government calls upon them to transmit to Peking the surplus over their own requirements, usually making a requisition for a fixed sum from each province calculated on the collections for past years. In national emergencies extraordinary contributions are demanded. When owing to famine or poverty the revenue of a province is insufficient for its own needs the Imperial Government remits the provincial contribution, and sometimes gives assistance out of its own treasury. It is estimated that not more than a third of the surplus revenue of the provinces is actually paid over by the officials to the imperial authorities.

A recent estimate makes the present imperial revenue 89,979,000 taels, equal to £14,829,000. The land tax yields a little over 25,000,000 taels, which is believed to be much less than the amount actually collected, which itself is capable of a large expansion. Estimating 300,000,000 acres under cultivation, and an average tax of two thirds of a tael per acre, the Government receives only 12½ per cent. of the amount collected. The salt tax, yielding some-

thing over 13,500,000 taels, has been slightly increased since the war and could be much further increased. The officials and middlemen connected with the monopoly retain two taels for every one that they send to Peking. The taxes levied in kind known as tribute rice would yield 1,000,000 taels more if greedy officials did not control the transportation. The actual yield is 5,000,000 taels. The revenue from native-grown opium is 2,000,000 taels, two fifths as much as is derived from half the quantity imported from India. The imperial customs yield nearly 22,000,000 taels. From the *likin* the Imperial Government derives nearly 13,000,000 taels, and it is constantly demanding larger remittances from the provincial authorities, causing them to increase the aggravating restrictions on internal trade. Three or four different sets of officials collect taxes from the same goods, and sometimes even compete with each other. English merchants suggest that their Government refuse to accede to the revision of the tariff desired by China, except on condition that all the taxes on trade be consolidated, which the Peking authorities might be induced to agree to, since they could thereby derive a much larger revenue from the internal commerce, exceeding as it does tenfold the foreign commerce of the empire. The total expenditure is taken to be the same as the revenue in amount. The chief items are 36,250,000 taels for the general provincial administration and 19,000,000 taels for the administration of the metropolis, including the expenses of the Manchu garrison and of the imperial household. No attempt is made to adjust taxation or expenditure by means of an annual budget, either provincial or imperial. After the demands of Peking are satisfied the provincial authorities are left to dispose of the rest of the revenue in their own way, the auditing of their accounts in Peking being a mere formality. None of the provinces, in fact, furnishes reports of expenditures. Of the revenue collected by the provincial authorities, including all except the imperial customs, about two thirds are applied to the civil and military expenditure of the provinces. The sums actually paid by the taxpayers are believed to be at least three times as much as ultimately reaches the public treasury, the extravagant system of collection costing as much as the net revenue, and the irregular perquisites retained by the officials absorbing as much more. The gross revenue for 1896, as returned by the Board of Revenue, is much less than the above estimate, amounting to 73,300,000 taels, or about £12,000,000, made up as follows: Imperial maritime customs, 15,500,000 taels; grain and land taxes, 10,800,000 taels; salt *gabells*, 12,200,000 taels; ordinary taxes on home produce, 2,600,000 taels; *likin*, 13,400,000 taels; various license fees, 3,500,000 taels; miscellaneous duties, 15,300,000 taels. The imperial customs collected amounted to 22,500,000 taels, from which must be deducted the cost of collection, about 10 per cent., and the amount of opium *likin*, etc., paid to provincial authorities.

The maritime customs, under European administration, make annual reports. The receipts for 1895 amounted to 21,385,389 haikwan taels (1 haikwan tael = 81 cents), of which 6,039,582 taels were import duties, 9,025,557 export duties, 1,216,361 taels duties collected from the coasting trade in foreign merchandise, 478,817 taels tonnage dues, 520,927 taels transit dues, and 4,104,145 taels the commuted *likin* tax on foreign opium.

The debt of the Imperial Government previous to the war with Japan consisted of a loan of £627,675 contracted in 1874, one of £1,604,276 borrowed in 1878, silver loans of £1,505,000 and £2,250,000 raised in 1884 and 1886, a German loan of £250,000 borrowed in 1887, and a loan of £1,635,000 in silver

raised in 1894; total outstanding on Dec. 31, 1895, £7,871,951. In 1895 a gold loan of £3,000,000 was raised, and about £2,000,000 more were advanced by foreign houses and £5,000,000 raised by domestic loans. The Japanese indemnities amount to about £40,000,000, making the present indebtedness of the Imperial Government nearly £58,000,000. The Japanese war indemnity was fixed at 200,000,000 kuping taels (1 kuping tael = 73 cents), and 30,000,000 taels more were demanded for the evacuation of the Liaotung peninsula. To meet these obligations the Government contracted a new foreign loan of the nominal amount of £15,820,000 in 1895 at 5 per cent., and in March, 1896, an Anglo-German loan of £16,000,000, also at 5 per cent. The total foreign debt now outstanding is about £38,800,000.

China received from these loans about £30,500,000, and up to 1897 had paid £21,500,000, and had a balance remaining in London of £5,000,000, sufficient to pay the installments due in 1897. Of the £4,000,000 applied to other purposes, £1,000,000 has been expended in the purchase of ships and arms and £750,000 was deposited in the Russo-Chinese Bank as a guarantee that China will fulfill the obligations undertaken in connection with the Siberian Railroad through Chinese territory. The sum still due Japan is £16,450,490, being the equivalent of 100,000,000 taels at the agreed rate of sterling exchange, though the sterling value of that sum after Japan adopted the gold standard fell to £15,000,000. Japan desires that the liquidation should be effected at once, being in need of gold, and China was anxious to clear off the indebtedness by raising a new loan of £16,000,000, because £1,850,000 of interest already paid on the part of the indemnity still due will be refunded if the whole is paid before May 8, 1898, instead of dragging along the payments till 1902. For the projected loan China has offered as security the unhypothecated remainder of the imperial customs revenue, which is £600,000 per annum, and the guarantee of the Board of Revenue. The total foreign indebtedness of the Chinese Government is about £38,500,000. In September a contract was made with a British syndicate for a loan of £16,000,000 to pay the Japanese indemnity, which was taken at 94, and for other loans for the construction of railroads. The indemnity loan is secured on the customs, the *likin*, and the salt revenue. The right of foreign control of the *likin* was acknowledged, but the Chinese Government refused to admit of an extension of foreign administration to the collection of *likin* taxes, as advocated by Sir Robert Hart, chief of the imperial customs, and supported by the British minister. The British and other governments have agreed in principle to the revision of the tariff fixed in 1858 by the treaty of Tientsin. The fall in the price of silver has greatly increased the burden of the foreign debt of China, payable in gold, and the amount of the debt has been enormously swelled by the addition of the war indemnity to Japan. The Chinese Government has therefore asked to be permitted to double the present tariff rates. These rates, owing to the fluctuation in market prices, fall considerably short of the 5-per-cent. *ad valorem* basis upon which the tariff of 1858 was framed, and probably do not represent on an average more than 3½- or 3¾-per-cent. *ad valorem*. Three quarters of the present customs revenue has been mortgaged to secure loans to meet the war indemnity and other expenses connected with the disastrous conflict with Japan, and before the indemnity can be cleared off the remaining portion of the revenue now collected from foreign trade must be pledged.

The Army.—The military forces of the Chinese Empire have two separate organizations. The Army

of the Eight Banners is recruited from the descendants of the Manchus, Mongols, and Chinese who put an end to the Ming dynasty in the seventeenth century, and placed the reigning dynasty in power. The other organization is the Army of the Green Flag, the national Chinese army, raised and maintained by the provincial governments. There are besides a number of small independent corps and the irregular troops that are raised and disbanded according to necessity. The troops of the Eight Banners are cantoned in Peking and 25 neighboring towns in the province of Pechili or garrisoned in the Chinese provinces, Mongolia, and Turkestan. Their effective strength is perhaps 100,000 men, armed for the most part with modern weapons and trained in European tactics. The Army of the Green Flag, the separate divisions of which are commanded by the viceroys and governors of the provinces, has a nominal strength of 539,000 men, but they are almost without military instruction, insufficiently armed, and devoid of military spirit and discipline. Since the Japanese war plans have been adopted for organizing new formations on European models, but no results have been obtained so far beyond the extension of the study of the art of war.

The Navy.—The battle ships formerly belonging to China, and attached to the northern squadron, were lost in the battles of Yalu and Wei-Hai-Wei during the war with Japan. The naval forces are still, like the national army, organized and controlled by the provincial administrations. The only vessel of the Peiyang or northern fleet now is the torpedo-catcher "Fei-Ying," of 850 tons, built in 1895. The Chinese Government in 1896 ordered 3 protected cruisers to be built at Stettin. The Foo-chow squadron consists of an ironclad gunboat, 6 cruisers, built between 1883 and 1890, 2 armed dispatch vessels, 4 transport avisos, and 2 paddle-wheel gunboats. The Shanghai squadron consists of 2 cruisers, 1 frigate, 5 gunboats, 6 floating batteries, and 3 armed transports. A new cruiser is being built. The Canton squadron comprises 3 torpedo cruisers, built in 1890 and 1891, 16 gunboats, 6 revenue cutters, and 42 torpedo boats, and has in construction 1 swift dispatch boat, 4 gunboats, 2 river gunboats, and 1 torpedo boat. The torpedo boats belonging to the other squadrons number 30 of the first and 13 of the second class.

Commerce and Production.—The Chinese are mostly engaged in agriculture, raising a great variety of products by careful and thorough methods of cultivation. Wheat, millet, corn, barley, and other cereals are grown in the northern provinces and great quantities of rice in the south, where sugar is cultivated extensively also. The tea districts are in the western and southern provinces. The silk culture is widespread, the best silk coming from Kwangtung, Kiangsu, Che-Kiang, and Szechuen. Silk mills have recently been established in Shanghai and Canton and large cotton mills in the former place. Coal, of which large beds underlie the whole of central and northern China, is mined at Kaiping and Han-Kow. Copper mines, which have long been worked in Yunnan, have been developed recently by Japanese metallurgists.

The imports in 1895 amounted to 171,696,715 taels, and exports to 143,293,211 taels, taking the prices in the ports of China. Adding to the value of the exports and deducting from that of the imports the duties and other charges, the value of the imports was 150,244,490 taels, and that of the exports 160,696,753 taels. The chief imports in 1895 were opium, of the total value of 29,164,800 taels; cotton manufactures, 53,074,164 taels; raw cotton, 568,917 taels; woolen goods, 3,723,246 taels; metals, 7,189,409 taels; coal, 3,394,272 taels; kerosene, 6,615,297 taels; seaweed and fishery products, 5,135,-

902 taels. The value of tea exported in 1895 was 32,449,862 taels; of raw silk and silk goods, 50,687,102 taels; of straw braid, 2,494,073 taels; of sugar, 2,129,779 taels; of cow and buffalo hides, 980,944 taels; of paper, 1,986,423 taels; of clothing, 2,189,969 taels; of chinaware and pottery, 1,541,132 taels. The total export of tea was 1,865,680 piculs, having declined from 2,217,295 piculs in 1886.

The amount, in haikwan taels, of the direct trade with various countries in 1895 was as follows:

COUNTRIES.	Imports.	Exports.
Hong-Kong.....	88,191,240	54,774,489
Great Britain.....	33,960,060	10,570,897
Straits and Singapore.....	2,536,000	1,887,000
East India.....	16,944,390	2,763,730
Japan.....	17,195,038	14,821,642
Macao.....	3,076,000	1,739,000
Siberia.....	111,000	11,131,000
European Russia.....	1,791,192	4,471,641
Rest of Europe.....	7,552,099	21,172,378
United States.....	5,093,182	15,383,402
All other countries.....	3,496,799	5,577,821
Total.....	179,947,000	143,293,000

From the sum of the imports are to be deducted 8,250,285 taels of re-exports, leaving the total net importation 171,696,715 taels. The imports from Formosa, valued at 8,806,328 taels, and exports to Formosa, valued at 1,760,624 taels, are included in the figures for Japan.

The foreign trade in 1896 reached the total of 333,600,000 haikwan taels, the largest ever recorded. Its sterling value was £55,500,000, against £51,500,000 in 1895 and £46,500,000 in 1894. The increase over the trade of 1895 is due to a gain of over 30,000,000 taels in imports, exports having decreased 12,000,000 taels, owing partly to the loss of the trade of Formosa. British imports increased over 20,000,000 taels. The British share in the total trade increased 9½ per cent. and amounted to 70 per cent. of the whole. The trade of all other foreign countries fell off 1,000,000 taels. This corresponds to the decline in the trade with Continental Europe, while trade with Japan decreased by over 3,000,000 taels. There was a decided improvement in the trade with the United States, which increased more than 2,500,000 taels. Opium imports in 1896 showed a further large decline, owing not only to the loss of Formosa, but to decreased demand throughout China. The trade in textiles was unusually large, and there were very heavy importations of American drills, sheetings, and cotton flannels, due to low prices prevailing in the United States market during the summer. American cottons are specially desired in the cold climate of northern China and Manchuria. Indian yarn imports have risen from 628,000 piculs in 1889 to 1,461,000 piculs in 1896. Japanese yarns rose from 19,000 piculs in 1895 to over 100,000 piculs. There was a remarkable increase in the imports of woolen cloth, especially from India. There was a striking decline in the exports of black tea, due to the disappearance of Formosa shipments and to diminished production throughout China. The export of brick and tablet tea to Russia showed an increase. The shipments of black tea to India likewise increased, as they have steadily done for ten years. There was a decline of 22,200 piculs in the silk exports, attributable to large production in other countries, to certain changes in fashion, and to an intermission of the American demand during the presidential campaign.

The foreign merchants who established themselves in the treaty ports are being gradually crowded out by the Chinese, and while the import trade has continuously increased the native traders are monopolizing in an increasing degree the ad-

vantages obtained under the treaties. The native merchants are subjected to official exactions that foreigners are protected from by treaties, but the demands of the mandarins are limited to what the trade can bear, for if they are too onerous it passes into foreign hands and the source of revenue is closed. The native merchants obtain their goods from the foreign houses in Hong-Kong and Shanghai. In Shanghai the foreign importers are becoming more and more the commission agents of the Chinese importers who supply the manufacturing centers of the West. Thus half the cotton imports are obtained in this way, and the Chinese take the risk of exchange as well as of the market. Of the imports other than cotton and woolen goods three fourths arrive in Shanghai on Chinese account.

The hopes raised by the terms obtained by the treaty of peace with Japan, increasing the manufacturing and trading privileges of foreigners in China, have not been realized. The cotton mills and silk filatures that have been established in the neighborhood of Shanghai are liable, according to the interpretation put upon the Shimonoseki treaty by the Chinese Government, to be impeded by the exaction of excise and *likin* duties on the manufactured products as well as excessive *likin* duties on the raw materials. The treaty distinctly provided that goods thus manufactured by machinery shall, for all purposes of internal taxation, stand on the same footing as imported goods, enjoying the same exemptions "in respect of inland transit and internal duties, charges, and exactions of all kinds, and also in respect of warehousing and storage facilities in the interior of China," as imported merchandise that has paid $2\frac{1}{2}$ per cent., half the customs duty, in lieu of transit duties. The Tsung-li-Yamen, disregarding the treaty stipulation fixing the maximum duty at $2\frac{1}{2}$ per cent., proposed that the goods manufactured in these steam factories at the treaty ports by foreigners shall pay a duty of 10 per cent., $2\frac{1}{2}$ per cent. more than the total duties on imported goods, including 5 per cent. import duty. This $2\frac{1}{2}$ per cent. the ministers thought ought to be added to counterbalance the charges of lighterage, freight, insurance, coolie hire, etc., that imported goods have to bear. Japan was willing, in return for land concessions at certain of the treaty ports, to agree to an interpretation of this clause of the treaty that will permit the Chinese to tax the products of factories as they desire, for the Japanese have repented securing for Europeans the right to establish cotton mills to compete with their own in their best market, with the advantage of abundant cotton at their doors and cheaper labor than in Japan. The Tsung-li-Yamen subsequently decided to levy on the manufactured goods only the same rate of duty that is paid on imports, without interfering, however, with the *likin* imposed on raw material. It is feared that an excessive growers' tax will be placed upon raw cotton sent to these mills in order to maintain the monopoly hitherto enjoyed by the Chinese mills, in favor of which the prohibition against the importation of spindles was formerly enforced by the Chinese Government. The cotton-spinning factories compete at present only with the mills of Japan and Bombay, turning out the coarser kinds of yarns. But there is no reason to suppose that this will continue to be the case, or that the manufacturing industry of China will be confined to spinning alone, and not embrace weaving, or to cotton rather than to wool or silk. Those interested in these undertakings hope from the demonetization of silver in Japan that China will become one of the principal manufacturing countries of the world. It is computed that a Chinese laborer does about half the work of the British operative at one fourth of his wages, and that the wages now paid

in Shanghai are higher than what the operatives can afford to take and hence will not rise, whereas the efficiency of the hands is likely to increase considerably in time.

The Chinese Government is negotiating for the right to increase the present scale of foreign customs duties to enable it to meet its obligations due in Europe, which have become heavier in proportion to the fall in silver. In default of such an arrangement it must increase the export duties in order to obtain the money to meet the heavy liabilities contracted abroad, although some of these specific duties, fixed when prices were higher, are a crushing burden on some of the most important branches of the export trade. The most flagrant instance is the export duty on tea, fixed by the Tientsin treaty of 1858 at $2\frac{1}{2}$ taels per picul, the equivalent at that time to 5 per cent. *ad valorem*, but now a duty of 20 per cent., while the *likin* taxes are at least 20 per cent. more. The total taxation on tea before it leaves the port of export is in many cases not less than 80 per cent. This has greatly assisted the competition of Indian and Ceylon teas in Great Britain, which took only 37,500,000 pounds of China teas in 1896 against 169,000,000 pounds in 1881, and that of Japanese green teas in the American market. The trade in raw silk, of which China no longer enjoys the monopoly, is also crippled, though in a less degree, by the excessive export duty.

The commutation of the *likin* duties, by which the payment to the maritime customs, with the foreign import duty of half its amount additional, exempts goods from all barrier duties in the interior, has in a greater or less degree been evaded by the local authorities. They no longer levy *likin* duties as such on merchandise accompanied by the transit pass, but they exact their equivalent under the names of excise and *octroi* duties. Kerosene oil, for example, has to pay in Canton a municipal tax amounting to nearly 40 per cent. *ad valorem*. The commutation of the *likin* on foreign opium under the Chifu convention of 1886 has been strictly observed by the provincial authorities because Great Britain reserved the right to revoke that convention in case of any evasion of its provisions, and in that event the Pekin government would lose the large revenue that comes from the commuted *likin* on opium. Other merchandise has been practically taxed at the inland barriers the same as before, although the $2\frac{1}{2}$ per cent. duty exempting it under the Tientsin convention from *likin* charges has been paid at the port of entry. The Central Government has not exerted its authority to check these treaty evasions, and has been less disposed to do so since its demands on the provincial treasuries have increased. These abuses have been greatest in the Kwang provinces, where the officials have simply ignored transit passes when in the hands of native merchants and have exacted excessive *octroi* and destination duties from foreigners. Finally, the British minister at Pekin, Sir Claude Macdonald, being desirous of removing obstructions to British trade in this part of China in order to meet the competition threatened by the French Tonquin Railroad, peremptorily challenged the Chinese Government to require the authorities of Kwangtung and Kwangsi to observe the international engagements. Accordingly a proclamation was issued in January, 1897, forbidding officials to collect barrier duties in any form from goods provided with transit passes or any *octroi* or destination duties except such as may be imposed on similar goods which have paid *likin* in transit.

The ports of Hangehow and Soochow, which were to be thrown open to foreign trade by the

terms of the Shimonoseki treaty, have not yet been opened. The opening of the West river was promised to Great Britain in 1895, and an imperial edict was issued declaring it open, but tedious negotiations had yet to be gone through with as to what ports on the river were to be opened and within what limits and under what regulations was navigation to be allowed in foreign bottoms. The West river was at last opened to steamers as far as Woochow-Foo on June 4, 1897. The opening of this water way is the compensation exacted by Great Britain for the cession to France in 1895 of a part of the Kiang-Hung district to the south of the Yunnan province in spite of an engagement made by China when the district was assigned to her by Great Britain under the Burmah frontier treaty that it should not pass to any other power without the consent of the British Government. By the waters of the West river and its tributaries access is obtained to the eastern part of Yunnan, the southern part of Kweichow, the province of Kwangsi, and the western part of Kwangtung, but the part of the river opened to foreign commerce only reaches into Kwangsi for the distance of ten miles beyond the border of Kwangtung province. Besides Woochow the only port opened is Samshui.

The French have been compensated for the opening of the West river to British commerce by receiving permission to extend their Tonquin Railroad to Yunnan-Foo, the capital of Yunnan, by way of Kwangsi. French engineers will be allowed to work the mines near the frontier.

Navigation.—There were 8,956 sailing vessels, of 1,053,670 tons, and 28,176 steamers, of 28,683,408 tons, entered and cleared during 1895. Of the total number of 37,132, of 29,737,078 tons, 19,579, of 20,525,798 tons, were British; 13,014, of 5,220,121 tons, Chinese; 2,684, of 2,442,185 tons, German; 266, of 341,345 tons, French; 108, of 121,691 tons, Japanese; and 92, of 86,427 tons, American.

Communications.—The internal commerce of China is exceedingly large, although roads, canals, and natural water ways afford all the means of transportation, except the railroad originally built from the Kaiping coal mines to deep water on the Petang river and now extended to Tientsin and beyond in the direction of Shan-Hai-Kwan. The extension of the Northern Railroad from Tientsin to Peking was completed in the summer of 1897. A Belgian syndicate, supported by the French and Russian ministers, in return for a 4-per-cent. loan of £4,000,000 sterling, running ninety years and taken at 90 per cent., obtained a concession for the construction of the trunk line from Peking to Han-Kow, on the Yangtse-Kiang. This railroad, to be completed by 1903, is 700 miles in length. An American syndicate also bid for this concession, but could not obtain the contract. The syndicate was to have a hand in the construction of the rest of the projected railroad system of 2,000 miles and to receive a 5-per-cent. commission on all material purchased. Of the material half is to be supplied by China and the other half by tenders from abroad. The other projected railroads were a continuation of the Han-Kow line to Canton, a line from Shanghai to Soochow and Hangchow, and the extension of the Northern Railroad to Kirin and Moukden. The British, German, and American ministers protested against this arrangement as infringing most-favored-nation rights, and consequently the monopoly clauses were not confirmed. British and German capitalists would not invest in the projected system of railroads because they were to be under the control of a Chinese official, while Sheng-Tajen, the Chinese Director General of Railroads, found it difficult to raise 13,000,000 taels of native capital that he promised. The obstacles were

sufficient to prevent the Belgian scheme from going through, and railroad construction, except the Peking-Han-Kow line, was postponed. The Manchurian railroad from the Onon station of the Transbaikalian section of the Great Siberian Railroad, through Tsitsihar, Kulanchen, and Ningtu, in Manchuria, to Nikolsk, on the South Ussuri Railroad, will have a length of 1,273 miles, of which 945 miles will be in Chinese territory. It deflects the Siberian route nearly 400 miles southward into the fruitful valley of the Sungari river, and shortens it by 341 miles. Work has been begun on a railroad from Shanghai to Woosung. Sheng's extensive scheme of construction, in addition to the difficulty of raising money, met with a serious obstacle in the unwillingness of owners of land to grant the right of way, which they have never been compelled to do under Chinese law by the process of expropriation. When certain landowners refused to allow the Woosung line to cross their property Sheng and the Nankin viceroy issued proclamations quoting the imperial authority for enforcing sales of land at valuations to be determined by local officials. A British syndicate in September, 1897, offered to advance £2,000,000 for the construction of a line from Shanghai to Soochow and Nankin, and at a future date £3,000,000 for its extension through Honan, both advances to be on the same terms as those of the Belgian contract.

The Imperial Government has telegraph lines connecting the capital with all the ports and the frontier provinces, and connecting with the Russian system in Manchuria and with the British Indian system at Manwyne, on the border of Yunnan and Burmah.

The post carts and runners of the imperial postal system hitherto prevailing have been insufficient, so that private messengers have been employed frequently, and the Maritime Customs Department has maintained in the winter months a special service between Peking and the seaports. The Government issued an edict on March 20, 1896, to expand this service into a national post office of the European type, which will be under the direction of the Inspector General of Customs. The Swiss Government received notice that China intends to join the postal union.

Relations with Russia.—A convention concluded with China by Count Cassini, the Russian minister at Peking, in the summer of 1896, in the form in which it was made public, conceded to the Russian Government the privilege of building a branch of the Siberian Railroad from some city in Siberia to Aiyun, in the Amur province, thence southwestward to the provincial capital of Tsitsihar and to Petune, in Kirin, and thence southeastward to the provincial capital of Kirin; also to make a prolongation from the Russian port of Vladivostok to Hunchun, in Kirin province, and thence to the provincial capital of Kirin. The object of connecting the Russian Railroad with the railroad system projected for the three eastern provinces, Fengtien, Kirin, and Heilung-Chiang, is stated to be not only that of facilitating the transport of goods and promoting international commerce between the two empires, but also the strengthening of the frontier defenses and seacoasts. The privileges conceded to Russia are said to be a response for loyal support at the close of the war between China and Japan and aid in securing the retrocession of Liaotung and its dependencies. The railroads are to be built by Russia at her own expense, and are to remain under the control of Russia for thirty years, at the end of which China, if so disposed, may purchase the railroads, rolling stock, and machine shops. If China finds difficulty in extending the existing railroad from Shan-Hai-

Kwan to Moukden, the provincial capital of Fengtien, and thence to the capital of Kirin province, Russia is authorized to provide funds and undertake the construction, following the Chinese survey from Kirin to Moukden, Newchwang, etc., and China may redeem this railroad at the end of ten years. The railroad to be built by China from Shan-Hai-Kwan to Newchwang, Kaiping, Chinchow, and Lushunkow, or Port Arthur, and thence to Talienwan, shall follow Russian railroad regulations in order to facilitate commercial intercourse between the two empires. In the settled districts the local civil and military officials will protect the railroads built in Chinese territory by Russia, but in barren and sparsely inhabited districts Russia shall be allowed to place cavalry and infantry guards at the various important stations. The interdiction on the exploitation of mines in Kirin and Heilung-Chiang will be removed. Should China require to reorganize and train on the Western system the territorial army of the three eastern provinces, Russia will furnish qualified military officers on the same conditions as German officers in the Liang-Kiang provinces. Russia has never possessed a seaport in Asia that is free from ice and open all the year round. If, therefore, military operations should suddenly arise in Asia, China is willing, in order to enable the Russian fleets in the eastern seas and the Pacific to move about freely and at pleasure, to lease temporarily to Russia the port of Kiaochow, in the province of Shan-Tung, the period of the lease being limited to fifteen years, at the end of which China shall buy all the barracks, godowns, machine shops, and docks built by Russia. But should there be no danger of military operations Russia shall not immediately enter into possession of the port, in order to obviate the chance of exciting the jealousy or suspicions of other powers. As the Liaotung ports of Lushunkow, or Port Arthur, and Talienwan are important strategical points, it shall be incumbent on China to fortify them properly, and Russia shall lend all necessary assistance in helping to protect them, and shall not permit any other power to encroach upon them. China, on her part, binds herself never to cede them to another country; but if Russia should find herself involved in a war, China consents to allow Russia temporarily to concentrate her land and naval forces within these ports.

The terms of this treaty were modified in various particulars, but not to the detriment of Russia's position in northern China. The treaty was the outcome of negotiations begun with Li-Hung-Chang in Peking, and continued by him with Prince Lobanoff in St. Petersburg. The Eastern Chinese Railroad Company was organized with its chief office in St. Petersburg, having a Chinese official for president, but Russian directors and a vice-president in real control, who is appointed by the Russian Minister of Finance. None but Russian and Chinese subjects can acquire shares in this company. The company has received the sanction of the Chinese Government to construct telegraph lines from the Liaotung peninsula to Helampo, on the Chinese frontier, and from Aiyun to the eastern Siberian terminus.

New Anglo-Chinese Agreement.—The opening of the West river was only part of the compensation exacted by Great Britain for the violation of the provisions of the convention of March 1, 1894, whereby England renounced in favor of China the suzerain rights over the states of Muang-Lem and Kiang-Hung, to which she had laid claim as successor to the King of Ava, on condition that China should not, without a previous agreement with England, cede any portion of these territories to any other nation. China did, on June 20, 1895,

cede to France a large part of Kiang-Hung to the east of Mekong. In consideration of Great Britain's consenting to waive all objections to this cession China, on Feb. 4, 1897, signed an additional agreement, granting territorial and commercial concessions to Great Britain, and the ratifications were exchanged on June 5. The territory ceded is on the border of Burmah and Yunnan. The boundary line from the Mekong to the point where it first strikes the Salween remains unchanged; but, instead of following the *thalweg* of the Salween for a considerable distance, as before, it takes a sweep to the northeast, leaving to Burmah the Shan state of Kokang and a part of Wanting, a territory 60 miles in extreme length and 25 miles in extreme breadth. Between the Shweli river and the northern termination of the frontier there are three smaller concessions, the smallest of which is a triangular tract between the Nam-Wan and the Nam-Mak, which is recognized in the agreement as Chinese territory, but is ceded to England on a perpetual lease for a rent to be determined at some future time. In addition to the Manwyne and Sansi routes for overland trade, which alone were sanctioned in the convention of 1894, any other routes that may be found desirable in the interest of trade will be opened on the same terms as those. England obtains permission to appoint a consul at either Momein or Shunning-Foo, and one also at Ssumao. British subjects and persons under British protection may establish themselves and trade at these places on the same terms as at treaty ports. The Chinese Government agrees to consider whether the conditions of trade justify the construction of railroads in Yunnan, and in the event of their construction agrees to connect them with the Burmese lines. The significance of this stipulation is that if the French penetrate Yunnan with their railroad, England will insist on its being connected with the system of Burmah.

German Seizure of Kiaochow.—The Chinese Government made plans to establish and fortify a naval station in the Bay of Kiaochow, immediately south of the Shan-Tung promontory, which commands the southern approach to the Gulf of Chili. A strong naval base at this point was reported to be necessary to the safety of China's contemplated naval armaments. This is the point mentioned in the published version of the secret treaty with Russia which is to be occupied by Russian forces for the protection of China's capital in the event of fresh hostilities breaking out in the far East. The Chinese Government granted permission for the temporary use of the bay as a winter station by the Russian fleet in the Pacific. In the beginning of November, Germany landed sailors and marines at Kiaochow, and subsequently stores and material were brought, as if a permanent occupation were intended. The ostensible purpose of the seizure was to insist on redress for the murder of two German missionaries.

Attacks on Missionaries.—Whereas the immediate effect of the war with Japan was to occasion fresh outbreaks of popular rage against missionaries as representatives of the outer barbarians from whom the Japanese had learned the art of war, a desire for a nearer acquaintance with Western institutions and sciences began to be manifested by some of the *literati*, and the attitude of the provincial officials toward the missionaries in many places became more friendly and respectful. The existence of famine, political disturbances, and the agitation of secret societies in various parts of the empire, fresh revivals of antiforeign feeling traceable to the war or diplomatic disputes, and the renewed circulation of the stereotyped slanders against the missionaries caused outbreaks to occur in various

places during 1897. In January shots were fired at an American mission near Foochow. On April 1 Père Mazel, a French missionary, was murdered at Loli, on the West river, in a region where robbery and disorder were rife. The priest saw the marauders approaching, barricaded the back door, and prepared to defend the front entrance with a rifle; but a part of the mob tore down the barricades in the rear and killed the missionary with shots from behind. These were not robbers, but fanatics, as they left without plundering the house after murdering the priest and mutilating his body. Anti-Christian riots occurred at Lintsing, in Shan-Tung province, where a league of fanatics was formed for the purpose of expelling the Roman Catholics and destroying all their property. In one fight 3 missionaries were killed, 8 wounded, and 4 captured. In Chingtu, the capital of Szechuen, the talk of foreigners kidnaping children was revived and Americans and Europeans were accused of having mapped out the country for conquest. In Kiangsi the English mission at Woocheu was destroyed in June, and the Catholic mission was saved only by the intervention of troops. Later the French Catholics in the Yaopeng district of Kwangtung requested their Government to interfere because, as they asserted, the Chinese were persecuting their converts, inflicting tortures, and burning houses and crops.

Famine and Plague.—A drought in the gorge district of the Yangtse-Kiang caused a disastrous famine extending from Ichang up to Chunking and into the hill country in the east. The rivers were so low that rice could not be carried to the sufferers, who perished by thousands in the spring months. In Hupeh the maddened people revolted against the authorities. In northern Szechuen and to the north and east of it towns were half depopulated by starvation and hunger typhus. An army of 30,000 starving people gathered in Szechuen, and in the city of Kichow they enforced demands for food with violence. Pitched battles were fought between the mobs and the Government troops, and 120 soldiers were killed or wounded, necessitating the dispatch of fresh troops from Chunkiang. Smallpox became very prevalent in central and western China, and near the seacoast the black plague broke out in Swatow and other places.

CHRISTIAN ENDEAVOR, UNITED SOCIETY OF. The following statistics of Societies of Christian Endeavor were published in the "Christian Endeavor Bulletin" of Sept. 11, 1897:

In the United States: Young People's Societies, 27,505; Junior Societies, 11,710; Intermediate, 395; Mothers', 68; Senior, 22.

In Canada: Young People's Societies, 2,925; Junior, 468; Intermediate, 5; Parents', 2; Mothers', 1.

In foreign lands: Young People's Societies, 7,306; Junior, 753; Senior, 6; Mothers', 2; Intermediate, 4. Floating societies, 92.

Whole number of societies, 51,264; of members, 3,075,840.

The International Convention of these societies was held in San Francisco, Cal., July 5 to 12. The annual address of President Clark was on the society as "A World-Encircling Religious Movement. How shall it fulfill God's Design?" The secretary's report showed that 5,000 new societies had been added, in all countries, during the year, and the whole number was now 50,747, with a membership estimated at 3,000,000. Of the societies besides those in the United States, 3,925 were in England, 2,124 in Australia, 433 in Scotland, 311 in Wales, 250 in India, 169 in Ireland, 93 in Madagascar, 68 in France, 100 in Mexico, 66 in Japan, 63 in the West Indies, 41 in Turkey, 53 in China, 52 in Africa, 32

in Germany, with, in all, 7,919 societies outside of America; while Canada had 3,390 societies. The denominations most largely represented in the societies in the United States were, in the order in which they are named, the Presbyterians, Congregationalists, Disciples of Christ, Baptists, Cumberland Presbyterians, Methodist Protestants, etc.; in Canada, the Methodists, Presbyterians, Baptists, etc.; in the United Kingdom, the Congregationalists, Baptists, Presbyterians, Primitive Methodists, etc.; in Australia, the Wesleyan Methodists. The gifts to missions, through their respective church boards, of 10,468 societies, amounted to nearly \$200,000, and it was estimated that the same societies had given an equal amount for other benevolences.

Much attention was given to the subject of missions, and many missionaries were present, with speakers from India, Japan, and Australia. Practical questions of methods and work were considered. A "rally" was held in behalf of Sabbath observance. One meeting was given up to mothers. Twenty-six denominational rallies were held. It was announced that changes were under consideration in committee which would give broader denominational and geographical representation to the body.

CHRISTIAN SCIENTISTS. The doctrine of this sect was first promulgated by Mrs. Mary B. Eddy in 1866. Besides the belief respecting God, the Scriptures, man's sinfulness, the atonement, redemption through the suffering of Christ, the forgiveness of sins, etc., it holds as a distinctive tenet that the way of salvation demonstrated by Jesus is the power of truth over all error, sin, sickness, and death; and it exacts from its adherents a promise to pray for that mind to be in them which was in Christ Jesus. Connected with this doctrine is a healing system based upon the theory that all is mind, without which matter is unreal and nonexistent. The society has enjoyed a very rapid increase within the past few years, which, according to one of its writers, has been most remarkable since the cessation of preaching in 1895. Previous to that time, for twenty-nine years, sermons were delivered before the congregations like those usual in the other denominations; but within the past three years the services have consisted simply in readings, responsive liturgy, and exposition of the Scriptures. Two readers are connected with each society and conduct the service throughout. Besides the Bible, Mrs. Eddy's "Science and Health" and the "Key to the Scriptures" are recognized as authoritative text-books. Every member may be a healer and missionary, but there are also professional healers and missionaries who devote their entire time to the work. In 1894 the Christian Scientists had in the United States 300 societies meeting regularly for worship, 26 teaching institutions, and 66 dispensaries and reading rooms. They had at the end of 1897 229 chartered churches, 114 other regularly established Sunday services, 3,500 ministers, and 40,000 members in the United States, with 64 public reading rooms, situated mainly in the larger cities. These figures show an increase during the year of 44 chartered churches, 500 ministers, and 15,000 members. It is believed that the whole number of adherents in the United States and Canada is not less than 250,000, and that the number of attendants has doubled within the past twelve months. Ten churches were built or acquired in the United States, one in Toronto, Canada, and one in London, England, during the year; and ground and a Christian Science Hall have been acquired in Concord, N. H. The society has also had marked growth in England, Germany, Italy, France, and Norway.

COLOMBIA, a republic in South America. The Senate is composed of 27 members, 3 from each department, elected for six years by indirect suffrage. The House of Representatives is composed of 68 members, elected by direct vote of the people for four years. Any male citizen twenty-one years old and able to read and write, or having an income of 500 pesos or real property worth 1,500 pesos, is entitled to vote. The acting President after the death of President Nuñez on Sept. 18, 1894, was Vice-President M. A. Caro, who resigned in September, 1896, handing over the executive authority to Antonio Roldau for the remainder of the term expiring Aug. 7, 1898. The Cabinet in the beginning of 1897 was composed as follows: Minister of Foreign Affairs, G. Holguin; Minister of Commerce and Communications, D. Ferreira; Minister of War, Gen. Molina; Minister of Public Instruction, J. M. Carrasquilla; Minister of Finance, Poncè Leon.

Area and Population.—The area of the republic is estimated to be 513,938 square miles. The population was estimated in 1895 at 4,000,000, including 150,000 uncivilized Indians. Education is free in the primary schools, of which there were 1,817, with 89,000 pupils in average attendance, in 1894. The Government maintains 15 normal schools, with 600 students, and a university, with 1,600, while 1,000 more attended the universities of the departments.

Finances.—The customs yield nearly two thirds of the revenue, which was estimated in the budget for the period 1895-'96 at 26,226,300 pesos, while the expenditure was expected to amount to 26,305,191 pesos. The estimates for the biennial period ending June 30, 1898, make the revenue 28,224,000 pesos.

The consolidated internal debt on June 30, 1896, amounted to 5,633,046 pesos, and there was a floating debt of 1,892,110 pesos. The paper money in circulation amounted to 30,862,352 pesos, making the total currency obligations of the Government 38,387,508 pesos. The foreign debt consists of a loan of £1,913,500 raised in England in 1873 and arrears of interest on this, bringing the total up to £3,514,442 on Dec. 31, 1896. An arrangement for the settlement of the debt was made with the British creditors, subject to the approval of the Colombian Congress.

After the conversion of 1873 the coupons were paid till 1879, and since then the bonds have been in default. Compromises made with the foreign bondholders in 1881 and 1884 were not ratified by the Congress. Another one negotiated in 1890 was rejected by the bondholders, and the Government would not even consider any arrangement until in 1896 a provisional agreement was made, according to which the Colombian Government undertook to pay the full principal and 43 per cent. of the defaulted interest, giving new bonds bearing $1\frac{1}{2}$ per cent. interest for the first three years, 2 per cent. for the next, and after six years $2\frac{1}{2}$ per cent., with a sinking fund that would extinguish the debt in thirty-six years.

The Cerruti claim for the value of estates and stores destroyed by Government troops in 1885 on suspicion that the owner, an Italian subject, was abetting the revolution then in progress, was referred to President Cleveland, who awarded the claimant £60,000 sterling and a guarantee against debts accruing from the loss of his business. This guarantee the Colombian Government refused to give, asserting that the matter was not submitted for arbitration.

Army.—The army on the peace footing is fixed at 5,300 officers and men. In case of war every Colombian fit to bear arms can be called into the service.

Commerce and Production.—There are 4,961 mines in Colombia, of which 3,398 are alluvial or quartz gold mines in Antioquia. In Cauca and Tolima, where 1,365 of the mines are situated, silver is found associated with gold and other metals. The average annual product of the precious metals is \$4,000,000. There are 30 emerald mines, 14 for cinnabar, 7 manganese mines, and others for the production of copper, platinum, lead, quicksilver, iron, coal, and salt. The Muzo mine produces about \$100,000 worth of emeralds annually. The salt mines at Zipaquirá, belonging to the Government, almost supply the needs of the country. Petroleum and coal are found in several departments. The iron mined at Pradera, near Bogotá, is manufactured into wrought iron, rails, and machinery castings. Agriculture is not carried on extensively, though the soil in many parts is very fertile. The improvement of facilities for transportation would greatly enlarge the opportunities for commerce in agricultural produce. Coffee of fine quality is produced, and its cultivation is extending rapidly. Other products are tobacco, cacao, sugar, vegetable ivory, rubber, and dyewoods. There are 3,465,000 cattle, horses, mules, and asses, and 3,487,000 sheep, goats, and hogs in the country according to official estimates. The total value of the imports in 1895 was 11,528,365 pesos, and of the exports 15,088,406. The principal articles of import are food, drinks, textiles, and iron and steel goods. The exports are gold bars and dust, coffee, peanuts, silver ore, cacao, cotton, dyestuffs, live animals, tobacco, rubber, hides, and timber.

Navigation.—The number of vessels entered at the port of Barranquilla in 1895 was 261, of 392,573 tons, and cleared 258, of 391,668 tons. The merchant marine consisted of 5 sailing vessels, of 1,157 tons, and 1 steamer, of 138 tons. Of 33 steamers that call at the ports of Colombia every month, 15 are British, 9 American, 4 German, 3 French, 1 Spanish, and 1 Italian.

Communications.—There were 346 miles of railroad in operation in 1896. The telegraphs have a length of 6,835 miles. The internal postal traffic in 1893 was 302,410 letters and postal cards, 615,844 samples and papers, and 70,038 registered letters and packets, while 342,440 letters and 206,171 papers and packets were mailed for foreign countries.

The Panama Canal.—The new canal company, formed in Paris in 1894 to complete the ten-lock canal rising to a maximum altitude of 133 feet, in the place of the sea-level canal originally planned by Ferdinand de Lesseps, made fair progress with the limited capital at its disposal, only 62,500,000 francs, of which not more than half was available for work on the canal. The cuttings in the Culebra and Emperador sections have assumed definite proportions. At the beginning of 1897 there were 3,600 laborers at work, recruited in Jamaica and Trinidad, in Sierra Leone, and in the provinces of Colombia. The present work is mainly experimental, intended to prove that a lock canal is feasible. About 1,500,000,000 francs have been expended since the scheme was first launched in 1881. The net receipts of the Panama Railroad, which is owned almost entirely by the canal company, increased from \$266,000 in 1895 to \$396,000 in 1896. The profits of four years have been applied to the purchase of three ocean steamers. The traffic from the Pacific to the Atlantic has decreased, owing to small crops and the competition of tramp steamers, but in the opposite direction, through arrangements with the steamship companies, there has been a large increase of traffic. The Government receives \$250,000 a year from the railroad.

The commission of engineers reported in 1890 that to complete the canal, with a width of 98½ feet at

the surface and half that depth, would cost 900,000,000 francs, including interest on the investment and an allowance of 20 per cent. for unforeseen expenses. The work already done by the old company and the plant on the grounds could not be duplicated for less than 450,000,000 francs. Before work was resumed in 1894 the engineers surveying the route concluded that the new plan for controlling the Chagres river and the task of preventing landslides in the Culebra cut would be less than they had expected, reducing the first provisional estimates by 150,000,000 francs. The amended plan is to have ten locks, and to supply water to the higher locks from immense reservoirs, which will relieve the floods in the Chagres river. The work done since the resumption of operations has cost comparatively much less than that accomplished under the old extravagant management. The rate of progress has been greatly accelerated. There were five or six times as many men employed in 1897 as in 1895. The excavations extend 16 miles from Colon and 4 miles inland from Panama, and at the present rate, if the engineering difficulties have not been underrated and if the financial means can be obtained, the canal will be completed within the ten years stipulated on the renewal of the concession.

COLORADO, a Western State, admitted to the Union Aug. 1, 1876; area, 103,925 square miles. The population in 1880, according to the census, was 194,327; in 1890 it was 412,198. Capital, Denver.

Government.—The following were the State officers during the year: Governor, Alva Adams, Democrat; Lieutenant Governor, Jared L. Brush, Republican; Secretary of State, Charles H. S.

Dudley, Edwin J. Temple, Oscar J. Pfeiffer, and William J. Orange; State Engineer, John E. Field; Commissioner of Mines, Harry A. Lee; Register of Land Board, L. C. Paddock; Dairy Commissioner, H. B. Canon; Fish Commissioner, Joseph S. Swan; Coal Mine Inspector, David Griffiths; Geologist, Thomas A. Rickard; Chief Justice of the Supreme Court, Charles D. Hayt, Republican; Associate Justices, Luther M. Goddard, Democrat, and John Campbell, Republican; Court of Appeals, President Judge, Charles I. Thompson; Associate Judges, Julius B. Bissell and Adair Wilson.

Finances.—The report of the Auditor shows the total estimated floating debt of the State, Nov. 30, 1896, to have been \$2,387,009.34. The bonded indebtedness was: Capitol building, \$600,000; casual deficiency, \$100,000; Cripple Creek insurrection, \$70,500; making the bonded indebtedness \$770,500, and the total bonded and floating debt \$3,157,509.34. The assets due the State amounted to \$865,196.96, leaving the total net indebtedness \$2,292,312.38.

The estimated expenditures for 1897-'98 amount to \$1,260,872.70, and the estimated general revenue fund income to \$1,092,950.

The appropriations from the general revenue fund for 1895-'96 amounted to \$1,187,310.36, of which \$21,321.20 remained unexpended. The appropriations from special funds aggregated \$144,954.98, of which \$27,459.09 remained unexpended.

The total valuation of the counties amounted to \$206,598,561 in 1896. The railroads, the mileage of which was 4,487 and the valuation \$31,716,267, are included in this summary.

The fees received at the office of the Secretary of State amounted to \$246,841.92, of which \$226,950.50 was for 3,408 findings of articles of incorporation.

Charities and Corrections.—The report of the penitentiary at Cañon City shows that there were in prison Nov. 30, 1896, convicts to the number of 607, an excess of 7 over the number two years previously; but the daily average count was increased by 35. The total cost of maintenance for the term was \$169,579.14, making about 36½ cents a day for each convict. This is the lowest *per capita* since 1876, the highest having been 76½ cents in 1881-'82. During the past two years \$8,393 has been expended for improvements and repairs.

At the State Reformatory at Buena Vista the total number of prisoners, Nov. 30, 1896, was 102, an increase of 48 over those at the close of the previous year. Of the 128 prisoners who have been paroled during the past two years, 81 report regularly, are working, and have good places; 29 reported for a time and then stopped; 13 never reported; and 5 have been returned for violating their paroles. The cost of maintenance for the two years was nearly \$55,000.

The average daily attendance at the Industrial School for Girls was 54, and the average monthly expenses \$590.72.

At the State Home for Dependent Children, nearly 60 were cared for from its opening, March 21, to Nov. 30, 1896, and 19 have been adopted into families.

The average number of inmates at the Soldiers' Home at Monte Vista in 1896 was 102. The estimated cost of maintenance for 1897-'98 is \$60,000. Improvements costing about \$14,000 have been made within the past two years.

The 53 counties that reported to the Board of Charities and Corrections cared for an average of 349 poor persons at their poor farms, at an expense of \$49,264.41. Other relief cost these counties \$82,624.

The prison census from 55 counties shows the



ALVA ADAMS, GOVERNOR OF COLORADO.

Whipple, Democrat; Treasurer, George W. Kepphart, Republican; Auditor, John W. Lowell, Republican; Attorney-General, Byron L. Carr, Republican; Superintendent of Public Instruction, Grace E. Patton, Democrat; Adjutant General, C. M. Moses, Republican; Regents of the University, David M. Richards, W. E. Anderson, Charles R.

total number of prisoners in county jails in 1895 to have been 3,530, of whom 225 were females. The maintenance of county jails has cost \$86,873.21; maintenance of the prisoners has cost \$41,763.49; salaries of jailers and guards has cost \$37,628.92; average cost *per capita*, \$258.55. One hundred and fifty-two of the prisoners were under sixteen years of age.

The Board of Pardons considered 332 applications during the last biennial period, and recommended 54 for pardon, 6 for conditional pardon, 15 for commutation, and 4 for respite.

Mining.—The report of the director of the mint for 1896 gives the product of gold of Colorado as 721,320 fine ounces, valued at \$14,911,000. The value of the silver product was \$29,185,293. This is about one third of the output of the precious metals in the country.

The receipts of gold bullion at the Denver branch mint show a large increase of production during the first nine months of 1897 over the corresponding months of 1896. The aggregate in 1896 was \$3,128,436.16; in 1897 it was \$8,388,088.56. The figures represent what is estimated as a little over half the State's production of the yellow metal, because only 2 out of the 7 smelters send their bars to this institution.

"The increase in the gold output," says a Colorado journal, "is general, and comes from all the mining camps of the State, Cripple Creek being in the lead."

An estimate of the output of 1897, made in July and based on the figures for the first six months of the year, was as follows: Cripple Creek (El Paso), \$14,000,000; Gilpin County, \$3,000,000; San Miguel County, \$3,000,000; Clear Creek County, \$1,500,000; Lake County (Leadville), \$1,000,000; San Juan County (Silverton), \$500,000; Boulder County, \$500,000; Ouray County, \$400,000; Summit County, \$250,000; Park County, \$250,000.

The recent introduction of processes for treating low-grade ore promises greatly to increase the output of the State.

Leadville is to have a reservoir on the Lake Fork branch of Arkansas river, where 2,000 acres have been bought for the purpose. The plan is to maintain the reservoir for storage, conduct the water through pipes to the foot of the little gulch leading up to Leadville, and there build a power house. This will furnish electric power to the mines of the whole district.

The product of lead for 1896 was valued at \$3,967,314, and that of copper at \$802,697.

Gold-Mining Convention.—The first International Gold-Mining Convention met in Denver, July 7, 8, and 9. Its objects were "to secure such national legislation as may be calculated to promote the business interests and development of the resources of the mining industry in North and South America; to bring together mining men and investors; to increase reciprocal trade among them; to discuss such questions as are naturally suggested by its objects; to cultivate acquaintance, fraternal feeling, and hearty co-operation among the various mining, commercial, and labor bodies represented, and especially to take under advisement the importance of the creation by Congress of a department to be known as the Department of Mines and Mining, thus securing a Cabinet officer to represent an interest which affects more than one third of the people of the United States."

L. Bradford Prince was president of the convention. The name of the organization was changed to The International Mining Congress, and Salt Lake City was chosen as the next place of meeting. Papers were read on the treatment of ores, the history of various mining camps, and geological

formations of mining districts. A resolution was adopted urging Congress to open to mining locations the Spanish land grants in California, Arizona, New Mexico, and Colorado; but a similar one regarding the gilsonite lands of Utah was laid on the table.

A committee was appointed to take steps for the establishment of a National Department of Mines and Mining, with a Cabinet officer at its head, and one to draft amendments to the mining laws which Congress will be asked to pass.

Decision.—A decision given by the Supreme Court in May in a case from Colorado, involving a controversy over the rights of tunnel-site owners and subsequent locators of veins along the line of the tunnel site or on its territories, settles the contention that a tunnel-site locator has the right to the possession of every blind vein that crosses the line of the tunnel within 3,000 feet from its face, which was not discovered when the tunnel was located; provided, that the tunnel-site owners have prosecuted the work on the tunnel with diligence. And the discovery of a lode or vein from the surface after the location of the tunnel will not deprive the owner of the tunnel of any part of the vein; provided, further, that he has diligently prosecuted his work on the tunnel. The decision also settles the right of the owner of such tunnel to locate 1,500 feet along the vein, and this location may be made partially upon one side of the point of discovery of the tunnel, or entirely upon one side.

Business.—The Denver Clearing-House Association issued an official statement in October showing the increase in business for six weeks of 1897, compared with the corresponding period of the preceding year, indicating the growing activity in business. The total increase for six weeks in September and October was \$1,934,538.

A Denver newspaper said in April: "The deposits of money in one bank in this city have increased by \$3,000,000 within less than a year. In other banks there has been a parallel increase."

The Leadville Strike.—The miners' strike, which began June 19, 1896, continued until March 9, 1897, ending in a victory for the mine owners. Gov. Adams went to Leadville in January and brought about a meeting between managers of mines and leaders of the strike in the hope of effecting a settlement. Both the miners and the owners made propositions, which were rejected. About the middle of January the great pumps that drained the mines on Carbonate Hill, the center of Leadville's wealth, were taken out, allowing the many mines there to fill with water. The Legislature appointed a committee of 2 Senators and 3 Representatives to investigate the strike, which committee in their report proposed a plan of settlement. At a meeting of the Miners' Union, March 9, it was decided by a vote of about 1,100 to 300 to declare the strike off. This action was understood to be owing to the reduction of the weekly relief allowance to an amount barely sufficient for meager existence, and the apparent hopelessness of any change in the attitude of the managers. The expense to the State for protecting property and keeping order by the militia was about \$300,000, and the cost to mine owners and miners of the camp was estimated at \$4,000,000, to say nothing of the cost to labor organizations elsewhere that were taxed for aid to the strikers.

Public Lands.—The amount of vacant public lands in the State is given as, approximately, 4,037,204 acres.

Efforts have been made this year to get the case of the Las Animas grant before the Court of Claims. It is one of those old undivided tracts the title to which, while allegedly perfect, never has been passed

upon by the court, and is in the anomalous position of being neither actually in the public nor in the private domain. It covers 3 counties of southeastern Colorado, takes in the city of Trinidad, the towns of La Junta and Las Animas, is traversed by 2 lines of railway, and is supposed to contain, besides great cattle ranges, valuable deposits of coal and iron. Legislative action is necessary to send the case to the Court of Claims, since by law no claim for more than 11 leagues of land can be brought before that court, and this involves 100 leagues. A bill granting permission to the court to take up the case was sent two years ago to the Committee on Public Lands.

It is complained that hunters are fast exterminating the game in the State and that the laws are not enforced. The Indians, who have had much of the blame for illegal slaughter, are now said to form but a small proportion of the lawbreakers. Meat hunters, hide hunters, and trophy hunters are among them, and in most instances the bodies of the animals are left to rot upon the ground by the hide hunters and sportsmen, who carry off the skins, heads, and feet. The Legislature revised the game laws, and if they are enforced the animals will be protected.

Legislative Session.—The eleventh General Assembly convened Jan. 6 and adjourned April 5. The parties stood on joint ballot: Populist, 34; Democrat, 25; Republican, 16; Silver Republicans, 10; National Silver, 12; Socialist, 1; Single Tax, 1; Nonpartisan, 1.

Francis Carney was president *pro tem.* of the Senate and Edwin W. Hurlbut Speaker of the House. The office of chaplain of the Senate was offered to the Rev. T. H. Malone, editor of the "Colorado Catholic," but he declined in favor of the Rev. Myron W. Reed, who had been associated with him in a movement to secure works of improvement for the laborers of Denver. Rev. W. S. Rudolph was chaplain of the House.

The message of the retiring Governor was read Jan. 9. It explained that the necessity of keeping troops in Leadville ever since Sept. 22 was due to the failure of the sheriff to enforce the laws. The Governor recommended the establishment of a board of conciliation and mediation, and advised the Legislature to memorialize Congress to establish a Government Department of Mines.

Gov. Adams was inaugurated Jan. 12 with conspicuous simplicity, at an expense to the State, according to the newspaper reports, of less than \$5. He walked to the Capitol to take the oath of office, and there was no parade, ball, reception, or demonstration of any kind.

The election for United States Senator to succeed Henry M. Teller took place Jan. 19. Mr. Teller was the candidate of the united silver forces, and George W. Allen was nominated by the regular Republicans. The vote stood 92 for Teller to 6 for Allen.

Among bills that became laws was one abolishing capital punishment and substituting imprisonment for life; one providing for the reorganization of the militia; a new assignment act; a new law relating to negotiable instruments; one requiring all persons trading or doing business under the name of "manager," "trustee," "agent," or in any other representative capacity, and persons using the words "& Co." or "& Company," or merely one initial letter as part of the business name, and persons doing business under any other name than the personal names of its constituent members, to file with the clerk and recorder affidavits showing who are so represented, and providing a penalty for failure so to do; a new law for regulating the business of pawnbrokers; one declaring bicycles to be baggage

to be transported by railroad on the same terms as other baggage; and one to prevent and punish fraudulent buying upon credit. The charter of Denver was amended in regard to annexed territory and to special assessments.

Appropriations for State institutions for 1897-'98 were made as follow:

For the Industrial School for Boys at Golden, \$50,000, besides the cash receipts of the institution.

For the Insane Asylum: For support, \$30,000; for payment of a deficit, \$32,818.52; for insurance, \$2,500.

For the Penitentiary, \$150,000.

For the Reformatory at Buena Vista: Support, \$50,000; deficiency, \$8,605.10; sewerage and farm implements, \$1,500.

For the School for the Deaf and Dumb and the Blind, for insurance, apparatus, etc., \$5,000.

For the Soldiers and Sailors' Home, \$40,000.

For the State Home for Dependent Children, \$20,000.

For the State University, \$40,000.

Other appropriations were for the two years: For maintenance of the Capitol building and grounds, \$63,000; for the completion of the Capitol building and improvement of the grounds, \$140,000, of which \$89,500 is to be used for finishing the interior of the building; for a part of the expenses of the Legislature, \$87,000; for operating the fish hatcheries, \$7,600; for the Board of Health, \$2,500; for deficiencies in the printing fund, 1895-'96, \$1,756.77.

Other bills that became laws were:

Creating a State and local boards of arbitration and providing for the adjustment of differences arising between employers and employees and defining the powers and duties thereof and making an appropriation therefor.

Providing that every able-bodied convict be put to the work that is most suitable to him and that will least conflict with free labor, and that the earnings of such convict, after the deduction of sufficient to pay the cost of maintenance and retention, shall be given to the family of such convict, or dependents, if there be any; if there be none, the same accumulated shall be paid to such convict upon discharge, and appropriating \$10,000 to carry out the provisions of the act.

Directing that the Twin Lakes Hatchery be abandoned or sold.

Creating a department of forestry, game, and fish, with a commissioner at a salary of \$1,200 and an allowance of \$500 for expenses.

Providing that no person may acquire property in game; all is to remain the sole property of the State, except, of course, whatever may be killed or caught according to the game laws.

Making it unlawful to kill or take at any time any bison, mountain sheep, elk, or beaver, except that such may be caught for park purposes.

Creating a nonpartisan State Board of Horticulture, consisting of six practical horticulturists, with a secretary at a salary of \$1,000 and mileage; the members to receive \$3 a day for time actually given to the work, and traveling expenses, the limit of time paid for to be thirty days a year.

Providing for the establishment of an Industrial School for Girls at or near Denver.

To prevent blacklisting and boycotting.

Regulating building and loan associations.

Repealing the "Act to provide for the erection and completion of a Capitol building at Denver, and creating a board of management and supervision"; and creating a board of Capitol managers for the purpose of supervising and directing the construction, completion, and furnishing of the Capitol building.

Authorizing the Treasurer to pay the interest for two years on the "casual deficiency" bonds and the "insurrection" bonds.

Prohibiting druggists from selling cocaine without a physician's certificate.

Creating a board of examiners in dentistry.

To protect employees and guarantee their right to belong to lawful labor organizations, unions, societies, or political parties; and to provide a penalty for coercing or attempting to coerce them.

To provide for the funding of \$225,000 of the indebtedness of the State, to meet expenses incurred in suppressing insurrection during 1896 and 1897, and appropriating money out of the general revenue fund to pay the first year's interest on same by the issuance of registered coupon funding bonds.

Repealing the acts creating a Bureau of Immigration and Statistics, and to promote the organization of fair associations.

Allowing surety companies to give and guarantee official bonds under certain regulations.

Memorials to Congress were adopted asking that "generous provision be made for that branch of the United States Geological Survey which is engaged directly in examining the metalliferous districts of the States and Territories, to the end that needed surveys may be commenced or completed, and the results published at the end of each season in pamphlet form, as much of the value of the information thus received depends upon its speedy publication"; and that the bill for the erection of a Government building at Glenwood Springs be passed.

As the regular session adjourned without enacting a general bill providing an appropriation for the ordinary expenses of the executive, legislative, and judicial departments of the State for the years 1897 and 1898, the Governor called a special session to meet April 6 for the sole purpose of passing such a bill, and it was accordingly passed.

The Governor vetoed a bill regulating the manufacture and sale of oleomargarine on the ground that it was not as good a law for the dairy and farm interest as the present statutes regulating the dairy industry and the oleomargarine traffic.

Political.—The only State election this year was for choosing a justice of the Supreme Court. William Gabbert was the nominee of the People's party on a platform demanding the independent and free coinage of silver and a sufficient volume of paper money to be issued by the Government, and denouncing government by injunction. The returns showed a majority for him of about 3,000.

COMPRESSED AIR, USES OF. The value of compressed air as a convenient means of distributing power was known long ago, but its general introduction is of comparatively recent date, as only within late years has it been practicable to manufacture at low cost air-tight appliances for utilizing it to advantage in a variety of ways. Among the earlier and more familiar uses to which it has been applied are the railway air brake, pneumatic cushions, and pneumatic dispatch tubes. The compressed-air rock drill came into use about 1865, and its employment in forming tunnels, mines, and other excavations has become almost universal. It is used even by the naked African laborers in the Johannesburg gold mines. Compressed air has a conspicuous place in most modern engineering works. The drills and channelling machines and most of the small engines on the Chicago Drainage Canal were air-driven. The rock work at the bottom of Harlem river for the foundations of the bridge at 181st Street was all done in caissons of compressed air. The Blackwall Tunnel, under the Thames, England, was also constructed under air pressure. Compressed air has replaced steam in many mechanical uses, and done away in many cases with such me-

chanical appliances as shafting, belts and pulleys, and gears. It is the active competitor of electricity in a hundred fields of usefulness, and is frequently preferred to the latter as a mechanical agent for transmitting power.

Largely owing to the inroads of electricity in every branch of mechanism, it has come to be recognized that the frictional losses sustained in transmitting power by shafting can be saved by employing other means of connecting an engine with the machines that it is designed to drive; and the electric wire being found to afford a means of transmitting power with small loss, builders of machinery came to understand more fully the fact that pipes or hose filled with compressed air afford an equally economical means of sending power to a moderate distance with little loss. Thus the development of electrical methods of power distribution have opened the way for compressed air and brought about a development of air-operated machinery which is most extensive and is constantly increasing.

The machine that confines the air so as to give it an effective pressure is called an air compressor, and is a form of pump, or rather a steam engine and pump combined. In the usual construction a steam cylinder and an air cylinder are placed end to end, and the steam-cylinder piston is made to drive a piston within the air cylinder so that at each stroke a cylinderful of air is compressed and forced out, as into a tank. The air so stored becomes a reserve of power that may be used at any convenient time at a distant point by transmission through pipes, the power being utilized at the receiving point by means of a cylinder and reciprocating piston, on the principle of the steam engine, or in any other convenient manner. In compressing air a great amount of heat is generated, and the loss of this would mean a corresponding loss in power; hence means have to be provided for saving the heat. The common method is to surround the air cylinder, where the compression is going on, with a water jacket, thus cooling the air and heating the water. As the water is heated it is led away to feed the boiler of the steam engine. Of course the hot water brought to the boiler is turned into steam very quickly, and this saves coal and economizes the loss that otherwise would be sustained. In practice it is found best to compress the air in several stages. All sizes of compressors are built, from those delivering power for operating one rock drill to great mechanisms capable of driving a hundred large machines.

Drills.—The rock drill is simply a percussion drill or chisel driven up and down and forming a hole by repeated blows on the rock. It is also operated by steam, and occasionally by electricity, but for underground work in mines and tunnels compressed air is preferred, as the power delivered to the drills is worth all it costs in the way of furnishing fresh air to the men operating the machines. The compressed-air rock drill has been used on every great tunnel built within the past twenty years, and for such excavations as those at Hell Gate, the Croton Aqueduct, and the tail race for the escape of the water at the Niagara power plant. Drilling in caissons or in front of air locks is the common method in excavating under water. In caisson work, as on river bottoms, the men descend through air locks to the caisson or chamber which has been sunk to the bottom, and there work under a pressure of air sufficiently great to prevent the inflow of the water from the open bottom of the caisson. In excavating the Blackwall Tunnel the work was carried only 8 feet below the Thames bottom, this thin stratum being composed of gravel and mud. The workmen were enabled to prosecute their labors there without being flooded or drowned

only by the maintenance of a heavy pressure of air in their rear, which held back the ooze and gave a temporary support to the undermined gravel. Large metal cylinders were advanced as the tunnel was formed, and in the front of these were maintained air locks with doors through which the men and tools were passed in and the excavated material was passed out. As the air leaked out of the forward part of the work, bubbling up into the Thames, it was necessary to furnish a very large supply, and about 8,000 cubic feet a minute were pumped in during the most critical portion of the work. A pressure of 20 to 48 pounds to the square inch was delivered, the latter being equal to more than 3 atmospheres. This was found to have a somewhat intoxicating effect upon the workmen, and some of them suffered with slight affections, as temporary paralysis, from working under such conditions, but no serious results followed. The men were allowed to remain under the pressure only about two hours at a time. It was essential that they should use care in going into and out of the air locks, to allow the air to pass freely to the inside of their eardrums, else the sudden change of pressure on the outside would produce a sharp pain in the drum. A similar method of excavating was used under the East river, at New York, and under the St. Clair river, and in excavations under Lake Michigan.

Cars.—The driving of street cars by compressed air has made considerable progress. It was first made a success in France, being used on a line between Paris and Nogent-sur-Marne and on the Nantes Railway, and more recently on a line between the Louvre and St. Cloud. A line is also operated at Bern, Switzerland. The air is stored in tanks under the cars, the pressure in the tanks on the Paris line being 2,000 pounds to the square inch at starting. A run of 6 or 8 miles can be made without recharging, but it has been found best to recharge, while stopping at stations, about every mile and a half. The air is used to drive the cars by means of expansion in cylinders like those of a steam engine, being admitted to the cylinders at a reduced pressure of about 150 pounds. The storage tanks employed are known as Mannesman tubes, being flasks or cylinders of mild steel of great tensile strength. They can not explode, in the sense of a general breaking up, but if a burst occurred it would be in the nature of a rip, permitting the escape of the air in a sudden blast, dangerous only to those immediately in front of it.

The Hardie system of compressed-air propulsion for street cars has been tried on the 125th Street line in New York city, and its operation has been highly praised by the technical press. The cost of its operation has not been made public, but it is believed to be greater than that of the electric trolley system. The air is stored in tubes under the car, as in the Paris system, and used in cylinders of the type employed on steam locomotives. The pressure in the tubes is 2,000 pounds to the square inch, and this is brought down by reducing valves to 130 pounds. At this pressure the air is reheated by being passed through a chest of hot water, greatly increasing the pressure, mostly by expansion of the air due to heat, but partly by vaporization of a portion of the water. The car has the advantage of operating without dead centers and running equally well in either direction with very little noise and no smoke or dirt. The system avoids all the difficulties of exposed wires incidental to electrical propulsion and the expense of underground mechanism as with cable railways. Locomotives for underground haulage in mines are built on similar lines.

Pneumatic Tubes.—Transportation tubes for carrying small packages by pneumatic pressure have been established in London, Paris, Vienna, and

Berlin for some years. They have also been employed by the Western Union Telegraph Company in New York, and in Chicago for press dispatches to the newspapers from a central bureau. All these tubes have a diameter of less than 3 inches. In 1893 a pneumatic-dispatch service was established in Philadelphia with tubes of $6\frac{1}{2}$ inches diameter to connect the main post office with a substation half a mile distant. The operation of this was so satisfactory that a system of large tubes was undertaken in New York city to connect the post office and the Produce Exchange, the 49th Street and Lexington Avenue branch post office, and the main post office in Brooklyn. The system between the first-named points was completed and officially opened Oct. 7, 1897, the first package sent consisting of a copy of the Constitution of the United States, President McKinley's inaugural, and a Bible. The lines are double, so that the service may be continuous in both directions. The carriers are metal cylinders about 20 inches long, and are slightly larger in circumference at the ends than elsewhere so as to allow of rounding curves. They operate very well with a comparatively loose fit, and may be sent under a headway of only a few seconds without interfering with each other.

Guns.—The compressed-air torpedo gun, commonly called the dynamite gun, introduced by Capt. Edmund L. G. Zalinski (see "Annual Cyclopædia" for 1888, page 796), has attracted wide attention in military circles within a few years. The air gun, an old invention, was revived by Mr. Mefford, of Detroit, about 1885, who suggested the practicability of its use for throwing high explosives. Up to the present time 11 pneumatic dynamite guns have been supplied to different countries, 1 going to England, 1 to Brazil, 3 being placed on the United States man-of-war "Vesuvius," 3 at Sandy Hook, N. J., and 3 at Fort Winfield Scott, San Francisco, Cal. Of these, the 3 on the "Vesuvius," of 15-inch caliber, were designed by Mr. Sewall and Mr. G. Reynolds, with the assistance of other engineers, and one of the Sandy Hook battery, of 8-inch caliber, was designed by Messrs. N. Pratt and Sewall. The last 7 guns, all of 15-inch caliber, were invented and designed by Capt. John T. Rapieff, who has obtained several patents for the guns. Capt. Zalinski, then a lieutenant, became acquainted with the system, and, upon presentation of the subject to the United States Government, was detached to investigate the matter, and through his efforts, experiments, etc., air guns attracted a proper public interest, which eventually culminated in an order from the United States Government. The maximum range of the dynamite gun is about 6,000 yards; the actuating air pressure is 1,000 pounds or less to the square inch; the storage pressure is 2,000 pounds or less to the square inch. The guns are capable of throwing projectiles containing 50, 100, 200, or 500 pounds of high explosives, using for smaller charges sub-caliber projectiles. The pressure of air does not increase as the projectile moves along the bore of the gun. The test of the English gun, the first of the new type, at Shoeburyness, affords a good idea for the accuracy of fire, being made on land, so that there was no doubt as to the first point of graze or the strike of the projectile. It was found that at a distance of 3,642 yards five successive shots fell in a rectangle 7 yards long by 5.4 yards wide, a result considered phenomenal. At the acceptance trials in the United States the horizontal target given by the Government was 120 by 30 yards (this being almost the size of the United States steamer "Chicago"), into which it was required to place a certain percentage of the number of projectiles thrown. All the projectiles were dropped into a

horizontal rectangle having less than one twentieth of the superficial area of the target.

The disappearing-gun carriages used at Sandy Hook and elsewhere are operated successfully by compressed air. An air cylinder stored at a pressure of about 575 pounds is employed to serve as a spring, and receive the kick or rearward thrust of the gun as it is fired and descends below its parapet. The pressure in the cylinder is utilized later to restore the gun to firing position.

Torpedoes.—Many of the automobile torpedoes, as the Hall and the Whitehead, make use of compressed air. The latter carries the air in a reservoir, stored at a pressure of 1,000 pounds. The air, being admitted to a triple-cylinder motor, drives two oppositely revolving propellers set in the tail of the torpedo. The torpedo is discharged from a gun by means of compressed air, this being the method commonly employed with locomotive torpedoes for naval warfare. The torpedo of Ericsson's "Destroyer" is fired by a combination of powder and compressed air, the advantage in this being that the air cushions the initial shock of the powder on the torpedo, and also aids the efficient combustion of the powder.

Ice Making.—Refrigeration and ice making are now accomplished almost altogether with the aid of air-compressing plants, ammonia gas being usually substituted for air in the compressor and liquefied by pressure. When the liquefied ammonia is allowed to expand it gathers heat to compensate for what it has lost, and in so doing reduces the temperature of its surroundings. Under some conditions atmospheric air is compressed and expanded, instead of ammonia.

Machinery.—A few years ago a large machine shop in St. Louis was equipped wholly with compressed-air mechanism. A 55-horse-power compressor operates the plant, the air being stored in a reservoir and piped to points where wanted. As a rule, the piping is brought directly over each tool. For the larger tools motive engines are employed, and when it is desired to drive them the turning of a cock admits the air, and the engine is stopped in the same simple manner. This avoids the running of idle shafting, there being no consumption of power when the machines are still. The system has been copied in many establishments, notably railroad shops, where air is peculiarly serviceable, because it lends itself to a number of peculiar uses to which no other motive fluid is applicable. In these shops traveling cranes, each bearing its own air cylinder, are used for handling very heavy castings. Smaller weights are conveniently handled by compressed-air hoists, which may be used almost anywhere. Hoists operating from overhead are made in the form of a long cylinder with a hook at each end. This is hooked to an overhead beam and to the article to be hoisted, and compressed air is then admitted to the lower end of the cylinder and slowly raises a piston to which the lower hook is attached, and the lift is made in a most simple manner. Only moderate pressure is required, and any good quality of hose will bear the strain. Lifting jacks, punching machines, riveters, and most of the class of machinery usually operated hydraulically may be managed equally well with compressed air, and with greater convenience where a compressor plant is used. Such a plant also does away with the necessity for blowers or rotary fans, being very convenient for operating a blowpipe, to direct a gas flame, or for fanning a forge. Steam pipes, steam passages and steam ports may be readily cleaned by a blast of compressed air, and in many railroad shops the cars and cushions are cleaned in the same manner, the air being applied through a hose, much as a fireman throws water on a burning building.

Very many of the safety appliances used in connection with railways depend upon compressed air. It is peculiarly adaptable to the operation of interlocking switches and semaphores, being commonly used in conjunction with electric and positive mechanisms.

Pumps.—The air-lift pump is a recent invention, suited to assist the flow of artesian wells. The well has a main pipe, which the water may ascend, and beside this is a smaller pipe, down which the compressed air passes. The smaller pipe enters the bottom of the main pipe below the water level, and carries water with it in its ascent to the surface. The expansion of the air cools the water and aerates it, so that it is in the best possible condition for drinking. The water supplies at Wayne, Pa., and Rockford, Ill., are obtained in this manner, and at the latter place the natural flow of a well has been increased fivefold. A similar mechanism has been employed to drain swamps or pits, and has proved effective and economical.

Various Uses.—Coal-cutting machines are frequently driven by compressed air, at a pressure of about 75 pounds, the exhaust air being valuable for ventilation. Some of these machines are mechanical picks, but the undercutting machine is more usually employed. A great variety of miscellaneous small tools are conveniently operable by compressed air, as the calking machines used in solidifying the joints of steel tanks, boilers, ship plates, etc. Air-operated stone-dressing machines have largely replaced hand labor within a few years, doing better work at a fraction of the cost. The machine delivers rapid, reciprocating blows with dressing tools, and will level off a square foot of granite in two and a half minutes. By regulating the upstroke with a die or pattern, rough carving may be done. A few other uses of compressed air are the operation of fog sirens; the spraying of petroleum, as in the lucigen, or for the operations of welding, japanning, and tempering; agitation of asphalt in process of manufacture; agitation of sirups in refining sugar; mixing of acids in compounding nitroglycerin; painting with an atomizer in place of a brush; manufacture of cellulose silk, the pulp being forced through minute holes by pneumatic pressure; stimulating of natural-gas wells; inflating pneumatic tires; pumping of fluids from barrels; refining of silk ribbon; operation of sand blasts; increasing the pressure in hydraulic elevator tanks; working of indicators and bells; regulation of clocks; aëration of sewage; compression of other gases, as for lighting railway cars; production of oxygen and nitrogen by the Brin process; sanding of railway rails; raising of sunken vessels; and vulcanizing of timber.

CONGO FREE STATE, a sovereign, independent, monarchical state in Central Africa, created with the consent of the great powers and declared perpetually neutral in conformity with the general act of the Congo, signed at Berlin on Feb. 26, 1885. Leopold II, King of the Belgians, was declared its sovereign, and he by his will, dated Aug. 2, 1889, has ceded his sovereign rights to Belgium. By a convention made on July 3, 1890, Belgium acquired the right to annex the State after a period of ten years. By a codicil to the will, dated July 21, 1890, the territories of the state were declared to be inalienable. The convention was ratified by the Belgian Chambers on July 25, 1890. The Government, under King Leopold, is presided over by a single Secretary of State at Brussels, Edmond van Eetvelde, who is assisted by Dr. A. de Cuvelier as Secretary of Foreign Affairs, H. Pochez as Treasurer, H. Droogmans as Secretary of Finance, and Charles Liebrechts as Secretary of the Interior, Public

Force, and Marine. The Governor General at Boma is Théodore Wahis.

Area and Population.—The area of the territories of the Congo State is estimated from 870,000 to 900,000 square miles, and the population from 14,000,000 to 30,000,000. The number of whites at the end of 1895 was 1,325, of whom 839 were Belgians, 88 English, 79 Swedes and Norwegians, 42 French, 49 Italians, 45 Americans, 39 Dutch, 21 Germans, 12 Danes, and 7 Swiss, Austrians, and Spaniards.

Finances.—The revenue for 1896 was estimated at 7,002,735 francs, of which 2,000,000 francs were advanced from the Belgian treasury, 1,000,000 francs contributed by the sovereign, 1,720,200 francs collected from customs, 40,800 francs obtained from sales and leases of land, 1,200,000 produced from domains and tribute and imposts paid in kind, and 1,041,735 francs received from various sources. The expenditures were estimated at 8,236,300 francs, of which 231,000 francs were for the central administration in Europe, 1,047,120 francs for administration in Africa, 4,820,793 francs for the public force, 526,758 francs for the marine, 614,437 francs for public works, 339,040 francs for agriculture, and 657,152 francs for various expenses. The revenue and expenditure for 1897 was estimated at 10,500,000 francs. The King gives the same contribution each year from his private purse, and the Belgian Government has been authorized to advance the sum of 2,000,000 francs annually till 1900.

The revenue for 1897 was 9,369,000 francs, of which 3,500,000 francs came from ivory and rubber, 2,000,000 francs from customs duties, 2,000,000 francs were advanced by the Belgian Government, 1,000,000 francs were contributed by the King, and 869,000 francs were miscellaneous receipts. The expenditures amounted to 10,141,800 francs, of which war and police absorbed nearly half, administration 1,538,000 francs, marine 941,000 francs, and public works 684,000 francs.

Public Force and Marine.—The armed force of the Free State is composed of native soldiers commanded by 172 European officers and 172 sergeants. The effective force for 1896 was fixed at 6,120 men, of whom 4,000 were recruited within the State.

The Government has 6 steamers plying on the lower Congo from the mouth to Matadi, and 14 on the upper Congo.

Commerce and Production.—The chief exportable products are palm oil, palm nuts, caoutchouc, ivory, orchilla weed, gum copal, ground nuts, and camwood. The imports are cotton goods, firearms, gunpowder, tobacco, and, within a limited territory, spirits. The general imports for 1895 were valued at 11,836,033 francs, against 11,854,021 francs in 1894, and the general exports at 12,135,656 francs, against 11,031,704 francs. The export of ivory in 1895 was 5,844,640 francs in value; caoutchouc, 2,882,585 francs; palm oil, 1,037,000 francs; palm nuts, 1,331,000 francs; coffee, 159,000 francs. Tobacco is grown by the natives in their villages, and plantations have been established by the Government. The cultivation of coffee has been introduced on the upper Congo. The trade is chiefly with Belgium, Great Britain, and Holland. Belgian imports in 1895 were valued at 6,099,958 francs, and exports to Belgium at 8,999,660 francs; imports from the Netherlands at 1,548,000 francs, and exports to the Netherlands at 885,000 francs; imports from Great Britain at 2,312,000 francs, and exports to Great Britain at 593,000 francs; imports from Germany at 920,000 francs, and exports to Germany at 218,000 francs; imports from the French Congo at 2,000 francs, and exports to the French Congo at 251,000 francs; imports

from the Portuguese possessions at 252,000 francs, and exports to Portuguese possessions at 1,189,000 francs; imports from other countries at 702,000 francs. In 1895 the number of vessels that visited Banana and Boma was 571, of 253,011 tons.

The imports in 1896 amounted to 16,000,000 francs, and the exports to 15,000,000 francs. Cotton stuffs and other manufactures come almost entirely from Belgium. Only 5,000,000 francs of the import and an equal amount of the export trade was with foreign countries. The spirit trade has decreased, and in 1896 formed only 1.37 per cent. of the entire value of the commerce. The sale of alcohol is forbidden throughout the State except on the lower Congo, and there it is subjected to the maximum tariff authorized by the act of Brussels. The laborious caravan route from Matadi to Stanley Pool is shortened one half by the railroad, and in 1899 the line will be completed. There were 7,000 men employed on the works in 1897, natives of Sierra Leone and other British West African colonies and of Senegal. In 1897 a decrease was noticed in the export trade, but there was a considerable increase in imports, representing chiefly expenditure by the Government, the religious missions, and the railroad company.

The Congo post office in 1895 forwarded 54,382 internal and 173,564 international letters.

Treatment of the Natives.—From the statements of missionary accusers of the Congo administration it appears that about the middle of 1893 forced labor was imposed on the natives, and this was attended with most inhuman practices. Soldiers are accustomed to shoot or mutilate any native who refuses to gather rubber. The State is said to still be engaged itself in the slave trade and to receive war indemnities in slaves. Prisoners captured in war are carried off to be trained as soldiers and to cultivate the property round the stations. Native armed sentinels, chosen from the wildest tribes, are placed in the towns to force the people to bring in rubber. In one district on the upper Congo, near Equatorville, 45 villages were burned by the black soldiery. Missionaries saw soldiers going to attack the village of Bompanga near Bolengi, their station, and heard the shots by which more than 20 people were killed, three quarters of their number women and children, and they saw the right hands of the killed taken back in a basket, for it is the practice to preserve the hands of such victims with smoke and return these trophies to the authorities to prove that the soldiers have not wasted their cartridges. When missionaries complained to the authorities of the dreadful carnage and devastation perpetrated by the troops in enforcing the collection of rubber, they were put off in most cases with evasions and no investigation was made, the matter being dragged along until the officials could say that it was an old story incapable of being sifted at such a late date. Sometimes, when they were insistent, the missionaries were themselves threatened with trial and penal servitude on the charge of inciting the natives to refuse to pay their tribute of rubber. After Col. Wahis had made a tour of the stations in July, 1896, and had, on asking the missionaries if they had any complaints to make, been informed of the Bompanga affair, which had already been the subject of a slighted investigation by Judge de Lancker, another village of the district, Mandaka Vajiko, was similarly attacked and about 50 were killed, not because the natives refused to pay the tax, but because they were accused of bringing bad rubber, the supply of good rubber not being equal to the demand. It was a common thing to see sentinels carrying baskets of right hands of men, women, and children to the commissary.

Although the charges of the missionaries were passed over and discredited, their publication in Europe spurred the Governor General to more energetic action for the correction of abuses. Some soldiers and traders were punished for cruelty, and some of the worst officials were got rid of. The Congo State encourages the development of missions, both Catholic and Protestant, and the number of missionaries has increased sevenfold since the State was founded, being 223 in 1897, including 108 Protestants. Something has been done to put a stop to cannibalism and human sacrifice, which are constituted crimes by one of the decrees of the State. On the Ubangi the traffic in human victims has almost ceased; but on the upper Congo even Baron Dhanis is said to have given out rations of human flesh to his troops, and cannibalism has, according to some observers, been on the increase since Europeans appeared in the Congo basin. Some of the decrees of the State are in direct conflict with the Brussels act, such as the decree announcing the confiscation of all lands in which private property has not been recognized, and the one declaring that all products of domain lands belong to the State. There are, however, regulations leaving the natives in possession of all the land that they can cultivate, and allowing them to settle on vacant lands.

The freedom of navigation and commerce on the Congo has become a fiction since the State established a practical monopoly of rubber and ivory. The Government boasts, in spite of the severe criticism to which it has been subjected, that it has accomplished much for the civilization of Africa, summing up its work in the report for 1897 as follows: "The peril of the slave trade averted, a vast territory entirely opened to progress, centers of civilization springing up everywhere, roads being built, communications rendered easy and speedy, a railroad in course of completion, a flotilla sailing over all the course of the river and its tributaries, trade developing, missions flourishing, schools being opened, the population protected by justice and getting initiated to cultivation and handicrafts, their material and moral situation improving, Christian villages forming themselves, barbarous practices disappearing—such is the work of ten years." In September, 1896, six missionaries were constituted a commission that was charged with the protection of natives throughout the territory of the State, and authorized to notify to the judicial authorities such acts of violence of which the natives may be the victims as come within their cognizance. The president of the Court of Appeal has since been charged with the duty of making tours of inspection for the special purpose of enforcing the regulations for the proper treatment of the natives.

Military Operations.—The military forces of the Free State were operating in the early part of the year on the upper Congo and in the Nile territory leased from Egypt by arrangement with Great Britain. In January the guard stationed at Banzyville, on the Ubangi, fired upon the French administrator from Mobaye, who crossed the river to secure the return of a woman captured by natives of the Free State. The French returned the fire, and several were wounded on both sides. The administration of the Congo State apologized to the French authorities and promised to punish the offenders.

An expedition under Capt. Chaltin, consisting of 700 soldiers, supplemented by 50 fusileers and 500 lancers under native chiefs, leaving Dunga on Dec. 14, 1896, reached the site of Bedden, on the Nile, two months later, after engaging in some skirmishes with native tribes, and on Feb. 17 attacked 2,000 Mahdists who occupied a strong position. While

the enemy attempted to inclose the Congo State troops with the two flanks, these charged the center and carried a defile and the neighboring heights at the point of the bayonet, whereupon the Mahdists fled in the direction of Rejaf, abandoning their arms, ammunition, and baggage. The Congo troops marched 18 miles the same day, arriving in front of Rejaf, which was held by 4,000 Mahdists, half of whom were Mohammedans from the north armed with breech-loading rifles. After a severe engagement the dervishes were driven from their position and fled northward. They lost several hundred men. The Congo State troops captured 3 guns, 700 breech-loading rifles, an enormous quantity of ammunition, banners, sabers, the town archives, and many herds of domestic animals. Rejaf was found to be the only fortified place in the Equatorial Province, with spacious, well-built houses. Lado had ceased to exist seven years before, and its site was overgrown with vegetation. Vatako, Longomerri, and other stations had also disappeared. The defeated Mahdists made no attempt to recover the country, and were not seen or heard of more. The people were glad to be delivered from their yoke, and made their submission to the Congo State.

Supporting this expedition was a force of 200 Haussas and a small army of Congo natives, stationed at different points on the northeastern frontier to guard against incursions of the Mahdists. Baron Dhanis had brought up this force while Capt. Michaux with 500 picked troops was engaged in stamping out the rebellion of the Batatelas in the south. Mutinous Batatela troops, after organizing their first revolt at Luluaburg in 1895 and suffering defeat at the hands of Major Gillain and Capt. Lothaire in November of that year, succeeded in making their escape toward the south across impenetrable forests. Baron Dhanis organized a column at Kassongo, which was sent in pursuit under Capt. Michaux. This force proceeded southward to Munza, between the Lualaba and the Lomani, and there encountered the rebels on Nov. 11, 1896. After a preliminary skirmish a battle was fought in complete darkness, which ended in the flight and dispersion of the rebels. Capt. Michaux continued the campaign, coming up with the rebels again in January, 1897, when he gave them another severe defeat.

The bulk of the force taken to the north by Baron Dhanis consisted of Batatelas and Bakussus, impressed troops who were subjected to severe discipline by the trained soldiers from Sierra Leone and the middle Congo in order to keep them in order. The Batatelas were especially restive and morose on account of being taken so far from their homes to fight for the State in a strange country. They expected to be led next against the dervishes, and were afraid that they would never see their native land again. On the same day that Capt. Chaltin attacked Rejaf a battalion of 1,500 Batatelas and Bakussus, under a brother of Baron Dhanis, mutinied and killed their commander. Another column, led by Major Leroi, revolted near Ndursi, and after killing their chiefs the rebels marched off in the direction of the upper Ituri, where they were joined in March by the mutineers of Baron Dhanis's expedition. The rebels carried off 3,000 rifles and all the stores and ammunition of the expedition. They made their way to the south, toward their own country beyond the Arab zone, by way of the valley of the Senliki, occasionally crossing the border into the British sphere. During one of these incursions one of their detachments attacked the English fort of Katwe, which had been strengthened by 40 Congo State soldiers, who aided the small English garrison to repel the assault. The soldiers who remained faithful to Baron Dhanis

had several encounters with the mutineers, in one of which Lieut. Julien was killed. Baron Dhanis first led the loyal remnant of his force, consisting mainly of the 200 Haussas, back to the fort of Avakubis, where Lieut. Henri had a small garrison. Then the commander-in-chief returned by way of Stanley Falls to Nyangwe to organize a fresh force for the repression of the rebellion. Meanwhile the troops left in the north under Lieut. Henri, 600 in number, started in pursuit of the rebels. They were rejoined on June 12 at Mekupi by a force under Lieut. Sannaes, who had followed the traces of the rebels from Kilongalonga, on the Ituri. The Arabs recently disarmed at Stanley Falls were quiet, and the troops of Baron Dhanis held the routes to Nyangwe and to Kassongo in order to cut off the retreat of the Batatela mutineers.

CONGREGATIONALISTS. The following is a summary of the statistics of the Congregational churches in the United States as they are given in the "Congregational Yearbook" for 1897: Number of churches, 5,546, of which 4,250 are registered as "supplied" and 1,296 as "vacant"; number of ministers, 5,405, of whom 3,690 are returned as "in pastoral work" and 1,715 as "without charge"; number of members, 615,195; of members of Sunday schools, 687,575, and the average attendance at Sunday schools, 423,070; number of families, 417,485; of Young People's Societies of Christian Endeavor, 3,892, with 242,546 members; number of additions during the year on confession, 32,147; of baptisms, 14,881 of adults and 11,655 of children. Amount of contributions (4,837 churches reporting): For foreign missions, \$469,731; for education, \$179,238; for church building, \$98,062; for home missions, \$545,977; for the American Missionary Association, \$159,469; for Sunday schools, \$57,852; for ministerial aid, \$23,126; other contributions, \$596,001; total benevolent contributions, \$2,129,450; received from legacies, \$323,081. Contributions for home expenditures (1,758 churches reporting), \$6,871,128. These figures show increase over the previous year of 64 churches, 12,638 members, 4,995 members of Sunday schools, and \$463,575 in contributions for home expenditures, and a decrease of \$57,594 in benevolent contributions. The 7 theological seminaries return 64 professors, 25 instructors or lecturers, 24 resident licentiates or fellows, 22 advanced or graduate students, and 486 undergraduate students.

The receipts of the Congregational Church Building Society for 1896, as reported at its forty-fourth annual meeting in January, were \$132,968, and its available resources for the year were \$221,644. Its total disbursements were \$135,751. Aid had been voted on 140 houses of worship and 45 parsonages. Payments amounting to \$71,867 had been voted direct from the treasury toward the completion of 114 houses of worship, securing church property valued at \$235,975; and payments in the form of loans had been made toward the completion of 45 parsonages, securing \$42,486 of parsonage property. This brought the number of houses of worship aided by the society up to 2,775, and the number of parsonages to 569. Between May, 1892, and the end of December, 1896, the treasurer of the society had received \$97,933 in the form of contributions to the Parsonage Loan fund and \$132,522 in the form of parsonage loans refunded. The purpose of the board was to keep this fund constantly invested in parsonages. On Dec. 31, 1896, the Church Building Loan fund was \$319,759, and 110 churches had received aid from it. Of this fund, \$129,854 had been paid back, and \$189,905 were outstanding.

Education Society.—The annual report of the Congregational Education Society shows that during the year 321 students were assisted—106 in the colleges and 215 in the seminaries—a falling off

of 26, the decrease being mainly in the colleges. The society also gives assistance to a number of Western colleges, including Pacific University and Pomona, Salt Lake, Fargo, Lake Charles, Ridgeville, Rollins, and Fairmount Colleges. Some of the high schools had been discontinued in the West, on account of the growth of the public schools. The receipts of the society for the year had been \$137,413, and the expenditure somewhat less, leaving a balance of about \$1,000.

Home Mission Society.—The seventy-first annual meeting of the Congregational Home Missionary Society was held in Saratoga Springs, N. Y., June 1. Gen. O. O. Howard presided. The receipts of the society for the year had been \$358,103, while the auxiliaries had raised and expended on their own fields \$230,215. The expenditures of the national society had been \$421,275, and of the auxiliaries \$230,215. The debt of the society had been increased from \$51,700, to \$127,505. The Woman's Unions had contributed \$45,550 to the treasury of the society. Two thousand and twenty-six missionaries had been employed in 44 States and Territories, supplying in whole or by preaching at stated intervals 3,091 congregations; of these, 214 had preached in foreign tongues, viz., 47 to German, 107 to Scandinavian, 22 to Bohemian, 4 to Polish, 13 to French, 1 to Mexican, 4 to Italian, 2 to Spanish, 4 to Finnish, 1 to Danish, 4 to Armenian, 1 to Greek, and 4 to Welsh congregations. The number of pupils in Sunday schools and Bible classes was not far from 172,784. Two hundred and thirty-eight new schools had been organized, and 2,638 schools were under the special care of the missionaries. The additions on confession of faith, so far as could be ascertained, numbered 7,942. One hundred and seven new churches had been organized, 38 had assumed entire self-support, 88 houses of worship had been completed, 182 materially repaired or improved, 4 chapels built, 62 parsonages provided, and 115 men in connection with the missionary churches were preparing for the ministry.

American Missionary Association.—The fifty-first annual meeting of the American Missionary Association was held in Minneapolis, Minn., Oct. 19, 20, and 21. President Merrill E. Gates, LL. D., of Amherst College, presided. The treasurer reported that the total receipts for the year ending Sept. 30 had been \$320,440, and the payments \$317,812. The debt had been reduced from \$66,572 to \$54,945. The year's receipts from the Women's missionary societies had been \$28,753. Forty-one schools had been aided wholly or in part from the income of the Daniel Hand fund (\$75,858), the accounts of which are kept separate from the general accounts of the association.

The Southern educational work of the association included 6 chartered institutions, 44 normal and graded schools, and 27 common schools—in all 77 schools—with 413 instructors and 12,348 pupils. Of the pupils, 69 were classified as theological, 70 as collegiate, 330 as collegiate preparatory, and 1,439 as normal. The condition of the colored people was represented as being one of steady advancement. Four of the graded and normal schools wholly under the care of colored teachers were mentioned in the report as presenting special features worthy of notice. The higher schools—Fisk University, Nashville, Tenn.; Talladega College, Alabama; Tougaloo University, Mississippi; Straight University, New Orleans, La.; and Tillotson College, Austin, Texas—each reported a year of exceptional progress. The industrial education given at these schools was constantly growing more important, and every year young men were being turned out of negro schools in the South who had been taught carpentry, shoemaking, printing, the gener-

al use of tools, and scientific farming in addition to the usual academic courses, and young women who had been taught cooking, washing, sewing, dress-making, nursing, and housekeeping. Eighteen mountain schools (included in the total of 77 schools) returned an enrollment of 2,195 pupils. These schools, besides their direct results, were exercising a healthy influence in creating a desire for a better education and larger intellectual growth, and in promoting a higher standard of instruction. The Orange Park School, Florida, was now free from the troubles from which it was suffering in the previous year (see "Annual Cyclopædia" for 1896, article CONGREGATIONALISTS). The church work in the South included 133 ministers and missionaries and 224 churches with 11,317 members. One thousand and sixteen members had been added by profession of faith, and 16,955 pupils were returned in church, mission, and Sunday schools. In all, 18 new churches had been organized, of which 12 were colored churches, 4 in the Southern mountains, and 2 in the Indian field. During the past five years 121 new churches had been added, of which 81 were colored churches, 35 were churches in the mountains, and 5 in the Indian fields. These churches had come into being independent of any direction or suggestion from the association. The 55 mountain churches had 1,619 members. Two local Congregational associations organized within the past few years among the mountain churches—the Cumberland Plateau Association, in Tennessee, and the Cumberland Valley Association, in Kentucky—were maintaining a vigorous existence. Seventeen churches were sustained among the Indians, and returned 971 members, 1,145 pupils in Sunday schools, and \$2,427 of benevolent collections. There were also connected with the Indian missions 26 missionary out stations, 86 missionaries and teachers, 37 of whom were Indians, and 23 schools with 592 pupils. The Indian missions were divided among the departments of Nebraska and the Dakotas—in which the 3 central training schools were situated—Montana (Fort Custer), Washington (Skokomish), and Alaska (Cape Prince of Wales). The churches, of which 2 had been added during the year, were mostly served by native pastors who went out from the Christian schools, while 4 white general missionaries superintended the work of the native pastors in the out stations. The Chinese missions comprised 20 schools, with 32 teachers, 7 of whom were Chinese, and 1,084 pupils, while 60 persons had made profession of faith during the year. The Chinese brethren, since the organization of their Chinese Missionary Society, in 1866, had contributed more than \$15,000 to missions in China. They were carrying on missionary work at Canton, with a property worth \$4,000, at Hong-Kong, where they had property valued at nearly \$10,000, and had organized an aggressive work from their chapel at Ci-Nung. Besides sustaining their three missions they had helped the American Board in China to start a number of chapels and free schools, and had contributed largely to the support of them. Their Christian Endeavor Society in San Francisco ranked as the third in the United States in contributions to foreign missions.

The American Board.—The eighty-eighth annual meeting of the American Board of Commissioners for Foreign Missions was held at New Haven, Conn., in October.

The treasurer's report showed that the total expenditure for the year had been \$688,414, of which \$636,299 represented the cost of missions, and that the board had been left \$45,150 in debt. The permanent fund amounted to \$240,734.

The general survey gives the following numbers: Of missions, 20; of stations, 101; of out sta-

tions, 1,126; of places for stated preaching, 1,501; average congregations, 63,264.

Laborers employed.—Number of ordained missionaries (15 being physicians), 174; of physicians not ordained (besides 10 women), 14; of other male assistants, 4; of women, 10 of them physicians (wives 176, unmarried 175), 351; whole number of laborers sent from the United States, 543; number of native pastors, 234; of native preachers and catechists, 546; of native school-teachers, 1,651; of other native laborers, 525; total of native laborers, 2,056; total of American and native laborers, 3,499.

The Churches.—Number of churches, 470; of church members, 44,606; added during the year, 3,919; whole number from the first, as nearly as can be learned, 138,790.

Educational Department.—Number of theological seminaries and station classes, 17, with 179 pupils; of colleges and high schools for young men, 57, with 3,388 pupils; of boarding schools for girls, 61, with 3,603 pupils; of common schools, 1,049, with 43,221 pupils; whole number under instruction, 54,615. Amount of native contributions so far as reported, \$113,039.

Owing to incomplete returns from Western and Eastern Turkey, the items from those missions in reference to churches and native agencies were taken from previous reports. In European Turkey, notwithstanding the war and the disturbances at Salonica and Monastir, and much hindrance to general travel, the mission work had held its own. In Eastern Turkey it had been more interrupted, and the care of orphans, 2,000 of whom had received protection, had laid heavy burdens on the missionaries. Yet the schools and churches had been thronged, and many places hitherto closed had been seeking spiritual help. The western and central missions in Turkey had held meetings for the first time in three years. The colleges at Constantinople, Marsovan, and Aintab and the high schools reported a successful year. In Bulgaria the work had considerably broadened; it had been very successful in Austria, Spain, and Mexico, and the growth of the Christian Endeavor societies in Spain and Mexico had been very noticeable. In India the doors were open on every hand. Great changes were shown in Japan, which was open everywhere. The East Central African Mission, now in its fourth year, had founded its first church, with 17 members. A revival of great power and extent had marked the progress of the Zulu mission. In Micronesia the situation was much improved, the missionaries had visited Ponape by special invitation of the Spanish governor, and visits had been paid to the Mortlock and Marshall islands. A rapidly and widely extending interest in Christianity was manifest in China; and in the Foochow mission, which had celebrated its jubilee, there had been more than 2,000 inquirers, while the 548 additions to the churches were almost 50 per cent. of the number reported in the previous year, and more than the total number in the mission five years preceding.

The Rev. R. S. Storrs, D. D., president of the board, having expressed a desire to retire from that office on account of his age, a committee was appointed to nominate a candidate to be his successor. The committee unanimously agreed to suggest the name of the Rev. C. D. Lamson, D. D., of Hartford, Conn., and he was unanimously elected president of the board. A special paper was presented by the Prudential Committee calling attention to the stringency in the financial affairs of the missions and the failure of the churches to contribute adequately to the needs of the work, and asking advice as to how the emergency should be met. Should the missions to papal lands be given up? Should some of the older missions be left to take care of

themselves? or should the educational work be reduced? The resolution passed in answer to these questions deprecated the adoption of any policy that should pay less attention to education, and recommended that the questions of contracting the missions to Roman Catholic countries be referred to a large committee which should confer with the missionaries in the field and dispatch deputations to India and China. The meeting was addressed by the Rev. Dr. F. E. Clark, President of the United Societies of Christian Endeavor, John R. Mott, President of the Student Volunteer Movement, and the Rev. Dr. J. H. Barrows, of Chicago, all of whom had lately visited Protestant missions abroad, and gave accounts of what they had observed among them. A committee appointed to inquire concerning the election of women as corporate members of the board and as members of the Prudential Committee reported that no legal or constitutional impediment stood in the way of such election, and the subject was referred for further consideration to a committee which was instructed to report at the next meeting of the board. A subscription taken during the meeting toward paying the debt of \$45,000, resulted in securing pledges for \$31,000.

British Congregationalists.—The annual meeting of the Congregational Union of England and Wales was held in London, beginning May 10. The Rev. Dr. Charles A. Berry presided, and the Rev. Alfred Rowland was chosen chairman for the next year. The report of the committee referred to the improved financial resources of the Church Aid Society, and mentioned the sending out by the Colonial Missionary Society of English ministers to Newfoundland and the native churches of Jamaica. A handbook of the Church history of the early Christian churches had been prepared by Prof. Adeney, and was on sale, and was to be followed by a summary of the story of the English Free Churches, by Mr. Johnson Evans. The Congregational Union lecture, by Dr. John Brown, on apostolic succession, was to be published in the fall. A new constitution for the Young People's Union, which had been approved by the General Committee, was intended greatly to widen the area of operations. It provides for the establishment of a central council and district branches, with the purpose of promoting the formation of such societies and their federation for increased efficiency and co-operation. All Congregational young people's societies formed on a religious basis are included in the scheme. The report of the Church Extension Committee gave a list of new churches begun and arranged for by the county associations. They involved a local expenditure of about £40,000. The Central fund was making less progress than the local funds had done. The income of the Church Aid Society had risen to £1,100 more than in the previous year, and the stipends of the village pastors had been raised in some cases to £100 and in others to £90, while the minimum had not been suffered to fall below £80. The opening address of the chairman, the Rev. Dr. Berry, was on "Congregational Churchmanship." Resolutions were passed concerning the education question and international arbitration, and expressing sympathy with those who were suffering from the burning of the Charity Bazaar in Paris.

The autumnal meeting of the union was held at Birmingham beginning Oct. 12, the Rev. Dr. C. A. Berry presiding. A resolution was adopted affirming that the assembly, pained by many indications of the development of sacerdotal claims and sacramental superstitions in the country, recognized an imperative obligation to reaffirm the judgment respecting those matters which was universal in the Congregational churches. It did not apprehend that the Roman Catholic communion was becoming

more formidable; but it observed, with profound sorrow, that within the pale of the Church of England, which was constitutionally a Protestant body, and was once regarded as a bulwark of Protestantism, there had grown up a considerable party which did not inculcate, but sought to subvert, the scriptural doctrines of the Reformation, claimed for their ministry sacerdotal and sacrificial functions belonging of right to the Lord Jesus Christ, and had introduced into the public services of the Church of England a mass of ritualistic observances such as were associated with the services of the Church of Rome. Even the two archbishops, in their reply to the letter of Pope Leo XIII, while rejecting his claims, acknowledged the Tridentine Council, and argued that the ministers of the Church of England were also a sacrificing priesthood. The assembly, while desiring to cultivate unity and co-operation with Christians in every place, regarded these sacerdotal claims and ritualistic practices with stern disapprobation. The assembly earnestly declared its unshaken loyalty to the Protestant faith, which it regarded as being the embodiment of the revelation of God and the palladium of their civil and religious liberties, and called on all Christians to combat and repudiate sacerdotalism. A resolution bearing reference to the dispute which was going on at the time among the engineering trades of the country deprecated the resort to strikes and lockouts, and expressed the conviction of the assembly that the gravest responsibility rests upon the leaders of all trade federations, whether of employers or employed, to seek to submit their differences to arbitration before the dispute has become such as can be settled only by the humiliation of one of the parties. It further expressed gratitude at the growth of public sentiment which had led to an act of Parliament authorizing the Board of Trade to intervene in trade differences. Another resolution emphatically condemned the educational policy of the Government during the previous session as "encouraging the endeavor to put the education of the country into the hands of the Established Church; and repeating the opinion that there could be no settlement of the educational difficulty until all schools supported out of public funds were placed under the control of local boards elected by popular suffrage." A letter conveying brotherly greeting and the wish that the deliberations of the assembly might be guided by the Holy Spirit was received from the Bishop of Worcester, to which a suitable reply was returned.

The John Robinson Memorial Church, so called in memory of the pastor of the Pilgrims of the Mayflower, in the erection of which the Congregational Union had co-operated, was dedicated at Gainsborough, June 9.

London Missionary Society.—The annual meeting of the London Missionary Society was held in London May 10. Mr. Stephen Massey presided. The treasurer's report represented that the society had received a smaller income than in the previous year and yet had had to incur a larger expenditure. The entire receipts for the year had been £146,232, of which £10,039 had been for the Centenary fund and £21,008 had been raised and appropriated at mission stations, thus reducing the free contributions to £115,184. Distinct from these figures were two special funds—the Indian Famine fund, from which £5,606 had been received, and the Bechuanaland Relief fund, which had brought in £603. The missions included 191 men and 70 single women, European missionaries, 34,473 members (omitting the churches in Madagascar), 133,352 adherents, 37,178 children in Sunday schools, and 15 hospitals and dispensaries, treating 117,352 patients.

CONGRESS. The second session of the Fifty-fourth Congress began Monday, Dec. 7, 1896, and on notification that both houses were ready to receive any communication, the President sent in the following message:

To the Congress of the United States:

As representatives of the people in the legislative branch of their Government, you have assembled at a time when the strength and excellence of our free institutions and the fitness of our citizens to enjoy popular rule have been again made manifest. A political contest involving momentous consequences, fraught with feverish apprehension, and creating aggressiveness so intense as to approach bitterness and passion, has been waged throughout our land, and determined by the decree of free and independent suffrage, without disturbance of our tranquillity or the least sign of weakness in our national structure.

When we consider these incidents and contemplate the peaceful obedience and manly submission which have succeeded a heated clash of political opinions, we discover abundant evidence of a determination on the part of our countrymen to abide by every verdict of the popular will, and to be controlled at all times by an abiding faith in the agencies established for the direction of the affairs of their Government.

Thus our people exhibit a patriotic disposition which entitles them to demand of those who undertake to make and execute their laws such faithful and unselfish service in their behalf as can only be prompted by a serious appreciation of the trust and confidence which the acceptance of public duty invites.

In obedience to a constitutional requirement, I herein submit to the Congress certain information concerning national affairs, with the suggestion of such legislation as in my judgment is necessary and expedient. To secure brevity and avoid tiresome narration, I shall omit many details concerning matters within Federal control, which, though by no means unimportant, are more profitably discussed in departmental reports. I shall also further curtail this communication by omitting a minute recital of many minor incidents connected with our foreign relations which have heretofore found a place in Executive messages, but are now contained in a report of the Secretary of State, which is herewith submitted.

At the outset of a reference to the more important matters affecting our relations with foreign powers, it would afford me satisfaction if I could assure the Congress that the disturbed condition in Asiatic Turkey had during the past year assumed a less hideous and bloody aspect, and that either as a consequence of the awakening of the Turkish Government to the demands of humane civilization, or as the result of decisive action on the part of the great nations having the right by treaty to interfere for the protection of those exposed to the rage of mad bigotry and cruel fanaticism, the shocking features of the situation had been mitigated. Instead, however, of welcoming a softened disposition or protective intervention, we have been afflicted by continued and not unfrequent reports of the wanton destruction of homes and the bloody butchery of men, women, and children, made martyrs to their profession of Christian faith.

While none of our citizens in Turkey have thus far been killed or wounded, though often in the midst of dreadful scenes of danger, their safety in the future is by no means assured. Our Government at home and our minister at Constantinople have left nothing undone to protect our missionaries in Ottoman territory, who constitute nearly

all the individuals residing there who have a right to claim our protection on the score of American citizenship. Our efforts in this direction will not be relaxed; but the deep feeling and sympathy that have been aroused among our people ought not to so far blind their reason and judgment as to lead them to demand impossible things. The outbreaks of blind fury which lead to murder and pillage in Turkey occur suddenly and without notice, and an attempt on our part to force such a hostile presence there as might be effective for prevention or protection would not only be resisted by the Ottoman Government, but would be regarded as an interruption of their plans by the great nations who assert their exclusive right to intervene in their own time and method for the security of life and property in Turkey.

Several naval vessels are stationed in the Mediterranean as a measure of caution and to furnish all possible relief and refuge in case of emergency.

We have made claims against the Turkish Government for the pillage and destruction of missionary property at Harpoot and Marash during uprisings at those places. Thus far the validity of these demands has not been admitted, though our minister, prior to such outrages and in anticipation of danger, demanded protection for the persons and property of our missionary citizens in the localities mentioned, and notwithstanding that strong evidence exists of actual complicity of Turkish soldiers in the work of destruction and robbery.

The facts as they now appear do not permit us to doubt the justice of these claims, and nothing will be omitted to bring about their prompt settlement.

A number of Armenian refugees having arrived at our ports, an order has lately been obtained from the Turkish Government permitting the wives and children of such refugees to join them here. It is hoped that hereafter no obstacle will be interposed to prevent the escape of all those who seek to avoid the perils which threaten them in Turkish dominions.

Our recently appointed consul to Erzerum is at his post and discharging the duties of his office, though for some unaccountable reason his formal *accreditation* from the Sultan has not been issued.

I do not believe that the present somber prospect in Turkey will be long permitted to offend the sight of Christendom. It so mars the humane and enlightened civilization that belongs to the close of the nineteenth century that it seems hardly possible that the earnest demand of good people throughout the Christian world for its corrective treatment will remain unanswered.

The insurrection in Cuba still continues with all its perplexities. It is difficult to perceive that any progress has thus far been made toward the pacification of the island, or that the situation of affairs as depicted in my last annual message has in the least improved. If Spain still holds Havana and the seaports and all the considerable towns, the insurgents still roam at will over at least two thirds of the inland country. If the determination of Spain to put down the insurrection seems but to strengthen with the lapse of time, and is evinced by her unhesitating devotion of largely increased military and naval forces to the task, there is much reason to believe that the insurgents have gained in point of numbers, and character, and resources, and are none the less inflexible in their resolve not to succumb, without practically securing the great objects for which they took up arms. If Spain has not yet re-established her authority, neither have the insurgents yet made good their title to be regarded as an independent state. Indeed, as the contest has gone on, the pretense that civil government exists on the island, except so far as Spain is

able to maintain it, has been practically abandoned. Spain does keep on foot such a government, more or less imperfectly, in the large towns and their immediate suburbs. But, that exception being made, the entire country is either given over to anarchy or is subject to the military occupation of one or the other party. It is reported, indeed, on reliable authority that, at the demand of the commander in chief of the insurgent army, the putative Cuban Government has now given up all attempt to exercise its functions, leaving that Government confessedly (what there is the best reason for supposing it always to have been in fact) a government merely on paper.

Were the Spanish armies able to meet their antagonists in the open or in pitched battle, prompt and decisive results might be looked for, and the immense superiority of the Spanish forces in numbers, discipline, and equipment could hardly fail to tell greatly to their advantage. But they are called upon to face a foe that shuns general engagements, that can choose and does choose its own ground, that from the nature of the country is visible or invisible at pleasure, and that fights only from ambush and when all the advantages of position and numbers are on its side. In a country where all that is indispensable to life in the way of food, clothing, and shelter is so easily obtainable, especially by those born and bred on the soil, it is obvious that there is hardly a limit to the time during which hostilities of this sort may be prolonged. Meanwhile, as in all cases of protracted civil strife, the passions of the combatants grow more and more inflamed and excesses on both sides become more frequent and more deplorable. They are also participated in by bands of marauders, who, now in the name of one party and now in the name of the other, as may best suit the occasion, harry the country at will and plunder its wretched inhabitants for their own advantage. Such a condition of things would inevitably entail immense destruction of property even if it were the policy of both parties to prevent it as far as practicable. But while such seemed to be the original policy of the Spanish Government, it has now apparently abandoned it and is acting upon the same theory as the insurgents, namely, that the exigencies of the contest require the wholesale annihilation of property, that it may not prove of use and advantage to the enemy.

It is to the same end that in pursuance of general orders Spanish garrisons are now being withdrawn from plantations and the rural population required to concentrate itself in the towns. The sure result would seem to be that the industrial value of the island is fast diminishing, and that unless there is a speedy and radical change in existing conditions it will soon disappear altogether. That value consists very largely, of course, in its capacity to produce sugar—a capacity already much reduced by the interruptions to tillage which have taken place during the last two years. It is reliably asserted that should these interruptions continue during the current year and practically extend, as is now threatened, to the entire sugar-producing territory of the island, so much time and so much money will be required to restore the land to its normal productiveness that it is extremely doubtful if capital can be induced to even make the attempt.

The spectacle of the utter ruin of an adjoining country, by nature one of the most fertile and charming on the globe, would engage the serious attention of the Government and people of the United States in any circumstances. In point of fact, they have a concern with it which is by no means of a wholly sentimental or philanthropic character. It lies so near to us as to be hardly

separated from our territory. Our actual pecuniary interest in it is second only to that of the people and Government of Spain. It is reasonably estimated that at least from \$30,000,000 to \$50,000,000 of American capital are invested in plantations and in railroad, mining, and other business enterprises on the island. The volume of trade between the United States and Cuba, which in 1889 amounted to about \$64,000,000, rose in 1893 to about \$103,000,000, and in 1894, the year before the present insurrection broke out, amounted to nearly \$96,000,000. Besides this large pecuniary stake in the fortunes of Cuba, the United States finds itself inextricably involved in the present contest in other ways both vexatious and costly.

Many Cubans reside in this country and indirectly promote the insurrection through the press, by public meetings, by the purchase and shipment of arms, by the raising of funds, and by other means, which the spirit of our institutions and the tenor of our laws do not permit to be made the subject of criminal prosecutions. Some of them, though Cubans at heart and in all their feelings and interests, have taken out papers as naturalized citizens of the United States, a proceeding resorted to with a view to possible protection by this Government, and not unnaturally regarded with much indignation by the country of their origin. The insurgents are undoubtedly encouraged and supported by the widespread sympathy the people of this country always and instinctively feel for every struggle for better and freer government, and which, in the case of the more adventurous and restless elements of our population, leads in only too many instances to active and personal participation in the contest. The result is that this Government is constantly called upon to protect American citizens, to claim damages for injuries to persons and property, now estimated at many millions of dollars, and to ask explanations and apologies for the acts of Spanish officials, whose zeal for the repression of rebellion sometimes blinds them to the immunities belonging to the unoffending citizens of a friendly power. It follows from the same causes that the United States is compelled to actively police a long line of seacoast against unlawful expeditions, the escape of which the utmost vigilance will not always suffice to prevent.

These inevitable entanglements of the United States with the rebellion in Cuba, the large American property interests affected, and considerations of philanthropy and humanity in general, have led to a vehement demand in various quarters for some sort of positive intervention on the part of the United States. It was at first proposed that belligerent rights should be accorded to the insurgents—a proposition no longer urged because untimely and in practical operation clearly perilous and injurious to our own interests. It has since been and is now sometimes contended that the independence of the insurgents should be recognized. But imperfect and restricted as the Spanish government of the island may be, no other exists there—unless the will of the military officer in temporary command of a particular district can be dignified as a species of government. It is now also suggested that the United States should buy the island—a suggestion possibly worthy of consideration if there were any evidence of a desire or willingness on the part of Spain to entertain such a proposal. It is urged, finally, that, all other methods failing, the existing internecine strife in Cuba should be terminated by our intervention, even at the cost of a war between the United States and Spain—a war which its advocates confidently prophesy could be neither large in its proportions nor doubtful in its issue.

The correctness of this forecast need be neither

affirmed nor denied. The United States has nevertheless a character to maintain as a nation, which plainly dictates that right and not might should be the rule of its conduct. Further, though the United States is not a nation to which peace is a necessity, it is in truth the most pacific of powers, and desires nothing so much as to live in amity with all the world. Its own ample and diversified domains satisfy all possible longings for territory, preclude all dreams of conquest, and prevent any casting of covetous eyes upon neighboring regions, however attractive. That our conduct toward Spain and her dominions has constituted no exception to this national disposition is made manifest by the course of our Government, not only thus far during the present insurrection, but during the ten years that followed the rising at Yara in 1868. No other great power, it may safely be said, under circumstances of similar perplexity, would have manifested the same restraint and the same patient endurance. It may also be said that this persistent attitude of the United States toward Spain in connection with Cuba unquestionably evinces no slight respect and regard for Spain on the part of the American people. They in truth do not forget her connection with the discovery of the Western Hemisphere, nor do they underestimate the great qualities of the Spanish people, nor fail to fully recognize their splendid patriotism and their chivalrous devotion to the national honor.

They view with wonder and admiration the cheerful resolution with which vast bodies of men are sent across thousands of miles of ocean and an enormous debt accumulated, that the costly possession of the Gem of the Antilles may still hold its place in the Spanish crown. And yet neither the Government nor the people of the United States have shut their eyes to the course of events in Cuba, or have failed to realize the existence of conceded grievances which have led to the present revolt from the authority of Spain—grievances recognized by the Queen Regent, and by the Cortes, voiced by the most patriotic and enlightened of Spanish statesmen, without regard to party, and demonstrated by reforms proposed by the executive and approved by the legislative branches of the Spanish Government. It is in the assumed temper and disposition of the Spanish Government to remedy these grievances, fortified by indications of influential public opinion in Spain, that this Government has hoped to discover the most promising and effective means of composing the present strife, with honor and advantage to Spain, and with the achievement of all the reasonable objects of the insurrection.

It would seem that if Spain should offer to Cuba genuine autonomy—a measure of home rule which, while preserving the sovereignty of Spain, would satisfy all rational requirements of the Spanish subjects—there should be no just reason why the pacification of the island might not be effected on that basis. Such a result would appear to be in the true interest of all concerned. It would at once stop the conflict which is now consuming the resources of the island and making it worthless for whichever party may ultimately prevail. It would keep intact the possessions of Spain without touching her honor, which will be consulted rather than impugned by the adequate redress of admitted grievances. It would put the prosperity of the island and the fortunes of its inhabitants within their own control, without severing the natural and ancient ties which bind them to the mother country, and would yet enable them to test their capacity for self-government under the most favorable conditions. It has been objected on the one side that Spain should not promise autonomy until her insurgent subjects lay down their arms; on the other

side, that promised autonomy, however liberal, is insufficient, because without assurance of the promise being fulfilled. But the reasonableness of a requirement by Spain, of unconditional surrender on the part of the insurgent Cubans before their autonomy is conceded, is not altogether apparent. It ignores important features of the situation—the stability two years' duration has given to the insurrection; the feasibility of its indefinite prolongation in the nature of things, and as shown by past experience; the utter and imminent ruin of the island, unless the present strife is speedily composed; above all the rank abuses which all parties in Spain, all branches of her Government, and all her leading public men concede to exist and profess a desire to remove. Facing such circumstances, to withhold the proffer of needed reforms until the parties demanding them put themselves at mercy by throwing down their arms, has the appearance of neglecting the gravest of perils and inviting suspicion as to the sincerity of any professed willingness to grant reforms.

The objection on behalf of the insurgents—that promised reforms can not be relied upon—must of course be considered, though we have no right to assume, and no reason for assuming, that anything Spain undertakes to do for the relief of Cuba will not be done according to both the spirit and the letter of the undertaking.

Nevertheless, realizing that suspicions and precautions on the part of the weaker of two combatants are always natural and not always unjustifiable—being sincerely desirous in the interest of both, as well as on its own account, that the Cuban problem should be solved with the least possible delay—it was intimated by this Government to the Government of Spain some months ago that, if a satisfactory measure of home rule were tendered the Cuban insurgents, and would be accepted by them upon a guarantee of its execution, the United States would endeavor to find a way not objectionable to Spain of furnishing such guarantee. While no definite response to this intimation has yet been received from the Spanish Government, it is believed to be not altogether unwelcome, and, as already suggested, no reason is perceived why it should not be approved by the insurgents. Neither party can fail to see the importance of early action; and both must realize that to prolong the present state of things for even a short period will add enormously to the time and labor and expenditure necessary to bring about the industrial recuperation of the island. It is therefore fervently hoped that earnest efforts for healing the breach between Spain and the insurgent Cubans upon the lines above indicated, may be at once inaugurated and pushed to an immediate and successful issue. The friendly office of the United States, either in the manner above outlined or in any other way consistent with our Constitution and laws, will always be at the disposal of either party.

Whatever circumstances may arise, our policy and our interests would constrain us to object to the acquisition of the island or an interference with its control by any other power. It should be added that it can not be reasonably assumed that the hitherto expectant attitude of the United States will be indefinitely maintained. While we are anxious to accord all due respect to the sovereignty of Spain, we can not view the pending conflict in all its features, and properly apprehend our inevitable close relations to it, and its possible results, without considering that by the course of events we may be drawn into such an unusual and unprecedented condition as will fix a limit to our patient waiting for Spain to end the contest, either alone and in her own way or with our friendly co-

operation. When the inability of Spain to deal successfully with the insurrection has become manifest, and it is demonstrated that her sovereignty is extinct in Cuba for all purposes of its rightful existence, and when a hopeless struggle for its re-establishment has degenerated into a strife, which means nothing more than the useless sacrifice of human life and the utter destruction of the very subject-matter of the conflict, a situation will be presented in which our obligations to the sovereignty of Spain will be superseded by higher obligations, which we can hardly hesitate to recognize and discharge. Deferring the choice of ways and methods until the time for action arrives, we should make them depend upon the precise conditions then existing, and they should not be determined upon without giving careful heed to every consideration involving our honor and interest, or the international duty we owe to Spain. Until we face the contingencies suggested, or the situation is by other incidents imperatively changed, we should continue in the line of conduct heretofore pursued, thus in all circumstances exhibiting our obedience to the requirements of public law and our regard for the duty enjoined upon us by the position we occupy in the family of nations. A contemplation of emergencies that may arise should plainly lead us to avoid their creation, either through a careless disregard of present duty or even an undue stimulation and ill-timed expression of feeling. But I have deemed it not amiss to remind the Congress that a time may arrive when a correct policy and care for our interests—as well as a regard for the interests of other nations and their citizens, joined by considerations of humanity and a desire to see a rich and fertile country, intimately related to us, saved from complete devastation—will constrain our Government to such action as will subserve the interests thus involved and at the same time promise to Cuba and its inhabitants an opportunity to enjoy the blessings of peace.

The Venezuelan boundary question has ceased to be a matter of difference between Great Britain and the United States, their respective governments having agreed upon the substantial provisions of a treaty between Great Britain and Venezuela submitting the whole controversy to arbitration. The provisions of the treaty are so eminently just and fair that the assent of Venezuela thereto may confidently be anticipated.

Negotiations for a treaty of general arbitration for all differences between Great Britain and the United States are far advanced, and promise to reach a successful consummation at an early date.

During the past year 35 appointments have been made in the consular service, 27 of which were made to fill vacancies caused by death or resignation or to supply newly created posts, 2 to succeed incumbents removed for cause, 2 for the purpose of displacing alien consular officials by American citizens, and 4 merely changing the official title of incumbent from commercial agent to consul. Twelve of these appointments were transfers or promotions from other positions under the Department of State; 4 of these appointed had rendered previous service under the department; 8 were made of persons who passed a satisfactory examination.

The scheme of examining applicants for certain consular positions to test their competency and fitness, adopted under an executive order issued on Sept. 20, 1895, has fully demonstrated the usefulness of this innovation. In connection with this plan of examination, promotions and transfers of deserving incumbents have been quite extensively made, with excellent results.

Seven were appointed to places not included in the order of Sept. 20, 1895, and 4 appointments, as above stated, involved no change of incumbency. The inspection of consular offices, provided for by an appropriation for that purpose at the last session of the Congress, has been productive of such wholesome effects that I hope this important work will in the future be continued. I know of nothing that can be done with the same slight expense so improving to the service. I desire to repeat the recommendation, contained in my last annual message, in favor of providing at public expense official residences for our ambassadors and ministers at foreign capitals. The reasons supporting this recommendation are strongly stated in the report of the Secretary of State, and the subject seems of such importance that I hope it may receive the early attention of the Congress.

We have during the last year labored faithfully and against unfavorable conditions to secure better preservation of seal life in the Bering Sea. Both the United States and Great Britain have lately dispatched commissioners to these waters to study the habits and condition of the seal herd and the causes of their rapid decrease. Upon the reports of these commissioners, soon to be submitted, and with the exercise of patience and good sense on the part of all interested parties, it is earnestly hoped that hearty co-operation may be secured for the protection against threatened extinction of seal life in the northern Pacific and Bering Sea.

The Secretary of the Treasury reports that during the fiscal year ended June 30, 1896, the receipts of the Government from all sources amounted to \$409,475,408.78. During the same period its expenditures were \$434,678,654.48, the excess of expenditures over receipts thus amounting to \$25,203,245.70. The ordinary expenditures during the year were \$4,015,852.21 less than during the preceding fiscal year. Of the receipts mentioned there was derived from customs the sum of \$160,021,751.67, and from internal revenue \$146,830,615.66. The receipts from customs show an increase of \$7,863,134.22 over those from the same source for the fiscal year ended June 30, 1895, and the receipts from internal revenue an increase of \$3,584,537.91.

The value of our imported dutiable merchandise during the last fiscal year was \$369,757,470, and the value of free goods imported \$409,967,470, being an increase of \$6,523,675 in the value of dutiable goods, and \$41,231,034 in the value of free goods over the preceding year. Our exports of merchandise, foreign and domestic, amounted in value to \$882,606,938, being an increase over the preceding year of \$75,068,773. The average *ad valorem* duty paid on dutiable goods imported during the year was 39.94 per cent., and on free and dutiable goods taken together 20.55 per cent.

The cost of collecting our internal revenue was 2.78 per cent., as against 2.81 per cent. for the fiscal year ended June 30, 1895. The total production of distilled spirits, exclusive of fruit brandies, was 86,588,703 taxable gallons, being an increase of 6,639,108 gallons over the preceding year. There was also an increase of 1,443,676 gallons of spirits produced from fruit, as compared with the preceding year. The number of barrels of beer produced was 35,859,250, as against 33,589,784 produced in the preceding fiscal year, being an increase of 2,269,466 barrels.

The total amount of gold exported during the last fiscal year was \$112,409,947, and of silver \$60,541,670, being an increase of \$45,941,466 of gold and \$13,246,384 of silver over the exportations of the preceding fiscal year. The imports of gold were \$33,525,065, and of silver \$28,777,186, being

\$2,859,695 less of gold and \$8,566,007 more of silver than during the preceding year.

The total stock of metallic money in the United States at the close of the last fiscal year ended on the 30th day of June, 1896, was \$1,228,326,035, of which \$599,597,964 was in gold and \$628,728,071 in silver.

On the 1st day of November, 1896, the total stock of money of all kinds in the country was \$2,285,410,590, and the amount in circulation, not including that in the Treasury holdings, was \$1,627,055,641, being \$22.63 *per capita* upon an estimated population of 71,902,000.

The production of the precious metals in the United States during the calendar year 1895 is estimated to have been 2,254,760 fine ounces of gold, of the value of \$46,610,000, and 55,727,000 fine ounces of silver, of the commercial value of \$36,445,000 and the coinage value of \$72,051,000. The estimated production of these metals throughout the world during the same period was 9,688,821 fine ounces of gold, amounting to \$200,285,700 in value, and 169,189,249 fine ounces of silver, of the commercial value of \$110,654,000 and of the coinage value of \$218,738,100 according to our ratio.

The coinage of these metals in the various countries of the world during the same calendar year amounted to \$232,701,438 in gold and \$121,996,219 in silver.

The total coinage at the mints of the United States during the fiscal year ended June 30, 1896, amounted to \$71,188,468.52, of which \$58,878,490 was in gold coins and \$12,309,978.52 in standard silver dollars, subsidiary coins, and minor coins.

The number of national banks organized from the time the law authorizing their creation was passed up to Oct. 31, 1896, was 5,051, and of this number 3,769 were at the date last mentioned in active operation, having authorized capital stock of \$650,014,895, held by 288,902 shareholders, and circulating notes amounting to \$211,412,620.

The total outstanding circulating notes of all national banks on the 31st day of October, 1896, amounted to \$234,553,807, including unredeemed but fully secured notes of banks insolvent and in process of liquidation. The increase in national-bank circulation during the year ending on that day was \$21,099,429. On Oct. 6, 1896, when the condition of national banks was last reported, the total resources of the 3,679 active institutions was \$3,263,685,313.83, which included \$1,893,268,839.31 in loans and discounts and \$362,165,733.85 in money of all kinds on hand. Of their liabilities \$1,597,891,058.73 was due to individual depositors, and \$209,944,019 consisted of outstanding circulating notes.

There were organized during the year preceding the date last mentioned 28 national banks, located in 15 States, of which 12 were organized in the Eastern States with a capital of \$1,180,000, 6 in the Western States with a capital of \$875,000, and 10 in the Southern States with a capital of \$1,190,000. During the year, however, 37 banks voluntarily abandoned their franchises under the national law, and in the case of 27 others it was found necessary to appoint receivers. Therefore, as compared with the year preceding, there was a decrease of 36 in the number of active banks.

The number of existing banks organized under State laws is 5,708.

The number of immigrants arriving in the United States during the fiscal year was 343,267, of whom 340,468 were permitted to land, and 2,799 were debarred, on various grounds prescribed by law, and returned to the countries whence they came at the expense of the steamship companies by which they were brought in. The increase in immigration

over the preceding year amounted to 84,731. It is reported that with some exceptions the immigrants of the past year were of a hardy laboring class, accustomed and able to earn a support for themselves, and it is estimated that the money brought with them amounted to at least \$5,000,000, though it was probably much in excess of that sum, since only those having less than \$30 are required to disclose the exact amount, and it is known that many brought considerable sums of money to buy land and build homes. Including all the immigrants arriving who were over fourteen years of age, 28.63 per cent. were illiterate, as against 20.37 per cent. of those of that age arriving during the preceding fiscal year. The number of immigrants over fourteen years old, the countries from which they came, and the percentage of illiterates among them, were as follow: Italy, 57,515, with 54.59 per cent.; Ireland, 37,496, with 7 per cent.; Russia, 35,188, with 41.14 per cent.; Austria-Hungary and provinces, 57,053, with 38.92 per cent.; Germany, 25,334, with 2.96 per cent.; Sweden, 18,821, with 1.16 per cent.; while from Portugal there came 2,067, of whom 77.69 per cent. were illiterate. There arrived from Japan during the year only 1,110 immigrants, and it is the opinion of the immigration authorities that the apprehension heretofore existing to some extent of a large immigration from Japan to the United States is without any substantial foundation.

From the Life-Saving Service it is reported that the number of disasters to documented vessels within the limits of its operations during the year was 437. These vessels had on board 4,608 persons, of whom 4,595 were saved and 13 lost. The value of such vessels is estimated at \$8,880,140, and of their cargoes \$3,846,380, making the total value of property imperiled \$12,726,520. Of this amount \$11,292,707 was saved and \$1,432,750 was lost. Sixty-seven of the vessels were totally wrecked. There were besides 243 casualties to small undocumented craft, on board of which there were 594 persons, of whom 587 were saved and 7 were lost. The value of the property involved in these latter casualties is estimated at \$119,265, of which \$114,915 was saved and \$4,350 was lost. The life-saving crews during the year also rescued or assisted numerous other vessels and warned many from danger by signals, both by day and night. The number of disasters during the year exceeded that of any previous year in the history of the service, but the saving of both life and property was greater than ever before in proportion to the value of the property involved and to the number of persons imperiled.

The operations of the Marine-Hospital Service, the Revenue-Cutter Service, the Steamboat-Inspection Service, the Lighthouse Service, the Bureau of Navigation, and other branches of public work attached to the Treasury Department, together with various recommendations concerning their support and improvement, are fully stated in the report of the Secretary of the Treasury, to which the attention of the Congress is especially invited.

The report of the Secretary of War exhibits satisfactory conditions in the several branches of the public service intrusted to his charge.

The limit of our military force, as fixed by law, is constantly and readily maintained. The present discipline and *morale* of our army are excellent, and marked progress and efficiency are apparent throughout its entire organization.

With the exception of delicate duties in the suppression of slight Indian disturbances along our southwestern boundary, in which the Mexican troops co-operated, and the compulsory but peaceful return, with the consent of Great Britain, of a band of Cree Indians from Montana to the British posses-

sions, no active operations have been required of the army during the year past.

Changes in methods of administration, the abandonment of unnecessary posts and consequent concentration of troops, and the exercise of care and vigilance by the various officers charged with the responsibility, in the expenditure of the appropriations, have resulted in reducing to a minimum the cost of maintenance of our military establishment.

During the past year the work of constructing permanent infantry and cavalry posts has been continued at the places heretofore designated. The Secretary of War repeats his recommendation that appropriations for barracks and quarters should more strictly conform to the needs of the service as judged by the department rather than respond to the wishes and importunities of localities. It is imperative that much of the money provided for such construction should now be allotted to the erection of necessary quarters for the garrisons assigned to the coast defenses, where many men will be needed to properly care for and operate modern guns. It is essential, too, that early provision be made to supply the necessary force of artillery to meet the demands of this service.

The entire army has now been equipped with the new magazine arms, and wise policy demands that all available public and private resources should be so employed as to provide within a reasonable time a sufficient number to supply the state militia with these modern weapons and provide an ample reserve for any emergency.

The organized militia numbers 112,879 men. The appropriations for its support by the several States approximate \$2,800,000 annually, and \$400,000 is contributed by the General Government. Investigation shows these troops to be usually well drilled and inspired with much military interest, but in many instances they are so deficient in proper arms and equipment that a sudden call to active duty would find them inadequately prepared for field service. I therefore recommend that prompt measures be taken to remedy this condition and that every encouragement be given to this deserving body of unpaid and voluntary citizen soldiers upon whose assistance we must largely rely in time of trouble.

During the past year rapid progress has been made toward the completion of the scheme adopted for the erection and armament of fortifications along our seacoast, while equal progress has been made in improving the material for submarine defense in connection with these works.

It is peculiarly gratifying at this time to note the great advance that has been made in this important undertaking since the date of my annual message to the Fifty-third Congress at the opening of its second session in December, 1893. At that time I informed the Congress of the approaching completion of 9 12-inch, 20 10-inch, and 30 40-inch high steel guns and 75 12-inch rifled mortars. This total then seemed insignificant when compared with the great work remaining to be done. Yet it was none the less a source of satisfaction to every citizen when he reflected that it represented the first installment of the new ordnance of American design and American manufacture, and demonstrated our ability to supply from our own resources guns of unexcelled power and accuracy. At that date, however, there were practically no carriages upon which to mount these guns, and only 31 emplacements for guns and 64 for mortars. Nor were all these emplacements in condition to receive their armament. Only one high-power gun was at that time in position for the defense of the entire coast.

Since that time the number of guns actually completed has been increased to a total of 21 12-inch,

56 10-inch, 61 8-inch high-power breech-loading steel guns, 10 rapid-fire guns, and 80 12-inch rifled mortars. In addition there are in process of construction 1 16-inch type gun, 15 12-inch, 56 10-inch, 27 8-inch high-power guns, and 66 12-inch rifled mortars; in all, 428 guns and mortars.

During the same year immediately preceding the message referred to the first modern gun carriage had been completed and eleven more were in process of construction. All but one were of the non-disappearing type. These, however, were not such as to secure necessary cover for the artillery gunners against the intense fire of modern machine rapid-fire and high-power guns.

The inventive genius of ordnance and civilian experts has been taxed in designing carriages that would obviate this fault, resulting, it is believed, in the solution of this difficult problem. Since 1893 the number of gun carriages constructed or building has been raised to a total of 129, of which 90 are on the disappearing principle, and the number of mortar carriages to 152, while the 95 emplacements which were provided for prior to that time have been increased to 280 built and building. This improved situation is largely due to the recent generous response of Congress to the recommendations of the War Department. Thus we shall soon have complete about one fifth of the comprehensive system, the first step in which was noted in my message to the Congress of Dec. 4, 1893.

When it is understood that a masonry emplacement not only furnishes a platform for the heavy modern high-power gun, but also in every particular serves the purpose and takes the place of the fort of former days, the importance of the work accomplished is better comprehended.

In the hope that the work will be prosecuted with no less vigor in the future, the Secretary of War has submitted an estimate by which, if allowed, there will be provided and either built or building by the end of the next fiscal year such additional guns, mortars, gun carriages and emplacements, as will represent not far from one third of the total work to be done under the plan adopted for our coast defenses, thus affording a prospect that the entire work will be substantially completed within six years. In less time than that, however, we shall have attained a marked degree of security. The experience and results of the past year demonstrate that with a continuation of present careful methods the cost of the remaining work will be much less than the original estimate.

We should always keep in mind that of all forms of military preparation, coast defense alone is essentially pacific in its nature. While it gives the sense of security due to a consciousness of strength, it is neither the purpose nor the effect of such permanent fortification to involve us in foreign complications, but rather to guarantee us against them. They are not temptation to war, but security against it. Thus they are thoroughly in accord with all the traditions of our national diplomacy.

The Attorney-General presents a detailed and interesting statement of the work done under his supervision during the last fiscal year. The ownership and management by the Government of penitentiaries for the confinement of those convicted in United States courts for violations of Federal laws, which for many years has been a subject of executive recommendation, has at last to a slight extent been realized by the utilization of the abandoned military prison at Fort Leavenworth as a United States penitentiary.

This is certainly a movement in the right direction; but it ought to be at once supplemented by the rebuilding or extensive enlargement of this improvised prison, and the construction of at least one

more, to be located in the Southern States. The capacity of the Leavenworth Penitentiary is so limited that the expense of its maintenance, calculated at a *per capita* rate upon the number of prisoners it can accommodate, does not make as economical an exhibit as it would if it were larger and better adapted to prison purposes; but I am thoroughly convinced that economy, humanity, and a proper sense of responsibility and duty toward those whom we punish for violations of Federal law dictates that the Federal Government should have the entire control and management of the penitentiaries where convicted violators are confined.

It appears that since the transfer of the Fort Leavenworth military prison to its new uses the work previously done by prisoners confined there, and for which expensive machinery has been provided, has been discontinued. This work consisted of the manufacture of articles for army use now done elsewhere. On all grounds it is exceedingly desirable that the convicts confined in this penitentiary be allowed to resume work of this description.

It is most gratifying to note the satisfactory results that have followed the inauguration of the new system provided for by the act of May 28, 1896, under which certain Federal officials are compensated by salaries instead of fees. The new plan was put in operation the 1st day of July, 1896, and already the great economy it enforces, its prevention of abuses, and its tendency to a better enforcement of the laws, are strikingly apparent. Detailed evidence of the usefulness of this long-delayed but now happily accomplished reform will be found clearly set forth in the Attorney-General's report.

Our Post Office Department is in good condition, and the exhibit made of its operations during the fiscal year ended June 30, 1896, if allowance is made for imperfections in the laws applicable to it, is very satisfactory. The total receipts during the year were \$82,499,208.40. The total expenditures were \$90,626,296.84, exclusive of \$1,559,898.27, which was earned by the Pacific Railroad for transportation and credited on their debt to the Government. There was an increase of receipts over the previous year of \$5,516,080.21, or 7.1 per cent., and an increase of expenditures of \$3,836,124.02, or 4.42 per cent.

The deficit was \$1,679,956.19 less than that of the preceding year. The chief expenditures of the postal service are regulated by law and are not in the control of the Postmaster-General. All that he can accomplish by the most watchful administration and economy is to enforce prompt and thorough collection and accounting for public moneys and such minor savings in small expenditures and in letting those contracts, for post-office supplies and star service, which are not regulated by statute.

An effective co-operation between the auditor's office and the Post Office Department and the making and enforcement of orders by the department requiring immediate notification to their sureties of all delinquencies on the part of postmasters and compelling such postmasters to make more frequent deposits of postal funds, have resulted in a prompter auditing of their accounts and much less default to the Government than heretofore.

The year's report shows large extensions of both star-route service and railway mail service, with increased postal facilities. Much higher accuracy in handling mails has also been reached, as appears by the decrease of errors in the railway mail service and the reduction of mail matter returned to the dead-letter office.

The deficit for the last year, although much less

than that of the previous and preceding years, emphasizes the necessity for legislation to correct the growing abuse of second-class rates, to which the deficiency is mainly attributable.

The transmission at the rate of 1 cent a pound of serial libraries, advertising sheets, "house organs" (periodicals advertising some particular "house" or institution), sample copies, and the like ought certainly to be discontinued. A glance at the revenues received for the work done last year will show more plainly than any other statement the gross abuse of the postal service and the growing waste of its earnings.

The free matter carried in the mails for the departments, offices, etc., of the Government, and for Congress, in pounds, amounted to 94,480,189.

If this is offset against buildings for post offices and stations, the rental of which would more than compensate for such free postal service, we have this exhibit of the weight of mail matter (other than above) transmitted through the mail for the year ending June 30, 1896:

CLASS.	Weight.	Revenue.
	Pounds.	
1. Domestic and foreign letters and postal cards, etc.....	65,337,343	\$60,624,464
2. Newspapers and periodicals, 1 cent per pound.....	348,988,648	2,996,403
3. Books, seeds, etc., 8 cents a pound.....	78,701,148	10,324,069
4. Parcels, etc., 16 cents a pound.....	19,950,187	3,129,321
Total	512,977,326	\$77,044,257

The remainder of our postal revenue, amounting to something more than \$5,000,000, was derived from box rents, registry fees, money-order business, and other similar items.

The entire expenditures of the department, including pay for transportation credited to the Pacific railroads, was \$92,186,195.11, which may be considered as the cost of receiving, carrying, and delivering the above mail matter. It thus appears that though the second-class matter constituted more than two thirds of the total that was carried, the revenue derived from it was less than one thirtieth of the total expense.

The average revenue from each pound of first-class matter was..... 93 cents
From each pound of second-class..... 8½ mills
(Of the second-class, 52,348,297 was county-free matter.)
From each pound of third-class..... 13½ cents
From each pound of fourth-class..... 15½ "

The growth in weight of second-class matter has been from 299,000,000 pounds in 1894 to 312,000,000 in 1895, and to almost 349,000,000 in 1896, and it is quite evident this increasing drawback is far outstripping any possible growth of postal revenues.

Our mail service should of course be such as to meet the wants and even the conveniences of our people, at a direct charge upon them so light as perhaps to exclude the idea of our Post Office Department being a money-making concern; but in the face of a constantly recurring deficiency in its revenues, and in view of the fact that we supply the best mail service in the world, it seems to me it is quite time to correct the abuses that swell enormously our annual deficit. If we concede the public policy of carrying weekly newspapers free in the county of publication, and even the policy of carrying at less than one tenth of their cost other *bona fide* newspapers and periodicals, there can be no excuse for subjecting the service to the further immense and increasing loss involved in carrying at the nominal rate of 1 cent a pound the serial libraries, sometimes including trashy and even harmful literature, and other matter which, under the loose

interpretation of a loose statute, has been gradually given second-class rates, thus absorbing all profitable returns derived from first-class matter, which pays three or four times more than its cost, and producing a large annual loss, to be paid by general taxation. If such second-class matter paid merely the cost of its handling our deficit would disappear and a surplus result which might be used to give the people still better mail facilities or cheaper rates of letter postage. I recommend that legislation be at once enacted to correct these abuses and introduce better business ideas in the regulation of our postal rates.

Experience and observation have demonstrated that certain improvements in the organization of the Post Office Department must be secured before we can gain the full benefit of the immense sums expended in its administration. This involves the following reforms, which I earnestly recommend:

There should be a small addition to the existing inspector service, to be employed in the supervision of the carrier force, which now numbers 13,000 men and performs its service practically without the surveillance exercised over all other branches of the postal or public service. Of course such a lack of supervision and freedom from wholesome disciplinary restraints must inevitably lead to imperfect service. There should also be appointed a few inspectors who could assist the central office in necessary investigation concerning matters of post-office leases, post-office sites, allowances for rent, fuel, and lights, and in organizing and securing the best results from the work of the 14,000 clerks now employed in first- and second-class offices.

I am convinced that the small expense attending the inauguration of these reforms would actually be a profitable investment.

I especially recommend such a recasting of the appropriations by Congress for the Post Office Department as will permit the Postmaster-General to proceed with the work of consolidating post offices. This work has already been entered upon sufficiently to fully demonstrate, by experiment and experience, that such consolidation is productive of better service, larger revenues, and less expenditures, to say nothing of the further advantage of gradually withdrawing post offices from the spoils system.

The Universal Postal Union, which now embraces all the civilized world, and whose delegates will represent 1,000,000,000 people, will hold its fifth congress in the city of Washington in May, 1897. The United States may be said to have taken the initiative which led to the first meeting of this congress at Bern in 1874, and the formation of the Universal Postal Union, which brings the postal service of all countries to every man's neighborhood, and has wrought marvels in cheapening postal rates and securing absolutely safe mail communication throughout the world. Previous congresses have met in Bern, Paris, Lisbon, and Vienna, and the respective countries in which they have assembled have made generous provision for their accommodation and for the reception and entertainment of the delegates.

In view of the importance of this assemblage and of its deliberations, and of the honors and hospitalities accorded to our representatives by other countries on similar occasions, I earnestly hope that such an appropriation will be made for the expenses necessarily attendant upon the coming meeting in our capital city as will be worthy of our national hospitality and indicative of our appreciation of the event.

The work of the Navy Department and its present condition are fully exhibited in the report of the Secretary.

The construction of vessels for our new navy has been energetically prosecuted by the present administration upon the general lines previously adopted, the department having seen no necessity for radical changes in prior methods under which the work was found to be progressing in a manner highly satisfactory. It has been decided, however, to provide in every shipbuilding contract that the builder should pay all trial expenses, and it has also been determined to pay no speed premiums in future contracts. The premiums recently earned and some yet to be decided are features of the contracts made before this conclusion was reached.

On March 4, 1893, there were in commission but 2 armored vessels, the double-turreted monitors "Miantonomoh" and "Monterey." Since that date, of vessels theretofore authorized, there have been placed in their first commission 3 first-class and 2 second-class battle ships, 2 armored cruisers, 1 harbor-defense ram, and 5 double-turreted monitors, including the "Maine" and the "Puritan," just completed. Eight new unarmored cruisers and 2 new gunboats have also been commissioned. The "Iowa," another battle ship, will be completed about March 1, and at least 4 more gunboats will be ready for sea in the early spring.

It is gratifying to state that our ships and their outfits are believed to be equal to the best that can be manufactured elsewhere, and that such notable reductions have been made in their cost as to justify the statement that quite a number of vessels are now being constructed at rates as low as those that prevail in European shipyards.

Our manufacturing facilities are at this time ample for all possible naval contingencies. Three of our Government navy yards, those at Mare Island, Cal., Norfolk, Va., and Brooklyn, N. Y., are equipped for shipbuilding, our ordnance plant in Washington is equal to any in the world, and at the torpedo station we are successfully making the highest grades of smokeless powder. Three first-class private shipyards, at Newport News, Philadelphia, and San Francisco, are building battle ships; 11 contractors, situated in the States of Maine, Rhode Island, Pennsylvania, New Jersey, Maryland, Virginia, and the State of Washington, are constructing gunboats or torpedo boats; 2 plants are manufacturing large quantities of first-class armor; and American factories are producing automobile torpedoes, powder, projectiles, rapid-fire guns, and everything else necessary for the complete outfit of naval vessels.

There have been authorized by Congress since March, 1893, 5 battle ships, 6 light-draught gunboats, 16 torpedo boats, and 1 submarine torpedo boat. Contracts for the building of all of them have been let. The Secretary expresses the opinion that we have for the present a sufficient supply of cruisers and gunboats, and that hereafter the construction of battle ships and torpedo boats will supply our needs.

Much attention has been given to the methods of carrying on departmental business. Important modifications in the regulations have been made, tending to unify the control of shipbuilding, as far as may be, under the Bureau of Construction and Repair, and also to improve the mode of purchasing supplies for the navy by the Bureau of Supplies and Accounts. The establishment, under recent acts of Congress, of a supply fund, with which to purchase these supplies in large quantities and other modifications of methods have tended materially to their cheapening and better quality.

The war college has developed into an institution which it is believed will be of great value to the navy in teaching the science of war as well as in stimulating professional zeal in the navy; and it

will be especially useful in the devising of plans for the utilization, in case of necessity, of all the naval resources of the United States.

The Secretary has persistently adhered to the plan he found in operation for securing labor at navy yards through boards of labor employment, and has done much to make it more complete and efficient.

The naval officers who are familiar with this system and its operation express the decided opinion that its results have been to vastly improve the character of the work done at our yards and greatly reduce its cost.

Discipline among the officers and men of the navy has been maintained to a high standard, and the percentage of American citizens enlisted has been very much increased.

The Secretary is considering, and will formulate during the coming winter, a plan for laying up ships in reserve, thereby largely reducing the cost of maintaining our vessels afloat.

This plan contemplates that battle ships, torpedo boats, and such of the cruisers as are not needed for active service at sea shall be kept in reserve with skeleton crews on board to keep them in condition, cruising only enough to insure the efficiency of the ships and their crews in time of activity. The economy to result from this system is too obvious to need comment.

The naval militia, which was authorized a few years ago, as an experiment, has now developed into a body of enterprising young men, active and energetic in the discharge of their duties and promising great usefulness. This establishment has nearly the same relation to our navy as the National Guard in the different localities bears to our army, and constitutes a source of supply for our naval forces the importance of which is immediately apparent.

The report of the Secretary of the Interior presents a comprehensive and interesting exhibit of the numerous and important affairs committed to his supervision. It is impossible in this communication to do more than briefly refer to a few of the subjects concerning which the Secretary gives full and instructive information.

The money appropriated on account of this department and for its disbursement for the fiscal year ended June 30, 1896, amounted to more than \$157,000,000, or a greater sum than was appropriated for the entire maintenance of the Government for the two fiscal years ended June 30, 1861.

Our public lands, originally amounting to 1,840,000,000 acres, have been so reduced that only about 600,000,000 acres still remain in Government control, excluding Alaska. The balance, being by far the most valuable portion, has been given away to settlers, to new States, and to railroads, or sold at a comparatively nominal sum.

The patenting of land in execution of railroad grants has progressed rapidly during the year, and since the 4th day of March, 1893, about 25,000,000 acres have thus been conveyed to these corporations.

I agree with the Secretary that the remainder of our public lands should be more carefully dealt with and their alienation guarded by better economy and greater prudence.

The commission appointed from the membership of the National Academy of Sciences, provided for by an act of Congress to formulate plans for a national forestry system, will, it is hoped, soon be prepared to present the result of thorough and intelligent examination of this important subject.

The total Indian population of the United States is 177,235, according to a census made in 1895, exclusive of those within the State of New York and

those comprising the five civilized tribes. Of this number there are approximately 38,000 children of school age. During the year 23,393 of these were enrolled in schools. The progress which has attended recent efforts to extend Indian school facilities and the anticipation of continued liberal appropriations to that end can not fail to afford the utmost satisfaction to those who believe that the education of Indian children is a prime factor in the accomplishment of Indian civilization.

It may be said in general terms that in every particular the improvement of the Indians under Government care has been most marked and encouraging. The Secretary, the Commissioner of Indian Affairs, and the agents having charge of Indians to whom allotments have been made, strongly urge the passage of a law prohibiting the sale of liquor to allottees who have taken their lands in severalty. I earnestly join in this recommendation and venture to express the hope that the Indian may be speedily protected against this greatest of all obstacles to his well-being and advancement. The condition of affairs among the five civilized tribes, who occupy large tracts of land in the Indian Territory, and who have governments of their own, has assumed such an aspect as to render it almost indispensable that there should be an entire change in the relations of these Indians to the General Government. This seems to be necessary in furtherance of their own interests, as well as for the protection of non-Indian residents in their territory. A commission organized and empowered under several recent laws is now negotiating with these Indians for the relinquishment of their courts and the division of their common lands in severalty, and aiding in the settlement of the troublesome question of tribal membership. The reception of their first proffers of negotiation was not encouraging; but through patience and such conduct on their part as demonstrated that their intentions were friendly and in the interest of the tribes the prospect of success has become more promising. The effort should be to save these Indians from the consequences of their own mistakes and improvidence, and to secure to the real Indian his rights as against intruders and professed friends who profit by his retrogression. A change is also needed to protect life and property through the operation of courts conducted according to strict justice and strong enough to enforce their mandates. As a sincere friend of the Indian I am exceedingly anxious that these reforms should be accomplished with the consent and aid of the tribes, and that no necessity may be presented for radical or drastic legislation. I hope, therefore, that the commission now conducting negotiations will soon be able to report that progress has been made toward a friendly adjustment of existing difficulties.

It appears that a very valuable deposit of gilsonite or asphaltum has been found on the reservation in Utah occupied by the Ute Indians. Every consideration of care for the public interest and every sensible business reason dictates such management or disposal of this important source of public revenue as will except it from the general rules and incidents attending the ordinary disposition of public lands, and assure to the Government a fair share at least of its advantages in place of its transfer for a nominal sum to interested individuals.

I indorse the recommendation made by the present Secretary of the Interior, as well as his predecessor, that a permanent commission, consisting of three members, one of whom shall be an army officer, be created to perform the duties now devolving upon the Commissioner and Assistant Commissioner of Indian Affairs. The management of the

bureau involves such numerous and diverse details and the advantages of an uninterrupted policy are so apparent that I hope the change suggested will meet the approval of the Congress.

The diminution of our enormous pension roll and the decrease of pension expenditure, which have been so often confidently foretold, still fail in material realization. The number of pensioners on the rolls at the close of the fiscal year ended June 30, 1896, was 970,678. This is the largest ever reported. The amount paid exclusively for the pensions during the year was \$158,214,761.94, a slight decrease from that of the preceding year, while the total expenditures on account of pensions, including the cost of maintaining the department and expenses attending pension distribution, amounted to \$142,206,550.59, or within a very small fraction of one third of the entire expense of supporting the Government during the same year. The number of new pension certificates issued was 90,640. Of these, 40,374 represent original allowances of claims and 15,878 increases of existing pensions.

The number of persons receiving pensions from the United States, but residing in foreign countries, at the close of the last fiscal year was 3,781, and the amount paid to them during the year was \$582,735.38.

The sum appropriated for the payment of pensions for the current fiscal year ending June 30, 1897, is \$140,000,000 and for the succeeding year it is estimated that the same amount will be necessary. The Commissioner of Pensions reports that during the last fiscal year 339 indictments were found against violators of the pension laws. Upon these indictments 167 convictions resulted.

In my opinion, based upon such statements as these and much other information and observation, the abuses which have been allowed to creep into our pension system have done incalculable harm in demoralizing our people and undermining good citizenship. I have endeavored within my sphere of official duty to protect our pension roll and make it what it should be, a roll of honor, containing the names of those disabled in their country's service and worthy of their country's affectionate remembrance.

When I have seen those who pose as the soldiers' friends active and alert in urging greater laxity and more reckless pension expenditure, while nursing selfish schemes, I have depreciated the approach of a situation when necessary retrenchment and enforced economy may lead to an attack upon pension abuses, so determined as to overlook the discrimination due to those who, worthy of a nation's care, ought to live and die under the protection of a nation's gratitude.

The Secretary calls attention to the public interests involved in an adjustment of the obligations of the Pacific railroads to the Government. I deem it to be an important duty to especially present this subject to the consideration of the Congress.

On Jan. 1, 1897, with the amount already matured, more than \$13,000,000 of the principal of the subsidy bonds issued by the United States in aid of the construction of the Union Pacific Railway, including its Kansas line, and more than \$6,000,000 of like bonds, issued in aid of the Central Pacific Railroad, including those issued to the Western Pacific Railroad Company, will have fallen due and been paid or must on that day be paid by the Government. Without any reference to the application of the sinking fund now in the Treasury, this will create such a default on the part of these companies to the Government as will give it the right to at once institute proceedings to foreclose its mortgage lien. In addition to this indebtedness, which will be due Jan. 1, 1897, there will mature

between that date and Jan. 1, 1899, the remaining principal of such subsidy bonds, which must also be met by the Government. These amount to more than \$20,000,000 on account of Union Pacific lines, and exceed \$21,000,000 on account of the Central Pacific lines.

The situation of these roads and the condition of their indebtedness to the Government have been fully set forth in the reports of various committees to the present and prior Congresses, and as early as 1887 they were thoroughly examined by a special commission appointed pursuant to an act of Congress. The considerations requiring an adjustment of the Government's relations to the companies have been clearly presented, and the conclusion reached with practical uniformity that if these relations are not terminated they should be revised upon a basis securing their safe continuance.

Under section 4 of the act of Congress passed March 3, 1887, the President is charged with the duty, in the event that any mortgage or other incumbrance paramount to the interest of the United States in the property of the Pacific railroads shall exist and be lawfully liable to be enforced, to direct the action of the Departments of the Treasury and of Justice in the protection of the interest of the United States by redemption or through judicial proceedings, including foreclosures of the Government liens.

In view of the fact that the Congress has for a number of years almost constantly had under consideration various plans for dealing with the conditions existing between these roads and the Government, I have thus far felt justified in withholding action under the statute above mentioned.

In the case of the Union Pacific Company, however, the situation has become especially and immediately urgent. Proceedings have been instituted to foreclose a first mortgage upon those aided parts of the main lines upon which the Government holds a second and subordinate mortgage lien. In consequence of those proceedings and increased complications, added to the default occurring on Jan. 1, 1897, a condition will be presented at that date, so far as this company is concerned, that must emphasize the mandate of the act of 1887 and give to executive duty under its provisions a more imperative aspect. Therefore, unless Congress shall otherwise direct or shall have previously determined upon a different solution of the problem, there will hardly appear to exist any reason for delaying beyond the date of the default above mentioned such executive action as will promise to subserve the public interests and save the Government from the loss threatened by further inaction.

The Department of Agriculture is so intimately related to the welfare of our people and the prosperity of our nation that it should constantly receive the care and encouragement of the Government. From small beginnings it has grown to be the center of agricultural intelligence and the source of aid and encouragement to agricultural efforts. Large sums of money are annually appropriated for the maintenance of this department, and it must be confessed that the legislation relating to it has not always been directly in the interest of practical farming, or properly guarded against waste and extravagance. So far, however, as public money has been appropriated fairly and sensibly to help those who actually till the soil, no expenditure has been more profitably made or more generally approved by the people.

Under the present management of the department its usefulness has been enhanced in every direction, and at the same time strict economy has been enforced to the utmost extent permitted by congressional action. From the report of the Sec-

retary it appears that through careful and prudent financial management he has annually saved a large sum from his appropriations, aggregating during his incumbency and up to the close of the present fiscal year nearly one fifth of the entire amount appropriated. These results have been accomplished by a conscientious study of the real needs of the farmer and such a regard for economy as the genuine farmer ought to appreciate, supplemented by a rigid adherence to civil-service methods in a department which should be conducted in the interest of agriculture instead of partisan politics.

The Secretary reports that the value of our exports of farm products during the last fiscal year amounted to \$570,000,000, an increase of \$17,000,000 over those of the year immediately preceding. This statement is not the less welcome because of the fact that, notwithstanding such increase, the proportion of exported agricultural products to our total exports of all descriptions fell off during the year. The benefits of an increase in agricultural exports being assured, the decrease in its proportion to our total exports is the more gratifying when we consider that it is owing to the fact that such total exports for the year increased more than \$75,000,000.

The large and increasing exportation of our agricultural products suggests the great usefulness of the organization lately established in the department for the purpose of giving to those engaged in farming pursuits reliable information concerning the condition, needs, and advantages of different foreign markets. Inasmuch as the success of the farmer depends upon the advantageous sale of his products, and inasmuch as foreign markets must largely be the destination of such products, it is quite apparent that a knowledge of the conditions and wants that affect those markets ought to result in sowing more intelligently and reaping with a better promise of profit. Such information points out the way to a prudent foresight in the selection and cultivation of crops and to a release from the bondage of unreasoning monotony of production, a glutted and depressed market, and constantly recurring unprofitable toil.

In my opinion the gratuitous distribution of seeds by the department as at present conducted ought to be discontinued. No one can read the statement of the Secretary on this subject and doubt the extravagance and questionable results of this practice. The professed friends of the farmer, and certainly the farmers themselves, are naturally expected to be willing to rid a department devoted to the promotion of farming interests of a feature which tends so much to its discredit.

The Weather Bureau, now attached to the Department of Agriculture, has continued to extend its sphere of usefulness, and by an uninterrupted improvement in the accuracy of its forecasts has greatly increased its efficiency as an aid and protection to all whose occupations are related to weather conditions.

Omitting further reference to the operations of the department, I commend the Secretary's report and the suggestions it contains to the careful consideration of the Congress.

The progress made in civil-service reform furnishes a cause for the utmost congratulation. It has survived the doubts of its friends as well as the rancor of its enemies, and has gained a permanent place among the agencies destined to cleanse our politics and to improve, economize, and elevate the public service.

There are now in the competitive classified service upward of 84,000 places. More than half of these have been included from time to time since March 4, 1893. A most radical and sweeping ex-

tension was made by executive order dated the 6th day of May, 1896, and if fourth-class postmaster-ships are not included in the statement it may be said that practically all positions contemplated by the civil-service law are now classified. Abundant reasons exist for including these postmasterships, based upon economy, improved service, and the peace and quiet of neighborhoods. If, however, obstacles prevent such action at present, I earnestly hope that Congress will, without increasing post-office appropriations, so adjust them as to permit in proper cases a consolidation of these post offices, to the end that through this process the result desired may to a limited extent be accomplished.

The civil-service rules as amended during the last year provide for a sensible and uniform method of promotion, basing eligibility to better positions upon demonstrated efficiency and faithfulness. The absence of fixed rules on this subject has been an infirmity in the system more and more apparent as its other benefits have been better appreciated.

The advantages of civil-service methods in their business aspects are too well understood to require argument. Their application has become a necessity to the executive work of the Government. But those who gain positions through the operation of these methods should be made to understand that the nonpartisan scheme through which they receive their appointments demands from them, by way of reciprocity, nonpartisan and faithful performance of duty under every administration, and cheerful fidelity to every chief. While they should be encouraged to decently exercise their rights of citizenship and support through their suffrages the political beliefs they honestly profess, the noisy, pestilent, and partisan employee, who loves political turmoil and contention, or who renders lax and grudging service to an administration not representing his political views, should be promptly and fearlessly dealt with in such a way as to furnish a warning to others who may be likewise disposed.

The annual report of the commissioners will be duly transmitted, and I commend the important matter they have in charge to the careful consideration of the Congress.

The Interstate Commerce Commission has, during the last year, supplied abundant evidence of its usefulness and the importance of the work committed to its charge.

Public transportation is a universal necessity, and the question of just and reasonable charges therefor has become of vital importance not only to shippers and carriers, but also to the vast multitude of producers and consumers.

The justice and equity of the principles embodied in the existing law passed for the purpose of regulating these charges are everywhere conceded, and there appears to be no question that the policy thus entered upon has a permanent place in our legislation.

As the present statute when enacted was, in the nature of the case, more or less tentative and experimental, it was hardly expected to supply a complete and adequate system. While its wholesome effects are manifest and have amply justified its enactments, it is evident that all desired reforms in transportation methods have not been fully accomplished.

In view of the judicial interpretation which some provisions of this statute have received and the defects disclosed by the efforts made for its enforcement, its revision and amendment appear to be essential to the end that it may more effectually reach the evils designed to be corrected.

I hope the recommendations of the commission upon this subject will be promptly and favorably considered by the Congress.

I desire to recur to the statements elsewhere made concerning the Government's receipts and expenditures for the purpose of venturing upon some suggestions touching our present tariff law and its operation.

This statute took effect on the 28th day of August, 1894. Whatever may be its shortcomings as a complete measure of tariff reform, it must be conceded that it has opened the way to a freer and greater exchange of commodities between us and other countries, and thus furnished a wider market for our products and manufactures.

The only entire fiscal year ending during which this law has been in force ended on the 30th day of June, 1896. In that year our imports increased over those of the previous year more than \$6,500,000, while the value of the domestic products we exported, and which found markets abroad, was nearly \$70,000,000 more than during the preceding year.

Those who insist that the cost to our people of articles coming to them from abroad for their needful use should only be increased through tariff charges to an extent necessary to meet the expenses of the Government, as well as those who claim that tariff charges may be laid upon such articles beyond the necessities of Government revenue, and with the additional purpose of so increasing their price in our markets as to give American manufacturers and producers better and more profitable opportunities, must agree that our tariff laws are only primarily justified as sources of revenue to enable the Government to meet the necessary expenses of its maintenance. Considered as to its sufficiency in this aspect, the present law can by no means fall under just condemnation. During the only complete fiscal year of its operation it has yielded nearly \$8,000,000 more revenue than was received from tariff duties in the preceding year. There was, nevertheless, a deficit between our receipts and expenditures more than \$25,000,000. This, however, was not unexpected. The situation was such in December last, seven months before the close of the fiscal year, that the Secretary of the Treasury foretold a deficiency of \$17,000,000. The great and increasing apprehension and timidity in business circles, and the depression in all activities intervening since that time resulting from causes perfectly well understood and entirely disconnected with our tariff law or its operation, seriously checked the imports we would have otherwise received and readily account for the difference between this estimate of the Secretary and the actual deficiency as well as for a continued deficit. Indeed, it must be confessed that we could hardly have had a more unfavorable period than the last two years for the collection of tariff revenue. We can not reasonably hope that our recuperation from this business depression will be sudden, but it has already set in, with a promise of acceleration and continuance. I believe our present tariff law, if allowed a fair opportunity, will in the near future yield a revenue which, with reasonable economy in expenditures, overcome all deficiencies. In the meantime no deficit that has occurred or may occur need excite or disturb us.

To meet any such deficit we have in the Treasury, in addition to a gold reserve of one hundred millions, a surplus of more than \$128,000,000 applicable to the payment of the expenses of the Government, and which must, unless expended for that purpose, remain a useless hoard, or, if not extravagantly wasted, must in any event be perverted from the purpose of its exaction from our people. The payment, therefore, of any deficiency in the revenue from this fund is nothing more than its proper and legitimate use.

The Government thus applying a surplus, for-

tunately in its Treasury, to the payment of expenses not met by its current revenues, is not at all to be likened to a man living beyond his income and thus incurring debt or encroaching on his principal. It is not one of the functions of our Government to accumulate and make additions to a fund not needed for immediate expenditure. With individuals it is the chief object of struggle and effort. The application of an accumulated fund by the Government to the payment of its running expenses is a duty.

An individual living beyond his income and embarrassing himself with debt or drawing upon his accumulated fund of principal is either unfortunate or improvident. The distinction is between a government charged with the duty of expending for the benefit of the people and for proper purposes all the money it receives from any source and the individual who is expected to manifest a natural desire to avoid debt or to accumulate as much as possible and to live within the income derived from such accumulations, to the end that they may be increased or at least remain unimpaired for the future use and enjoyment of himself or the objects of his love and affection who may survive him.

It is immeasurably better to appropriate our surplus to the payment of justifiable expenses than to allow it to become an invitation to reckless appropriations and extravagant expenditures. I suppose it will not be denied that under the present law our people obtain the necessities of a comfortable existence at a cheaper rate than formerly. This is a matter of supreme importance, since it is the palpable duty of every just government to make the burdens of taxation as light as possible. The people should not be required to relinquish this privilege of cheap living except under the stress of their Government's necessity made plainly manifest.

This reference to the condition and prospects of our revenues, naturally suggests an allusion to the weakness and vices of our financial methods. They have been frequently pressed upon the attention of Congress in previous Executive communications and the inevitable danger of their toleration pointed out. Without now repeating those details I can not refrain from again earnestly presenting the necessity of the prompt reform of a system opposed to every rule of sound finance and shown by experience to be fraught with the gravest peril and perplexity. The terrible civil war which shook the foundations of our Government more than thirty years ago brought in its train the destruction of property, the wasting of our country's substance, and the estrangement of brethren. These are now past and forgotten. Even the distressing loss of life the conflict entailed is but a sacred memory, which fosters patriotic sentiment and keeps alive a tender regard for those who nobly died. And yet there remains with us to-day, in full strength and activity, as an incident of that tremendous struggle, a feature of its financial necessities, not only unsuited to our present circumstances, but manifestly a disturbing menace to business security and an ever-present agent of monetary distress. Because we may be enjoying a temporary relief from its depressing influence this should not lull us into a false security nor lead us to forget the suddenness of past visitations.

I am more convinced than ever that we can have no assured financial peace and safety until the Government currency obligations upon which gold may be demanded from the Treasury are withdrawn from circulation and canceled. This might be done, as has been heretofore recommended, by their exchange for long-term bonds bearing a low rate of interest, or by their redemption with the proceeds of such bonds. Even if only the United States notes known

as greenbacks were thus retired, it is probable that the Treasury notes issued in payment of silver purchases, under the act of July 14, 1890, now paid in gold when demanded, would not create much disturbance, as they might, from time to time, when received in the Treasury by redemption in gold or otherwise, be gradually and prudently replaced by silver coin.

This plan of issuing bonds for the purpose of redemption certainly appears to be the most effective and direct path to the needed reform. In default of this, however, it would be a step in the right direction if currency obligations redeemable in gold, whenever so redeemed, should be canceled instead of being reissued. This operation would be a strong remedy, but it would improve present conditions. National banks should redeem their own notes. They should be allowed to issue circulation to the par value of bonds deposited as security for its redemption, and the tax on their circulation should be reduced to $\frac{1}{2}$ of 1 per cent.

In considering projects for the retirement of United States notes and Treasury notes issued under the law of 1890, I am of the opinion that we have placed too much stress upon the danger of contracting the currency and have calculated too little upon the gold that would be added to our circulation if invited to us by better and safer financial methods. It is not so much a contraction of our currency that should be avoided as its unequal distribution. This might be obviated, and any fear of harmful contraction at the same time removed by allowing the organization of smaller banks in less populous communities than are now permitted, and also authorizing existing banks to establish branches in small communities under proper restrictions.

The entire case may be presented by the statement that the day of sensible and sound financial methods will not dawn upon us until our Government abandons the banking business and the accumulation of funds, and confines its monetary operations to the receipt of the money contributed by the people for its support and to the expenditure of such money for the people's benefit. Our business interests and all good citizens long for rest from feverish agitation and the inauguration by the Government of a reformed financial policy which will encourage enterprise and make certain the rewards of labor and industry.

Another topic in which our people rightfully take a deep interest may be here briefly considered. I refer to the existence of trusts and other huge aggregations of capital, the object of which is to secure the monopoly of some particular branch of trade, industry, or commerce, and to stifle wholesome competition. When these are defended, it is usually on the ground that though they increase profits they also reduce prices and thus may benefit the public. It must be remembered, however, that a reduction of prices to the people is not one of the real objects of these organizations, nor is their tendency necessarily in that direction. If it occurs in a particular case, it is only because it accords with the purposes or interests of those managing the scheme.

Such occasional results fall far short of compensating the palpable evils charged to the account of trusts and monopolies. Their tendency is to crush out individual independence and to hinder or prevent the free use of human faculties and the full development of human character. Through them the farmer, the artisan, and the small trader is in danger of dislodgment from the proud position of being his own master, watchful of all that touches his country's prosperity, in which he has an individual lot, and interested in all that affects the ad-

vantages of business of which he is a factor, to be relegated to the level of a mere appurtenance to a great machine, with little free will, with no duty but that of passive obedience, and with little hope or opportunity of rising in the scale of responsible and helpful citizenship.

To the instinctive belief that such is the inevitable trend of trusts and monopolies is due the widespread and deep-seated popular aversion in which they are held, and not the unreasonable insistence that, whatever may be their incidental economic advantages, their general effect upon personal character, prospects, and usefulness can not be otherwise than injurious.

Though Congress has attempted to deal with this matter by legislation, the laws passed for that purpose thus far have proved ineffective, not because of any lack of disposition or attempt to enforce them, but simply because the laws themselves as interpreted by the courts do not reach the difficulty. If the insufficiencies of existing laws can be remedied by further legislation it should be done. The fact must be recognized, however, that all Federal legislation on this subject may fall short of its purpose because of inherent obstacles, and also because of the complex character of our governmental system, which, while making the Federal authority supreme within its sphere, has carefully limited that sphere by metes and bounds which can not be transgressed. The decision of our highest court on this precise question renders it quite doubtful whether the evils of trusts and monopolies can be adequately treated through Federal action, unless they seek directly and purposely to include in their objects transportation or intercourse between States or between the United States and foreign countries.

It does not follow, however, that this is the limit of the remedy that may be applied. Even though it may be found that Federal authority is not broad enough to fully reach the case, there can be no doubt of the power of the several States to act effectively in the premises, and there should be no reason to doubt their willingness to judiciously exercise such power.

In concluding this communication, its last words shall be an appeal to the Congress for the most rigid economy in the expenditure of the money it holds in trust for the people. The way to perplexing extravagance is easy, but a return to frugality is difficult. When, however, it is considered that those who bear the burdens of taxation have no guarantee of honest care save in the fidelity of their public servants, the duty of all possible retrenchment is plainly manifest.

When our differences are forgotten, and our contests of political opinion are no longer remembered, nothing in the retrospect of our public service will be as fortunate and comforting as the recollection of official duty well performed and the memory of a constant devotion to the interests of our confiding fellow-countrymen.

GROVER CLEVELAND.

EXECUTIVE MANSION, Dec. 7, 1896.

Immigration.—At the first session of the Congress the House of Representatives passed a bill designed to restrict immigration. It was in the form of an amendment to the act of March 3, 1891, and it provided that all male persons between the ages of sixteen and sixty who can not both read and write the English or some other language be excluded from this country, excepting parents of persons now living here or hereafter admitted. It prohibited aliens from engaging in labor in the United States while retaining a residence abroad; it forbade employers to set such aliens to work; and it declared unlawful the entrance of any alien into this country from nations outside of America,

except at points where a board of immigrant inspection is maintained.

The measure was reported in the Senate Dec. 10, 1896, with amendments, and as it passed that body it provided that any admissible immigrant might bring with him or send after an illiterate wife, parent, grandparent, minor child, or grandchild; it arranged for a test of illiteracy by means of five-line slips from the Constitution of the United States to be read and copied by immigrants; and it exempted refugees from Cuba during the continuance of war on that island from its operation.

In the Senate Mr. Lodge, of Massachusetts, after reading resolutions from various labor organizations in favor of the measure, said:

"I will confess that I am very radical upon this question. I should be glad to see immigration stop until every man and woman seeking work in this country have employment. Women certainly work for low wages, and the lines of work for which they compete are overcrowded. I think that that which makes it desirable to exclude the male immigrant makes it just as desirable to exclude the female immigrant. The illiteracy test is simply an effort to adopt a test which shall restrict immigration, lower the number of immigrants coming to this country, and do it by shutting out the most undesirable class. That all persons who can not read and write are undesirable, no one will contend. No form of exclusion can be perfectly accurate, but it comes as near to it as any test. If Senators will take the trouble to read the very careful analysis made in the report of the committee they will, I think, find what I say on that point justified.

"This test, if it had been applied during the last year, would have shut out 75,000 immigrants, according to the last report of the Commissioner of Immigration. That is sufficient argument for me. I do not see how it can be advisable to add constantly to the volume of the unemployed in this country in that direct way. It is simply taking in the unemployed of other countries.

"The people gathered in our great cities without employment, who see a constant stream of the unemployed of other nations pouring in, know that that is one direct form of competition with them. They may differ as to other policies in other respects, as to the tariff and the currency questions, but there is no doubt that they are all united to-day in feeling that this unrestricted competition of the unemployed of other lands should be prevented. That it affects them, and affects them badly, no one can doubt. It is perfectly plain that if there are unemployed here and you pour in additional unemployed constantly, you add to the chance all the time that our own unemployed will remain as they are. That, to me, is the controlling reason for this legislation. That is why it makes no difference in my mind whether it be the competition with the labor of women or the competition with the labor of men. I think at this period we ought to do something to check it."

Mr. Palmer, of Illinois, objected to the measure on the ground that it might result in the separation of families, and then added:

"I believe in the right of expatriation. I believe in the right of emigration. I believe that this world was made by the Almighty, and that these attempts at controlling the movements of good people are wrong. I admit the right of any Government to exclude from its borders persons of bad character, persons addicted to crime, dangerous persons of all classes, but I want to say that I have no idea in the world that the class of persons whom it is really desirable to exclude from the country will be affected by this bill. I understand the dan-

gerous classes more generally read and write than the classes which are not so dangerous. I claim, however, the right of any person of good character and industrious habits to come into the United States at his pleasure, and bring with him his wife and children. I believe in that right. While I would consent to any other limitation aside from that of good character and industrious habits, still I would not consent to the separation of families which this bill would necessarily produce."

Mr. Chandler, of New Hampshire, argued that the bill would not prevent the immigration of those earnestly bent upon that course, but simply delay it:

"I wish the attention of the Senator from Illinois a moment in order that I may ask him whether the trouble which he has stated is not entirely obviated by the suggestion which I made the other day, that it will require only a few months' delay on the part of the father and mother in coming here with children to enable them to instruct their children how to read and write either the English language or their native language? Does the Senator realize that this bill is no hardship upon his own statement of the case, because it can only exclude the children of this father and mother and delay them for a period of time sufficient to enable them to educate those children? Take the case of a father and mother, say forty years of age. The law requires that that father and mother shall read and write, and the Senator does not propose to change that requirement. Now, here is a father and mother who can read and write, the parents of a family in Italy or in England. They want to come to this country. They have children between the ages of sixteen and twenty-one who can not read or write. They ought to have had their children taught to read and write, but they find that when they desire to come to this country they have not so taught them. Now, I ask the Senator if it is a hardship which would make him wish to amend this bill simply to say to that father and mother: 'You can read and write; and now before coming to America you wait until your children can read and write your own language.'

"This is a mild bill; it is a weak bill, in the opinion of many of us, because it does not go far enough. It does nothing in the world but detain abroad in their own countries for a sufficient length of time the persons who want to come here so that they may obtain the simplest rudiments of education, to wit, the reading and writing of their own language.

"Mr. President, this bill has been purposely made mild in order that it may receive the support of members of all political parties, and with the hope that it would go through the Senate without any objection from any quarter, in accordance with the pledges of both the great political parties of the country."

Mr. Mills, of Texas, declared against the measure on grounds of principle and policy.

"We have a great body of foreign people in this country who are good citizens. They are laborers; they have helped to build up this great hive of American industry, and there is room for more of them in the United States. Speaking for my own State, I would be glad to welcome 100,000 Germans to come to Texas; I would be glad to welcome 100,000 Irishmen; I would be glad to welcome 100,000 Scandinavians. There is a large number of these three races of foreigners living in the State of Texas. I have known many of them, and known them for many years, and I know them to be good citizens. Suppose that the people from some of these foreign countries wish to come and bring their children and they have not had the opportunity to have

them educated under the despotic governments of Europe, they are to be kept away and to wait until they can educate their children, and the Government can make no provision for them. This is a free country. We have hitherto invited them to come and enjoy the blessings of liberty with ourselves, and now we say: 'Because your government is a despotic government and has enslaved you and your children and it is impossible for you ever to educate them, you shall be proscribed from coming to this country and enjoying the blessings of free government.'

"This is the only really free country in the world. It is a peculiar Government among the governments and nationalities of the world. This continent was dedicated to liberty when this Government was erected, to be the home of a free people, of a self-governing people, of a people who held their liberties in their own hands; and now we are told that the civil service must apply to the immigration of people coming from foreign countries, and a man or his children who can not stand the test of a civil-service examination must be remanded back to despotism again because they have lived in a despotic government which cared not for them.

"No, Mr. President, I am opposed to the educational test. The capacity to read and write is no evidence of virtue either in manhood or womanhood, and I have not a doubt but that the penitentiaries of every State in the Union are full of criminals who can read and write, and read and write well. I have not a doubt that the majority of the wretches whose necks have been broken on the gallows could read and write. The acquirement of the capacity to read and write does not dispel vice and wickedness from the heart. There are thousands and hundreds of thousands of good people in this country and in other countries who can not read and write. I doubt very much if one in ten of the men or women who first came to this country could read and write; but yet see what a precious heritage they have created in this country and bequeathed to us.

"These, sir, are the reasons which constrain me to vote against this bill, and to preserve and persevere and continue in the policy of our fathers to keep the test of pauperism and crime the only test to be applied to foreigners coming to enjoy this heritage of liberty with us."

The bill passed the Senate Dec. 17 by the following vote:

YEAS—Allen, Bacon, Baker, Bate, Berry, Brown, Burrows, Butler, Call, Cameron, Cannon, Chandler, Chilton, Clark, Davis, Dubois, Elkins, Faulkner, Frye, Gallinger, Hale, Hansbrough, Harris, Hawley, Hill, Hoar, Kyle, Lodge, McBride, McMillan, Mantle, Martin, Mitchell of Oregon, Morrill, Nelson, Pasco, Pepper, Perkins, Pettigrew, Platt, Proctor, Pugh, Quay, Sewell, Sherman, Smith, Stewart, Teller, Vest, Walthall, Wetmore, Wilson—52.

NAYS—Blackburn, Blanchard, Caffery, Lindsay, Mills, Mitchell of Wisconsin, Morgan, Murphy, Palmer, Vilas—10.

NOT VOTING—Aldrich, Allison, Brice, Carter, Cockrell, Cullom, Daniel, Gear, George, Gibson, Gordon, Gorman, Gray, Irby, Jones of Arkansas, Jones of Nevada, Pritchard, Reach, Shoup, Squire, Thurston, Tillman, Turpie, Voorhees, Warren, White, Wolcott—27.

The House disagreed to the Senate amendments and a conference committee was appointed. That committee made a report which was concurred in by the House and nonconcurred in by the Senate.

The points of objection in the conference report were stated by Mr. Gibson, of Maryland, as follows:

"The result of that conference is, as I have stated in my point of order, that the conferees instead of

determining the differences between the Senate bill and the House bill, reporting that they had agreed and reporting the sections agreed upon, or reporting that the House had adhered and the Senate had receded or that the Senate had adhered and the House had receded, and presenting the result of that conference in the shape of a perfected bill which had before that time been passed upon by both houses, have not done so; but, on the contrary, they sought—I speak it reverently—to accomplish by indirection what the Senate of the United States and the House of Representatives had expressly determined against.

"I now come to the points of difference to which the Senator from Massachusetts has called my attention. The conference report presents a very different immigration bill from that passed upon by the Senate and passed upon by the House of Representatives. Let us see whether I am correct or whether I am incorrect in that statement.

"In the very first section of the conference report—and here is the suggestion I made—the conferees have added to what had already been agreed upon by both houses. The Senate and the House had agreed upon the age limit; the Senate and the House had agreed as to the character of the reading and writing test; the Senate and the House had agreed that all persons over sixteen years of age who can not read and write the language of their native country or some other language, except in the case of aged persons not able to read and write at all—a grandparent—should be admitted. The House had agreed that all male persons between sixteen and sixty years of age who can not both read and write the English language or some other language should be excluded. The House and the Senate practically agreed to these conditions in this connection; yet we find the conferees in their wisdom, in the plenitude of the authority which it seems that they have arrogated to themselves or not—which remains to be seen—have added to and have changed what the House of Representatives and the Senate have suggested without the House and the Senate having passed upon that question. They have provided that:

"All persons physically capable and over sixteen years of age who can not read and write the English language or the language of their native or resident country."

"Here is a provision to which I call the attention of the Senator from Massachusetts in answer to his inquiry made of me a moment since as to where a change has been made by the conferees.

"The object of the immigration bill as passed by the Senate and as passed by the House of Representatives was to admit immigrants who could conform to the educational test. The conferees have gone outside of the authority with which they were invested by their respective houses and have added what the House and the Senate never before passed upon, and that is the prohibition entirely and absolutely of a class of immigrants who would have been admitted under the Senate bill and under the House bill. The explanation of that is to be found in the fact that there are thousands of immigrants eligible under the House bill and under the Senate bill who are ineligible under the conference report because of the fact that they have not a resident country and can not speak the language of their native country. Those are Russian Jews, the Slavs, the Hungarians, Mennonites, and thousands more of the different classes of immigrants that I might mention who are intended to be admitted under the bill passed by both houses who are excluded by the conference report. I hope that point is clear, Mr. President.

"I come to the other provisions where the con-

feres further transcended their authority. Under the bill substituted by the Senate for the House bill there was a provision that a man who could pass the illiteracy test should be permitted to send for his wife if he had left her behind, or if she had accompanied him and was illiterate herself, that she was admissible if he was; and yet, transcending the plain proposition on the part of the Senate and on the part of the House of Representatives, the conferees in their report have added to what the House of Representatives and the Senate had agreed upon by undertaking to separate man and wife and to commend the alien immigrant to the society of his grandfather rather than to that of his wife. They have excluded the wife and admitted the grandfather. The House of Representatives and the Senate passed no such bill, and yet the conferees, seeking by indirection, as I charge here, rather than by express legislation, have altered it by adding to what has been agreed upon by both houses.

"I come to the second proposition, as to the further point of order which I make in this connection, and that is that they more arrogantly—and I do not use the word reverently either in this connection—have sought to do by indirection what has never been undertaken by either house of Congress, and that was to add new sections to a bill."

Mr. Lodge, of Massachusetts, though not conceding the fairness of the criticism, proposed a new conference committee.

In the House, Mr. Danford, of Ohio, after explaining the scope of the changes made by the conference committee, said:

"Now as to the number of illiterates seeking our shores from year to year. I have before me the report of the Commissioner General of Immigration for the year ending June 30, 1896. You will find on page 30 of the report that the number of illiterates who reached this country during that fiscal year was 66,314 out of a total of 263,709. Of this illiteracy a very large proportion come from southern and eastern Europe. The percentage of illiteracy from the Scandinavian states was exceedingly small, less than 1 per cent.; from Denmark it was but 0.95, from Norway 1.18, from Sweden 1.16, from Germany less than 3 per cent., from England about 5 per cent., and Ireland only 7 per cent. But when you come to the countries of eastern and southern Europe the percentage runs up to over 60 of illiterates, so that the immigration that comes to us from Germany and from the Scandinavian states and the countries of western and northern Europe will be affected very little by the passage of the act."

In defense of Italian immigrants, Mr. Buck, of Pennsylvania, said:

"We are told secretly—it is not openly declared as the intention of the bill to strike in that direction—that numbers of an insignificant and inferior race come here from southern Europe. I need not defend that race. It is true that under the effects of oppression and peculiar institutions the mass of those people are ignorant, but remember they are the descendants of the Cæsars and the Gracchi. Remember that Venice was the mistress of the world when London was but the "tower of a prison" and a slaughter field of political strife and murders. Remember that when all of northern Europe was in the darkness of the Middle Ages Italy had her Dante and her Tasso, her Petrarch, her Boccaccio, her Michael Angelo, and a little later her Christopher Columbus. These races have the instinct of high aspiration in their souls."

Mr. Walker, of Massachusetts, attacked the whole measure as narrow and reactionary:

"Mr. Speaker, I confess that this conference report, as it now stands, has stirred my blood more

than anything I can remember since I have been a member of Congress. Can it be possible that we are forgetting the principles that we have stood for in the past? Can it be possible that we are forgetting to-day that we are a Christian nation? Can it be that we are forgetting that all that constitutes true manliness is the willingness of a man to sacrifice something of himself for others? Can it be possible that this bad measure is to be urged through the House on the plea that this measure must be adopted or a good measure can not be had?

"I confess I shrink with extreme reluctance from adding any other prohibition to those already raised to impede immigration to this country. Have we forgotten so soon the motives and principles that moved our fathers or our grandfathers when they first came here? I tell you, sir, that we are none of us so far removed from the immigrant that we can lightly touch him by the smallest weight of our little finger or lay the burden of a hair upon him that we can possibly avoid in justice to ourselves. When we do restrict immigration, it should be done with the very greatest possible care."

"Is the educational qualification the only one? Why, Mr. Speaker, the very worst class of immigrants that now come here can not only read and write, but they are, some of them, from the most highly educated classes. Such people are found in the ranks of the socialists, the communists, the anarchists, and the nihilists. They may come, and we have no means of excluding them. We have no law for their exclusion. Is it not better for our own interests and the interests of the foreign born who have already made their homes among us that the better class of honest toilers from these foreign countries should come here to balance their baneful influences? Is it not true that in the last election it was among these people—in our foreign-born population—we found the most conservative of our people? I say, sir, that the most conservative people during the last campaign and election were found in the immigrants who have made their homes among us. Almost to a man they were found honest, faithful to our institutions, and conservative."

"The House bill was sufficiently drastic; but let us look for a moment at the condition of this bill as it is returned to us by the conference committee. Mr. Speaker, I would sooner burn off my right hand than cast a vote for the bill in its present condition or if it is not amended in several particulars."

The general argument for the bill was put by Mr. Taylor, of Ohio, as follows:

"It is the philosophy of protection which lies behind and justifies this bill. It is the law of self-preservation that demands it. It is quite as necessary that we should protect ourselves against cheap labor as that we should protect ourselves against the product of cheap labor. It is just as important that we should defend our civilization against the ravaging inroads of other civilizations when those ravages come through the immigration of cheap labor as when they come through the product of that labor."

"The civilizing process, so far as it relates to the products of cheaper labor, comes through protective-tariff acts. We can not civilize the goods themselves, but we can prevent their invasion of civilization; that is to say, we can prevent their lowering the rewards which the American citizen receives for his labor. It is the purchasing power of this reward which fixes the character and quality of our civilization."

"The civilizing process, so far as it relates to the importation of the cheap labor, comes through laws restricting immigration. How can these laws so

operate as to minimize the deteriorating effects of modern immigration?

"Viewed from one standpoint, two classes of people have come to this country from other shores. One is made up of peoples who, when they mingle with the American people, become Americans; of those who freely and naturally commingle with our people and our ways; who raise themselves to the American standard; who love the American flag; who become all that the American people are. In a few years they are welded to the old stock, leaving impressions and taking impressions, and producing a generally homogeneous result.

"The other class possesses no inherent capacity to assimilate. They do not, except in rare and noticeable instances, become absorbed into the tissue of our own people. Their fiber never changes. Though among us and apparently of us, they are aliens in spirit, in tradition, and, generally, in language.

"Such a people, in the broadest and most patriotic sense, can never be said to be desirable elements in our social fabric.

"If what I have said be true and be understood, I need not waste words of eulogy on those splendid people who, though of foreign birth, have helped to make our country what it is and who share with us a just pride in the magnificent empire which they have helped to make magnificent. They are less Americans than I take them to be if they oppose the spirit of this measure.

"The disturbing, the threatening fact is that the character of our immigration has radically changed in the last twenty-five years. From some countries we have received a brave, stalwart, and desirable people; from others we have received an increasing horde whose influence is, and has been, distinctly deteriorating and demoralizing. It is against the latter that we would rouse the spirit of patriotism, and, if that will not suffice, we appeal to a spirit of self-interest.

"The proof is at hand. By the census of 1890 we learn that out of every million of native-born white inhabitants of the United States 898 were inmates of prisons; out of every million of foreign-born whites 1,768 were inmates of prisons.

"Out of every million of native-born whites, 829 were paupers in almshouses; out of every million of foreign-born whites, 3,131 were paupers in almshouses.

"To put it in another form, in proportion to the population there are twice as many foreign-born white prisoners as native born. There are nearly four times as many foreign-born white paupers as native born.

"Comment is unnecessary, if not misleading. No eloquence could paint in more vivid words the appalling facts which these figures present.

"Let us now examine another item of proof more convincing, perhaps, than that just adduced.

"During the year ending June 30, 1896, the number of immigrants landed at ports of the United States was 343,267. These brought with them money amounting to \$4,917,318, or \$14.30 each. How long did that sum suffice to support these new additions to our idle millions? How long was it until these poor people became a public charge or took the bread out of the mouth of some American workman or workwoman by underbidding for his or her job? Is it for any such purpose that our gates are thrown open and the toiling masses of other lands invited to come in? Have those who are here no rights that we are bound to respect? Every man who was born under or has adopted our flag has an equal right with every other, but I submit that he has a greater, an infinitely greater, right than those who are yet in the homes of their

fathers across the water. Unhappy the country and distressed the people which do not recognize and assert that right.

"In the same connection we learn that, while the average amount brought by the German immigrant was \$30, the Russian brought \$6.75, the Italian \$8.50, and the Austro-Hungarian \$11.70. No man can contemplate these unhappy people without pity; but his pity is more bountiful and effective if expressed before its unhappy object has left his home in another country.

"From June 30, 1885, to June 30, 1896, the number of immigrants landed at our ports was 4,694,120, and of this amazing number approximately 2,500,000 were males above the age of fifteen.

"The prosperity of this country has been threatened, and adversity has been and is upon us. Many causes have conspired to produce this result. Has the introduction of 2,500,000 able-bodied workmen affected it any? Doubtless we can absorb many thousands of immigrants every year, but we do not want to absorb any that we can not assimilate.

"Forty per cent., I think, of the immigration of the last ten years has been distinctly undesirable. It has demoralized the social conditions in many sections of the country. It has demoralized labor and wages wherever it has gone. If there is work for him to do, the immigrant who is ready to come up to the American standard of living is a gain to the community to which he comes. The immigrant who will not raise himself to our standard is a menace to our civilization, no matter how much work there may be for him to do. He has no proper place among us.

"These ought to be self-evident facts; yet we find them disputed. I protest that America is not an asylum. We want all to come for whom we have work and who can understand us and become a part of us; but we do not want and do not welcome any others. Let no man mistake the temper of the American people on this point.

"But let us see now if this educational test is calculated to mitigate the evil from which we suffer and from which, if relief does not soon come, we must suffer more.

"While intelligence is not the criterion of virtue, it yet furnishes, along broad lines, a reasonably safe test. We do not need to look about us to find our proof. It is not to individual instances that we need to point. Indeed, it is not to any general law or to any generally accepted idea of the value of intelligence that we need to look. Considered in relation to its application to this subject of immigration, we have only to look to the statistics of immigration for the past year."

A second conference committee was appointed, and both House and Senate concurred in its report.

In the House, action was taken Feb. 9, 1897, after a few brief protests, among them the warning of Mr. Mahany, of New York:

"The House adopted the preceding conference report (which was afterward nonconcurred in by the Senate) notwithstanding the fact that the report, as submitted, tore asunder families, separated husbands and wives, parents and children. And now we find that this measure, which involves a sweeping change in the immigration laws of the United States, is to be rushed through this House under a motion for the previous question, which chokes off adequate debate and prevents the opponents of this legislation from pointing out in detail its manifold faults and absurdities.

"The bill as now framed fulfills practically none of the conditions for which its framers profess to have labored. With a single exception it does not exclude any one whom the great body of American citizens desire to exclude. There is unquestionably

a sentiment in this country in favor of better and closer safeguards in the administration of our immigration laws, and though American labor is interested in this question, it is not interested in this bill. The vast majority of American wage earners are liberal, broad-minded, sympathetic men, and they have no desire to close the doors against those who come from Old World oppression with clean mind and healthy body and sturdy patriotism to cast in their lot with this new republic of the West. Those whom it is the universal sentiment to exclude are the paupers, imbeciles, criminals, and other off-scourings of Europe, together with alien-contract laborers, and the 'birds of passage,' who, retaining domicile and citizenship in other lands, fatten on the substance of our own.

"But whom does this law exclude? Under its provisions every anarchist, every communist, every socialist who comes here to war upon established social order, has triumphant entry. The very fact that these men are anarchists and communists and socialists indicates that they have thought; and, to a certain degree, have been educated up to their thought. There is not one of them who could not pass the requirements of this bill. The measure strikes simply at those people who, under the oppressive laws of Old World governments, are—no matter what their aspirations—absolutely unable to obtain, nay, are debarred by iron social conditions from obtaining, the necessary education to meet the test of this bill. It shuts out honest, God-fearing, virtuous people, whose descendants would make patriotic citizens and strong pillars of this republic. It is a crime against civilization. It is a bar against the educational advancement of the world.

"Why, Mr. Speaker, the absurdity of the proposition is manifest. The members of this House who, by an overwhelming majority, will, in all probability, pass this bill, would—and I say it with due deliberation—the great majority, I repeat, of the men now occupying seats in this Chamber would not only not be Representatives on this floor, but would not even be citizens of the United States if this bill had been in operation a hundred or a hundred and fifty years ago.

"What we want is not restriction of immigration so much as the regulation of it that shall take these voyagers from foreign shores away from the crowded cities of the Union and place them where they can win prosperity for themselves and add to the glory and progress of the great republic.

"And I desire to say to the members of the Republican party here that it was the foreign-born vote in the last election that gave you your great majorities in the States of the West and the commonwealths of the East. In the spirit of nonpartisanship that should characterize this discussion, I compliment the Democratic party, which, with all its faults, has rarely used its victories for the purpose of proscription or oppression. I wish to say to you, members of this House—and while it may be the voice of youth and inexperience, it may eventually prove to be the voice of prophecy—that if you enact this legislation every man who votes for its passage will in the future find that, like Banquo's ghost, that vote will never down.

"As a member of this committee, I warn Republicans especially, that in the plenitude of our victory we should use our power wisely, not illiberally; that we should so administer this vote of confidence that both the future of the United States and the civilization of the world shall be benefited thereby. Let me tell you also not to mistake the meaning of the last election. I am not unconscious of the fact that many of my Republican brethren are prone to consider that triumph, not as a repudiation (as it

was) of unsound finance, but as an indorsement of plutocracy, as an indorsement of monopoly, as an indorsement of everything that distrusts the conscience and the common sense of the plain people.

"I feel deeply on this subject. I believe I understand the sensibilities of the foreign-born voters in the United States. This bill is a blow at the Polish immigration, which has as much right to the fruits of liberty as any other nation upon the face of the earth. It is an indirect reflection upon the German element, which gave us to a very large extent our splendid majorities in the last election. I will not speak of the particular nation from which my forefathers came, for fear I may be considered as animated in this address by individual prejudice. But I warn you, my friends, that if you enact this measure you will have reason hereafter to remember these words—that on the ruins of your theories and upon the destruction of your party victories a more liberal policy will march to success."

The vote in the House on concurrence was as follows:

YEAS—Acheson, Adams, Aitken, Aldrich of Illinois, Allen of Mississippi, Anderson, Avery, Babcock, Bailey, Baker of Maryland, Baker of New Hampshire, Barney, Bartholdt, Bell of Colorado, Bennett, Bingham, Bishop, Black, Blue, Boatner, Bowers, Brewster, Broderick, Brownell, Brosius, Brown, Bull, Burrell, Burton of Missouri, Burton of Ohio, Cannon, Chickering, Clardy, Clark of Iowa, Cobb, Coffin, Cooke of Illinois, Cooper of Florida, Cooper of Texas, Cooper of Wisconsin, Corliss, Cousins, Crisp, Crowther, Crump, Curtis of Iowa, Curtis of Kansas, Curtis of New York, Dalzell, Danford, Dayton, De Armond, Denny, De Witt, Dinsmore, Dockery, Dolliver, Dovener, Draper, Ellett, Ellis, Erdman, Fairchild, Fenton, Foote, Foss, Fowler, Gamble, Gardner, Gibson, Gillett of Massachusetts, Graff, Griffin, Grosvenor, Grout, Grow, Hager, Hall, Halterman, Hanly, Hart, Hartman, Hatch, Heatwole, Hemenway, Henderson, Henry of Connecticut, Henry of Indiana, Hepburn, Hermann, Hicks, Hilborn, Hill, Hitt, Hooker, Hopkins, Howe, Howell, Hubbard, Huff, Hulick, Huling, Hull, Jenkins, Johnson of California, Johnson of Indiana, Johnson of North Dakota, Joy, Kerr, Kirkpatrick, Knox, Lacey, Latimer, Layton, Lefever, Leonard, Lewis, Linney, Linton, Little, Loudenslager, Low, Mahon, Marsh, McCall of Massachusetts, McCall of Tennessee, McCleary of Minnesota, McClellan, McClure, McCulloch, McDearmon, McLachlan, McRae, Meiklejohn, Mercer, Meredith, Miles, Miller of Kansas, Miller of West Virginia, Milliken, Milnes, Minor of Wisconsin, Mitchell, Moody, Morse, Neill, Northway, Ogden, Otjen, Overstreet, Parker, Patterson, Pearson, Perkins, Phillips, Pitney, Poole, Powers, Prince, Pugh, Quigg, Ray, Reeves, Rinaker, Royse, Scranton, Settle, Shafroth, Sherman, Shuford, Simpkins, Smith of Illinois, Smith of Michigan, Snover, Sorg, Southard, Spalding, Sperry, Stahle, Steele, Stewart of New Jersey, Stewart of Wisconsin, Stokes, W. A. Stone, Strong, Strowd of North Carolina, Sulloway, Sulzer, Talbert, Tate, Tawney, Tayler, Terry, Thomas, Towne, Tracewell, Tracey, Treloar, Turner of Virginia, Tyler, Van Horn, Van Voorhis, Wadsworth, Walker of Virginia, Warner, Watson of Indiana, Wheeler, White, Wilber, Williams, Wilson of Idaho, Wilson of Ohio, Wilson of South Carolina, Wood, Woodman, Woomer, Wright—217.

NAYS—Bartlett of Georgia, Bell of Texas, Berry, Buck, Calderhead, Catchings, Clarke of Alabama, Cockrell, Cox, Culberson, Cummings, Harrison, Hendrick, Hurley, Kiefer, Kleberg, Lawson, Long, Loud, Maguire, Mahany, McLaurin, Meyer, Money, Murray, Noonan, Otey, Owens, Pendleton, Richard-

son, Robertson of Louisiana, Sauerhering, Sayers, Sparkman, Stallings, Strait—36.

NOR VOTING—Abbott, T. H. Aldrich, W. F. Aldrich, Allen of Utah, Andrews, Apsley, Arnold of Pennsylvania, Arnold of Rhode Island, Atwood, Baker of Kansas, Bankhead, Barham, Barrett, Bartlett of New York, Beach, Belknap, Boutelle, Brunn, Clark of Missouri, Coddling, Colson, Connolly, Cook of Wisconsin, Cowen, Crowley, Daniels, Dingley, Doolittle, Eddy, Evans, Faris, Fischer, Fitzgerald, Fletcher, Gillet of New York, Goodwyn, Griswold, Hadley, Hainer of Nebraska, Hardy, Harmer, Harris, Heimer of Pennsylvania, Howard, Hunter, Hutcheson, Hyde, Jones, Kem, Kendall, Kulp, Kyle, Leighty, Leisenring, Lester, Livingston, Lorimer, Maddox, Martin, McCormick, McCreary of Kentucky, McEwan, McMillin, Miner of New York, Mondell, Moses, Mozley, Murphy, Newlands, Odell, Payne, Pickler, Price, Raney, Reyburn, Robinson of Pennsylvania, Rusk, Russell of Connecticut, Russell of Georgia, Shannon, Shaw, Skinner, Southwick, Spencer, Stephenson, C. W. Stone, Strode of Nebraska, Swanson, Taft, Thorp, Tucker, Turner of Georgia, Updegraff, Walker of Massachusetts, Wanger, Washington, Watson of Ohio, Wellington, Willis, Wilson of New York, Woodard, Yoakum—102.

In the Senate there was renewed discussion of the measure, and the vote on the concurrence in the conference report, Feb. 17, was as follows:

YEAS—Aldrich, Allison, Baker, Brown, Burrows, Butler, Chandler, Chilton, Cullom, Davis, Elkins, Faulkner, Frye, Gallinger, Gear, Hill, Hoar, Lodge, McBride, Martin, Morrill, Nelson, Pepper, Perkins, Pettigrew, Platt, Pritchard, Proctor, Quay, Sewell, Sherman, Teller, Thurston, Wetmore—34.

NAYS—Bacon, Bate, Berry, Blanchard, Caffery, Call, Carter, Cockrell, Gibson, Gorman, Gray, Hansbrough, Hawley, Lindsay, Mantle, Mills, Mitchell of Wisconsin, Morgan, Murphy, Palmer, Pasco, Pugh, Roach, Shoup, Stewart, Tillman, Turpie, Vest, Vilas, Voorhees, White—31.

NOT VOTING—Allen, Blackburn, Brice, Cameron, Cannon, Clark, Daniel, Dubois, George, Gordon, Hale, Harris, Irby, Jones of Arkansas, Jones of Nevada, Kenney, Kyle, McMillan, Mitchell of Oregon, Smith, Squire, Walthall, Warren, Wilson, Wolcott—25.

The measure as finally adopted was as follows:

“Be it enacted, etc.. That section 1 of the act of March 3, 1891, in amendment of the immigration and contract-labor acts, be, and hereby is, amended by adding to the classes of aliens thereby excluded from admission to the United States the following: All persons physically capable and over sixteen years of age who can not read and write the English language or some other language; but a person not so able to read and write who is over fifty years of age and is the parent or grandparent of a qualified immigrant over twenty-one years of age and capable of supporting such parent or grandparent may accompany such immigrant, or such a parent or grandparent may be sent for and come to join the family of a child or grandchild over twenty-one years of age, similarly qualified and capable, and a wife or minor child not so able to read and write may accompany or be sent for and come to join the husband or parent similarly qualified and capable.”

“SEC. 2. For the purpose of testing the ability of the immigrant to read and write, as required by the foregoing section, the inspection officers shall be furnished with copies of the Constitution of the United States, printed on numbered uniform pasteboard slips, each containing not less than 20 nor more than 25 words of said Constitution printed in the various languages of the immigrants in double small pica type. These slips shall be kept in boxes made for that purpose and so constructed as to con-

ceal the slips from view, each box to contain slips of but one language, and the immigrant may designate the language in which he prefers the test shall be made. Each immigrant shall be required to draw one of said slips from the box and read, and afterward write out, in full view of the immigration officers, the words printed thereon. Each slip shall be returned to the box immediately after the test is finished, and the contents of the box shall be shaken up by an inspection officer before another drawing is made. No immigrant failing to read and write out the slip thus drawn by him shall be admitted, but he shall be returned to the country from which he came at the expense of the steamship or railroad company which brought him, as now provided by law. The inspection officers shall keep in each box at all times a full number of said printed pasteboard slips, and in the case of each excluded immigrant shall keep a certified memorandum of the number of the slip which the said immigrant failed to read or copy out in writing. If in any case from any unavoidable cause the foregoing slips are not at hand for use, the inspection officers shall carefully and thoroughly test the ability of the immigrant to read and write, using the most appropriate and available means at their command; and shall state fully in writing the reasons why the slips are lacking, and describe the substituted method adopted for testing the ability of the immigrant.”

“SEC. 3. That the provisions of the act of March 3, 1893, to facilitate the enforcement of the immigration and contract-labor laws, shall apply to the persons mentioned in section 1 of this act.”

“SEC. 4. That it shall hereafter be unlawful for any male alien who has not in good faith made his declaration before the proper court of his intention to become a citizen of the United States to be employed on any public works of the United States, or to come regularly or habitually into the United States by land or water for the purpose of engaging in any mechanical trade or manual labor for wages or salary, returning from time to time to a foreign country.”

“SEC. 5. That it shall be unlawful for any person, partnership, company, or corporation knowingly to employ any alien coming into the United States in violation of the next preceding section of this act: Provided, That the provisions of this act shall not apply to the employment of sailors, deck hands, or other employees of vessels, or railroad train hands, such as conductors, engineers, brakemen, firemen, or baggagemen, whose duties require them to pass over the frontier to reach the termini of their runs, or to boatmen or guides on the lakes and rivers on the northern border of the United States.”

“SEC. 6. That any violation of the provisions of sections 4 and 5 of this act by any alien or citizen shall be deemed a misdemeanor, punishable by a fine not exceeding \$500 or by imprisonment for the term of not exceeding one year, or by both such fine and imprisonment, in the discretion of the court: Provided, That all persons convicted of a violation of section 4 of this act shall be deported to the country whence they came.”

“SEC. 7. That notwithstanding the provisions of this or any other existing law, the Secretary of the Treasury may permit aliens to enter this country for the purpose of teaching new arts or industries under such rules and regulations as he may provide.”

“SEC. 8. That this act shall not apply to persons arriving in the United States from any port or place in the island of Cuba, during the continuance of the present disorders there, who have heretofore been inhabitants of that island.”

“SEC. 9. That this act shall take effect July 1, 1897.”

March 2 the President sent to the House of Representatives the following veto message:

To the House of Representatives:

I herewith return without approval House bill numbered 7864, entitled "An Act to amend the immigration laws of the United States."

By the first section of this bill it is proposed to amend section 1 of the act of March 3, 1891, relating to immigration "by adding to the classes of aliens thereby excluded from admission to the United States the following: All persons physically capable and over sixteen years of age who can not read and write the English language or some other language; but a person not so able to read and write who is over fifty years of age and is the parent or grandparent of a qualified immigrant over twenty-one years of age and capable of supporting such parent or grandparent may accompany such immigrant, or such a parent or grandparent may be sent for and come to join the family of a child or grandchild over twenty-one years of age, similarly qualified and capable, and a wife or minor child not so able to read and write may accompany or be sent for and come and join the husband or parent similarly qualified and capable."

A radical departure from our national policy relating to immigration is here presented. Heretofore we have welcomed all who came to us from other lands, except those whose moral or physical condition or history threatened danger to our national welfare and safety. Relying upon the zealous watchfulness of our people to prevent injury to our political and social fabric, we have encouraged those coming from foreign countries to cast their lot with us and join in the development of our vast domain, securing in return a share in the blessings of American citizenship.

A century's stupendous growth, largely due to the assimilation and thrift of millions of sturdy and patriotic adopted citizens, attests the success of this generous and free-handed policy which, while guarding the people's interests, exacts from our immigrants only physical and moral soundness and a willingness and ability to work.

A contemplation of the grand results of this policy can not fail to arouse a sentiment in its defense, for however it might have been regarded as an original proposition and viewed as an experiment, its accomplishments are such that if it is to be uprooted at this late day its disadvantages should be plainly apparent and the substitute adopted should be just and adequate, free from uncertainties and guarded against difficult or oppressive administration.

It is not claimed, I believe, that the time has come for the further restriction of immigration on the ground that an excess of population overcrowds our land.

It is said, however, that the quality of recent immigration is undesirable. The time is quite within recent memory when the same thing was said of immigrants who with their descendants are now numbered among our best citizens.

It is said that too many immigrants settle in our cities, thus dangerously increasing their idle and vicious population. This is certainly a disadvantage. It can not be shown, however, that it affects all our cities nor that it is permanent; nor does it appear that this condition where it exists demands as its remedy the reversal of our present immigration policy.

The claim is also made that the influx of foreign laborers deprives of the opportunity to work those who are better entitled than they to the privilege of earning their livelihood by daily toil. An unfortunate condition is certainly presented when any who are willing to labor are unemployed. But so

far as this condition now exists among our people, it must be conceded to be a result of phenomenal business depression and the stagnation of all enterprises in which labor is a factor. With the advent of settled and wholesome financial and economic governmental policies and consequent encouragement to the activity of capital, the misfortunes of unemployed labor should, to a great extent at least, be remedied. If it continues its natural consequences must be to check the further immigration to our cities of foreign laborers and to deplete the ranks of those already there. In the meantime those most willing and best entitled ought to be able to secure the advantages of such work as there is to do.

It is proposed by the bill under consideration to meet the alleged difficulties of the situation by establishing an educational test, by which the right of a foreigner to make his home with us shall be determined. Its general scheme is to prohibit from admission to our country all immigrants "physically capable and over sixteen years of age who can not read and write the English language or some other language"; and it is provided that this test shall be applied by requiring immigrants seeking admission to read and afterward to write not less than 20 nor more than 25 words of the Constitution of the United States in some language, and that any immigrant failing in this shall not be admitted, but shall be returned to the country from whence he came at the expense of the steamship or railroad company which brought him.

The best reason that could be given for this radical restriction of immigration is the necessity of protecting our population against degeneration and saving our national peace and quiet from imported turbulence and disorder.

I can not believe that we would be protected against these evils by limiting immigration to those who can read and write in any language 25 words of our Constitution. In my opinion it is infinitely more safe to admit a hundred thousand immigrants who, though unable to read and write, seek among us only a home and opportunity to work, than to admit one of those unruly agitators and enemies of governmental control, who can not only read and write, but delight in arousing by inflammatory speech the illiterate and peacefully inclined to discontent and tumult. Violence and disorder do not originate with illiterate laborers. They are rather the victims of the educated agitator. The ability to read and write, as required in this bill, in and of itself affords, in my opinion, a misleading test of contented industry and supplies unsatisfactory evidence of desirable citizenship or a proper apprehension of the benefits of our institutions. If any particular element of our illiterate immigration is to be feared for other causes than illiteracy, these causes should be dealt with directly, instead of making illiteracy the pretext for exclusion to the detriment of other illiterate immigrants against whom the real cause of complaint can not be alleged.

The provisions intended to rid that part of the proposed legislation already referred to from obvious hardship appears to me to be indefinite and inadequate.

A parent, grandparent, wife, or minor child of a qualified immigrant, though unable to read and write, may accompany the immigrant or be sent for to join his family, provided the immigrant is capable of supporting such relative. These exceptions to the general rule of exclusion contained in the bill were made to prevent the separation of families, and yet neither brothers nor sisters are provided for. In order that relatives who are provided for may be reunited, those still in foreign

lands must be sent for to join the immigrant here. What formality is necessary to constitute this prerequisite, and how are the facts of relationship and that the relative is sent for to be established? Are the illiterate relatives of immigrants who have come here under prior laws entitled to the advantage of these exceptions? A husband who can read and write and who determines to abandon his illiterate wife abroad will find here under this law an absolutely safe retreat. The illiterate relatives mentioned must not only be sent for, but such immigrant must be capable of supporting them when they arrive. This requirement proceeds upon the assumption that the foreign relatives coming here are in every case by reason of poverty liable to become a public charge unless the immigrant is capable of their support. The contrary is very often true. And yet, if unable to read and write, though quite able and willing to support themselves and their relatives here besides, they could not be admitted under the provisions of this bill if the immigrant was impoverished, though the aid of his fortunate but illiterate relative might be the means of saving him from pauperism.

The fourth section of this bill provides "that it shall be unlawful for any male alien who has not in good faith made his declaration before the proper court of his intention to become a citizen of the United States to be employed on any public works of the United States, or to come regularly or habitually into the United States by land or water for the purpose of engaging in any mechanical trade or manual labor for wages or salary, returning from time to time to a foreign country." The fifth section provides "that it shall be unlawful for any person, partnership, company, or corporation knowingly to employ any alien coming into the United States in violation of the next preceding section of this act."

The prohibition against the employment of aliens upon any public works of the United States is in line with other legislation of a like character. It is quite a different thing, however, to declare it a crime for an alien to come regularly and habitually into the United States for the purpose of obtaining work from private parties, if such alien returns from time to time to a foreign country, and to constitute any employment of such alien a criminal offense.

When we consider these provisions of the bill in connection with our long northern frontier and the boundaries of our States and Territories, often but an imaginary line separating them from the British Dominions, and recall the friendly intercourse between the people who are neighbors on either side, the provisions of this bill affecting them must be regarded as illiberal, narrow, and un-American.

The residents of these States and Territories have separate and especial interests which in many cases make an interchange of labor between their people and their alien neighbors most important, frequently with the advantage largely in favor of our citizens. This suggests the inexpediency of Federal interference with these conditions when not necessary to the correction of a substantial evil affecting the general welfare. Such unfriendly legislation as is proposed could hardly fail to provoke retaliatory measures to the injury of many of our citizens who now find employment on adjoining foreign soil.

The uncertainty of construction to which the language of these provisions is subject is a serious objection to a statute which describes a crime. An important element in the offense sought to be created by these sections is the coming "regularly or habitually into the United States." These words are impossible of definite and certain construction. The same may be said of the equally important

words, "returning from time to time to a foreign country."

A careful examination of this bill has convinced me that for the reasons given and others not specifically stated, its provisions are unnecessarily harsh and oppressive, and that its defects in construction would cause vexation, and its operation would result in harm to our citizens.

GROVER CLEVELAND.

EXECUTIVE MANSION, March 2, 1897.

March 3, the House reconsidered the measure and passed it over the presidential veto by a vote of 195 yeas to 37 nays; but in the Senate the subject was merely referred to the Committee on Immigration.

Postal Matters.—Dec. 8, 1896, the measure providing for limited indemnity for loss of registered mail matter was called up in the House. It is as follows:

"*Be it enacted, etc.*, That section 3926 of the Revised Statutes be amended so as to read as follows:

"SEC. 3926. For the greater security of valuable mail matter the Postmaster-General may establish a uniform system of registration, and as a part of such system he may provide rules under which the sender or owners of first-class registered matter shall be indemnified for losses thereof in the mails, the indemnity to be paid out of the postal revenues, but in no case to exceed \$10 for any one registered piece, or the actual value thereof when that is less than \$10, and for which no other compensation or reimbursement to the loser has been made: *Provided*, That the Post Office Department or its revenues shall not be liable for the loss of any other mail matter on account of its having been registered."

In support of the measure the argument of the Postmaster-General for such a policy was read:

"In the report of last year, submitted by my predecessor, attention was called to the expediency of a law authorizing the payment of an indemnity, not exceeding \$10 in any case, for losses of registered matter in the mails.

"I beg leave to renew this recommendation. It is part of the system of registration in most of the leading countries of the world, and would add to the popularity of our own system if adopted. It seems, besides, but equitable that after matter has been put into the mails, at an increased cost over ordinary matter, and with a special view to its security, the Government should, to a limited extent at least, guarantee its safety. In addition to this, I am of the opinion that such a modification of the system would prove so popular that in a short time nearly all valuable matter to be sent through the mails would be registered, so that but few losses would be likely to occur, and these could be much more satisfactorily investigated and located than is the case when losses occur in the ordinary mails. The saving to the Government in the investigation of such losses would probably more than repay it for the amount expended for indemnity.

"This is a matter that will no doubt be brought before the Postal Union Congress, which is to meet in this city in 1897; but before that time a law should be enacted authorizing the introduction of this reform into our domestic postal system.

"Five thousand two hundred and eighty complaints pertaining to the registered mail were received during the year. Of this number 2,513 alleged the rifling or abstraction of the contents of the letters or packages, and 2,302 announced the entire loss of the letter or package and contents. Only 19 complaints of carelessness by postal employees were received.

"A comparison of the office records for the last two fiscal years shows that the total number of complaints affecting the registered mail during the fiscal

year 1895 was less by 646 than the total number of complaints of the same character received during 1894, a ratio of decrease of nearly 11 per cent. It is worthy of note that the total number of actual losses which occurred in the registered mail during the last fiscal year was 435 less than those determined during the previous year, or a decrease of a little more than 24 per cent. The statistics of the department show that the employees of the postal service handled, approximately, 14,428,081 pieces of registered mail during the last fiscal year, with the inconsiderable loss of 1 piece in every 21,305 handled.

"The number of pieces of mail matter registered during the year was 14,428,081, of which 11,744,525 were paid registrations and 2,683,556 were official or free. This shows a falling off in paid registrations of 5.7 per cent. The decrease in the aggregate of fees collected is \$57,353.04."

In explanation of the bill and the results which it was designed to accomplish, Mr. Loud, of California, said:

"Mr. Speaker, an investigation of the registration branch of the post office will show that we are gradually losing our registration business, while we are still maintaining the expensive machinery which that branch of the postal service demands. The express companies throughout the country, which guarantee indemnity in case of loss, are gradually absorbing all this class of business, which was formerly done by the Post Office Department, and to those who have looked into the matter it seems quite clear that the time has arrived when we ought either to go out of the registration business or else provide some such system as is here proposed, whereby the people may have a guarantee of the safety of such matter as they confide to the charge of the department, or some measure of indemnity for its loss. The Government charges a very liberal fee for registration for packages and letters, 8 cents, and the registration department is one of the most profitable branches of the service. For several years past Postmasters-General have called the attention of Congress to the necessity of providing for some limited indemnity for losses incurred by persons who send registered matter through the mails. Now, on the basis of the packages lost in the year 1895 (and the amount of loss upon packages is being continually reduced) it would have cost this Government not more than \$25,000 had we paid \$10 for every package that was lost.

"The Post Office Department is becoming more perfect in its operations day by day—more careful in the execution of its business; and, as I have remarked, the number of lost packages is decreasing year by year. We therefore have no right to assume that the ratio will increase. But we do assume that if we can give a guarantee of the safe delivery of matter confided to the care of the Post Office Department our registration will increase to the extent not merely of \$25,000 a year, but \$50,000 or \$75,000 a year, and of this amount at least one half would be clear profit to the Government.

The measure passed the House without serious opposition, and was taken up and passed by the Senate, Feb. 24, 1897, without a division. It was approved by the President, Feb. 27.

A bill concerning delivery of letters in towns, villages, and other places where no free delivery exists was reported and passed the House, Dec. 8, 1896, as follows:

"*Be it enacted, etc.*, That whenever not less than 20 persons who receive their mail matter through the same post office shall petition the postmaster at such office to appoint one or more letter carriers, who shall be at least sixteen years of age, for the delivery of letters and other mail matter therefrom

to the persons addressed, at their respective residences or places of business, and for the collection of letters and the conveyance and delivery of them to the post office, said postmaster shall appoint a suitable number of letter carriers for that purpose, and it shall be their duty to report at least once a week to the postmaster appointing them the number of pieces delivered and collected by them and amount paid therefor.

"SEC. 2. That at all places where the foregoing delivery and collections may be authorized under this act the letter carriers thus appointed may receive of the person to whom he delivers letters or papers, or from whom he receives them for conveyance to the post office, such weekly, monthly, or quarterly compensation as may be mutually agreed upon; and when no such agreement is made, they may demand and receive not exceeding 1 cent for each letter or other package which they deliver from or convey to the post office: *Provided*, That the sum which each carrier thus collects shall be in full for his services; and none of such carriers shall have any claim upon the Post Office Department for compensation for services rendered as a letter carrier: *Provided further*, That no letter or other mail matter shall be given to such letter carrier for delivery unless addressed to a person who has lodged at the post office a written request that his mail matter be delivered to such letter carrier: *And provided further*, That if any person who shall have filed such written request shall refuse or neglect to pay the amount agreed upon or fixed by this act for the delivery or collection of any mail matter, the same may be returned by the carrier to the post office, and thereafter the carrier shall not be required to deliver or collect any mail to or from such person. Each person so appointed shall give bond to the postmaster for the faithful performance of his duties in the penal sum of \$100.

"SEC. 3. That the letter carriers appointed by authority of this act shall be subject to all the provisions of existing laws not inconsistent with this act."

Mr. Sperry, of Connecticut, said in explanation of the measure:

"You know in many of our large agricultural communities it takes a man sometimes two hours to go to the post office. You take it in cold weather, when there is snow on the ground, or in harvest time, and the farmer can ill afford to spare those two hours, or one hour, as the case may be, to go to the post office for his letters, possibly nine times out of ten returning without anything, and yet his valuable time is lost. Under this system the carrier himself, who shall be appointed by the postmaster to serve the villages and towns in which the post office is located, can go and take from the office these letters or newspapers and deliver them to the various parties to whom they are addressed, and receive therefor the rate of compensation agreed upon between the carrier and the people served. Should they like to have a letter mailed, the letter carrier would charge the same price or whatever may be agreed upon. In my judgment, should this system go into operation, our income from the various country post offices and villages would be increased very largely. I remember the first street-lamp boxes that were put up in 1860. It was said when these boxes were put up that it involved a cost that the people would not submit to; that it was a great charge upon the Government. But I know from my own experience in the New Haven post office that in less than six months after these letter boxes had been placed upon the street corners, giving the people an opportunity to mail their letters at any hour or at any moment, instead of going one mile or two miles to the post office to mail the same, it was

plainly shown that the receipts doubled, or nearly so, and the letter carriers' department soon commenced paying for itself.

"Now, you not only give these people the accommodation they want, whether in villages or rural communities it matters not, but you will increase the receipts of the Post Office Department by giving people facilities, if you please, to mail and receive their letters. It is like running a horse car. If you run it once an hour you will not get nearly the number of passengers that you would get if you run it once in half an hour. If you can run it once in half an hour, and you change to once in ten minutes, you would get more than you would in the half hour. People will not wait. Give the people a chance, give the people facilities to receive their letters and to mail their letters, and according to the facilities given the increase will come. It is sure to come. There is no loss incurred at all by the Government. So long as the people want their letters carried in this way, let the farming communities—the villages and the towns of less than 10,000 inhabitants—have that privilege, they paying for it as agreed upon. It is the old penny-post system over again. There is nothing new about it. That penny-post system grew up into free delivery by and by, as you gave the people an opportunity to receive and mail their letters in the way convenient to themselves and without loss of time. Why withhold this privilege from the people so long as they are willing to pay for it, where it does not cost the Government one cent?"

Mr. Williams, of Mississippi, said:

"Now, Mr. Speaker, the proposed bill—the legislation it seeks to enact—is nothing but the development into law of a system which already exists in a part of this country. For example, down in my own country, in the State of Mississippi, there is a community of people—there are several of them, but I have in mind one community—who annually direct the postmaster to deliver their mail to a certain person selected by them to receive and deliver it. The carrier gets the mail from the post office and deposits it in boxes in front of the various plantations on his route, and takes from the boxes such mail matter as has been deposited by the planters, or the renters of the land, and carries it to the post office. So the common sense of a community in this country has already developed a scheme exactly that which the gentleman from Connecticut desires to put into the shape of law upon our statute books. And, in order to avoid the objection of undue expense, his bill provides that these carriers shall be paid by the people whose mail they deliver.

"Now, it is wrong, inherently wrong, that the great cities of this country should have their free delivery of mail matter, while the people living in more sparsely settled communities can not have such an advantage. But I recognize at the same time the fact that the free delivery of letters in sparsely settled localities would bring about an expenditure to the Government far beyond a due proportion of the number of letters or mail matter delivered, and all that; and each of us has practically surrendered to the idea that all of the great cities of the United States should have this free delivery, and that the citizen of the United States living in Philadelphia, for instance, should have favors shown him by the Government which a citizen living in the rural districts of Kansas does not have, and which can not be shown to him. I understand that the argument is always made, in answer to that, that the mail of Philadelphia, for example, pays its own way; but that is not true, because for every letter they send out from Philadelphia a letter is received there from some more sparsely settled section of the country."

The Senate passed the measure Feb. 25, 1897, but there is no record of its approval by the President.

Much greater interest was shown in what is called the Loud bill "to amend the postal laws relating to second-class mail matter." It was taken up in the House, Dec. 15, 1896, debated on various occasions with great spirit, and passed Jan. 6, 1897, in the following form:

"*Be it enacted, etc.,* Thatailable matter of the second class shall embrace all newspapers and other periodical publications which are issued at stated intervals and as frequently as four times a year, and are within the conditions named in sections 3 or 4 of this act: *Provided*, That nothing herein contained shall be so construed as to admit to the second-class rate publications purporting to be issued periodically and to subscribers, but which are merely books, or reprints of books, whether they be issued complete or in parts, whether they be bound or unbound, whether they be sold by subscription or otherwise, or whether they purport to be premiums or supplements or parts of regular newspapers or periodicals.

"SEC. 2. That publications of the second class, except as provided in section 25 of the act of March 3, 1879, when sent by the publisher thereof, and from the office of publication, excluding sample copies, or when sent from a news agency to actual subscribers thereto, or to other news agents, shall be entitled to transmission through the mails at 1 cent a pound or fraction thereof, such postage to be prepaid as now provided by law: *Provided, nevertheless*, That news agents shall not be allowed to return to news agents or publishers at the pound rate unsold periodical publications, but shall pay postage on the same at the rate of 1 cent for 4 ounces.

"SEC. 3. That all periodical publications regularly issued from a known place of publication at stated intervals as frequently as four times a year, by or under the auspices of benevolent or fraternal societies, trades unions, or orders organized under the lodge system, and having a *bona fide* membership of not less than 1,000 persons, shall be entitled to the privilege of second-class mail matter: *Provided*, That such matter shall be originated and published to further the objects and purposes of such society or order.

"SEC. 4. That the conditions upon which a publication shall be admitted to the second class are as follows:

"1. It must regularly be issued at stated intervals as frequently as four times a year, bear a date of issue, and be numbered consecutively.

"2. It must be issued from a known office of publication, which shall be shown by the publication itself.

"3. It must be formed of printed paper sheets, without board, cloth, leather, or other substantial binding, such as distinguish printed books for preservation from periodical publications.

"4. It must be originated and published for the dissemination of information of a public character, or devoted to literature, the sciences, arts, or some special industry, and must have a legitimate list of subscribers who voluntarily order and pay for the same: *Provided*, That nothing herein contained shall be so construed as to admit to the second-class rate regular publications, or any particular issue of any regular publication, designed primarily for advertising purposes, or for free circulation, or for circulation at nominal rates: *And provided*, That all extra numbers of second-class publications sent by the publishers thereof, acting as the agent of an advertiser or purchaser, to addresses furnished by the latter, shall be subject to pay postage at the rate of 1 cent for every 4 ounces or fraction there-

of: *And provided further*, That it shall not be permissible to mail any given article or articles, or any part of any particular number of a newspaper or periodical, segregated from the rest of the publication, except at the third-class rate of postage.

"SEC. 5. That publishers and others, whose publications shall be admitted as mail matter of the second class under the provisions of this act, shall be required, before depositing such mail matter in the post office, to separate the same into United States mail sacks or bundles by States, cities, towns, and counties, as the Postmaster-General may direct.

"SEC. 6. That the act of Congress in regard to second-class mail matter approved July 15, 1894, be, and the same is hereby, repealed.

"SEC. 7. That this act shall take effect and be in force from and after July 1, 1896."

Mr. Loud said in opening the discussion:

"Mr. Chairman, many gentlemen here may assume, perhaps, that I have magnified the importance of this measure, but this measure received the commendation of the Post Office Department ten years ago. The officers of that department whose duty it is to carefully investigate the working of our postal system saw the gross abuses that had grown out of the laws of 1879 and 1885 and presented the question to Congress in 1887, and each year since that time they have begged and pleaded with Congress in no uncertain tones to give the administration of the Post Office Department some relief. The abuse has so grown in magnitude of late years that even the President of the United States in his last message called attention to the grievous evil which confronts us in the handling and carriage of second-class mail matter. I hope the House will pardon me while I read a few words from the report of the present Postmaster-General, a gentleman who has given this matter careful attention and study, aided and guided by the opinions of the officers who have gone before him for eight years. With that experience to draw upon, he took up the question and brought it down to the present time, and on page 6 of the report he uses this language:

"So disheartening is it for the responsible head of the department to see this waste of its earnings, with its resulting impairment of the efficiency of the postal service, its absorption of the fruits of good management and of careful economies, that but for the hope that Congress would enact the bill now on the House calendar I should have taken the responsibility to modify and reverse the successive rulings through which this inroad on the service has been effected, and to exclude from the benefit of second-class rates the serial libraries and other publications not in the policy of the law, even if within the letter of its rather loose phraseology. This would have imposed upon those who profit at the public expense by existing practices the necessity of seeking through the courts or otherwise the restoration of their special privileges."

"Mr. Chairman, I am satisfied that if the present Postmaster-General had another year to serve he would carry into execution the purpose set forth in this part of his annual report. For my part I do not believe that it was ever intended by Congress that serial novels should pass through the mails at pound rates, a privilege originally vested in the newspapers of this country, and confined to them up to 1879, when by a ruling of the Attorney-General at that time, Gen. Devens, it was held that a book issued in serial numbers was entitled to be carried at second-class rates under the rather loose phraseology of the law. With all due respect to the learning of the gentleman and to his honesty and integrity, I think he erred, because in the advertisements of these so-called serials throughout

the land even to-day they are not referred to as serial publications, but in their proper sphere, as books, and books alone.

"We all admit that this country is to-day in an unfortunate condition financially. While perhaps we may not all agree as to the remedy for the cure of the existing evil, we do all admit that from a financial standpoint this country is in an unfortunate position. Now this bill presents to this body the opportunity to relieve the country from a deficiency of \$10,000,000 already existing in the service of the Post Office Department, and give to it in addition a revenue of \$10,000,000 more. At the lowest calculation there is involved in this bill a saving to the Government of \$20,000,000 per annum, and if we may take the figures of Postmaster-General Wanamaker, acknowledged to be a good business man, and who was at that time in a position to know whereof he spoke—if we may take his estimate made in 1892, we must come to the conclusion that this iniquity—I will term it iniquity—costs our people more than \$40,000,000 annually. That is not much money, gentlemen, I am willing to admit, to us who deal with hundreds of millions as some people deal with dollars."

Mr. Loud went on to say that the essential points in the measure were simply the exclusion of books issued as serials and sample copies of periodicals from second-class mail matter, and that these changes would relieve the Post Office Department.

Mr. Quigg, of New York, who led the opposition to the bill, outlined his course of argument as follows:

"This bill is not only important, it is revolutionary; and it is not less reactionary than revolutionary. If this bill passes, for the first time since the Post Office Department was established Congress will have taken a step backward in the liberal policy it has maintained with regard to the public uses of the post office. If this bill passes, privileges and rights will be withdrawn and denied which have existed for half a century, privileges and rights so widely availed of that industries have been built upon them, trades and businesses established, and conditions of production and barter fixed. If this bill passes, a blow will be struck at every occupation connected with the art of printing and the business of publishing, circulating, and selling the product of the printing press. If this is so, and anybody can see at a glance that it is so, no argument is needed to enforce the assertion that we should be sure of our ground and be fully persuaded of compensating results to the public interest before we give our approval to such radical, such injurious and far-reaching legislation.

"Two pretenses are made with which to justify this bill. The first is that the mails are now being used in a way that the law did not intend or contemplate and that by this bill we are simply providing against abuses. The second is that its passage will save to the public Treasury the sum which the gentleman from California, by mathematical processes that are altogether bewildering, variously estimates from \$10,000,000 to \$40,000,000. If either of these pretenses could be established, if they were even credible, I should certainly support the bill in spite of the grievous injuries that its enactment must entail upon the industries and occupations to which I have just referred. But the facts in the case conclusively prove that the uses of the mails which this bill seeks to prevent were held in full contemplation when the law took its present shape, have since been repeatedly confirmed, and that the effect of the bill upon the revenue and expenditure of the Post Office Department is altogether problematical. Indeed, I think that the House will see before this debate is concluded that the inevitable loss of revenues in first- and fourth-

class postage will be quite as great as any possible saving by reason of the reduction of the cost of mail transportation and that the net effect of the bill will be to produce disaster to printers, binders, publishers, newsdealers, and paper manufacturers, without materially affecting the financial condition of the post office."

Mr. Kyle, of Mississippi, in support of the bill, attacked the discrimination in favor of serial publications and the character of some of those publications. He said:

"I call attention now to some statements made by Mr. Wanamaker upon this subject. It is not only Postmaster-General Wilson who has been struggling to get rid of this wrong, this imposition upon the people of this country, but also Postmaster-General Wanamaker and Postmaster-General Bissell. All three of these postmasters-general have been calling attention to this evil and appealing to Congress to relieve the department of this wrong. I call it a wrong because I believe it is a wrong, and I believe that if I had time I could demonstrate that it is a wrong. Here is what Mr. Wanamaker says about the carrying of these cheap books and the discrimination that is made in their favor:

"First. The enjoyment of the privilege of low postage by these paper-covered books works an injustice to the publishers of all other books. We all know that unnumbered thousands of books are issued every year in this country bound in cloth, leather, or some other substantial form of binding. There are also many books published with paper covers, the publishers of which make no pretense of issuing them as parts of a series or library of publications, they having the fairness to issue them under their true name—books. Now why should there be any discrimination against these books, either bound or unbound? Why should they be taxed, for carriage by mail, 1 cent for every 2 ounces, while those that come under what are called the serial class go through for a cent a pound? There are, indeed, actual instances of the same book precisely, issued with paper covers, but by different publishers, in the one case charged but a cent a pound and in the other eight times that amount. These distinctions are manifestly absurd and unjust, and while they operate advantageously to one class of publishers they are harmful to another."

"I say so, too. Why should there be any discrimination against books? And I want the man on this floor who is able to give a satisfactory answer to that inquiry of Mr. Wanamaker to do so. Why should there be a postal rate of 8 cents a pound upon a book with a cloth back while there is a charge of only 1 cent a pound on these paper-covered publications? Can any gentleman tell why? I pause for an answer. If there is any reason for discrimination, it is the other way. I believe the man who is trying to accumulate a library for himself and his family should be encouraged, rather than the fellow who is dealing in this cheap paper-back literature which is poisoning the youth of the land to-day. Mr. Wanamaker puts the question in such a way as to appeal to every man who opposes this bill to answer it, but no man has yet responded. The gentleman from New York occupied the floor for an hour and a half this morning talking to this committee, and he doubtless has read Mr. Wanamaker's presentation of this question and has been impressed with the injustice and the inequality of the existing law, and he did not undertake to answer."

"Let me call attention now briefly to what Mr. Wanamaker said with reference to this class of literature:

"There are many novels of that class which every librarian who has any regard for the morals of the community deplores the existence of, novels which depict, sometimes in the most seductive, sometimes in the most repulsive aspects, the decline and fall of woman—novels in which, where there is not a seduction there is an adultery, and where there is not an adultery there is a seduction, and very frequently there are both. Now what kind of literature is that to bring into domestic circles, to be put forth by the thousand, and scattered all over your country, to the exclusion, or at least to the prejudice, of decent and elevating literature?"

"What kind of literature is that to bring into the domestic circle by these cheap rates of postage?"

Mr. Burton, of Ohio, said of the "sample-copy" abuse:

"Now I do not believe we will any of us object to the sample copy, if restricted to its proper use, for which it was originally intended, namely, that of sending out copies of *bona fide* publications, so that persons may judge of their merit and decide whether to subscribe or not. But the trouble is an abuse has grown up from this system which can not be separated from its legitimate use. One single periodical sends out monthly, under the sample-copy privilege, 1,250,000 copies. It is not a newspaper. It is a travesty to call it such. There are many similar sheets. It appears from the report of the Postmaster-General that the increase during six years in newspapers entered for circulation at the post office as second-class matter was 24,304, but the actual number of periodicals which during that time obtained standing in the newspaper directory was 3,747. So, as Postmaster-General Bissell stated, only 15 per cent. of those included under the designation of second-class matter were legitimate newspaper publications."

"These go in enormous quantities. They are a cheap advertising medium. They are sent indiscriminately over the country. Advertisers, realizing the fact that they go in the mail almost for nothing, and are scattered far and wide, are willing to pay large prices for the privilege of advertising in their columns. And right here I wish to pay attention to the leading argument made in favor of this sample-copy privilege. It is claimed that while these copies are carried at a loss to the Government, yet the Government makes up for the loss in other ways. It is said that letters come to the publisher of the sample copy. He offers prizes. All of which stimulates the post-office business. To that a sufficient answer is, that there is just so much money that the people of this country have to spend. There is just so much business they can transact, and they will transact just as much business, write just as many letters, and pay attention to a great deal better class of advertisements, if this business of advertising is restricted to the legitimate newspaper and the ordinary way of doing business. Indeed, there will be an improvement, because with the greater responsibility and degree of care which must be exercised by the regular newspaper in regard to matter in its columns, there will be a higher standard, and money will be invested in a better way."

The case against the measure was put most effectively by Mr. Tracey, of Missouri, who said:

"Mr. Chairman, it would be immaterial who does the business unless it should be done at an increased cost to the people. But I submit if the effect of this legislation is to transfer the business now done by the Post Office Department to the express companies, which, in the absence of the only competition possible, increases the cost of transportation and handling to the people, the legislation is un-

wise and ought to be defeated. That the bill under consideration would have that effect appears to be recognized by the chairman of the committee, and he answers by saying he does not care.

"Now, Mr. Chairman, it would seem to me that no argument should be necessary to convince any one that the cost of carrying the different classes of mail matter varies materially. If the argument adduced from the position taken and the assumptions made finds itself based on a false assumption, then the argument itself necessarily falls to the ground. It must be apparent that the cost of handling and carrying first-class mail matter is much larger than the cost of carrying and handling second-class matter. The handling of the pieces of mail matter known as first-class matter involves a large number of separate handlings. In the first place, the stamps must be printed, distributed, and canceled. Every piece of first-class mail matter passes through from three to four postmarkings. Then, in addition to that, the various distributions which do not obtain in second-class mail matter must be taken into consideration.

"In handling second-class mail matter, under the present laws and regulations a large amount of the handling, perhaps one half of it fully, is done by the publishers themselves. The publications are assorted into mail sacks for States, cities, counties, etc., and are delivered in that condition to the Post Office Department, and by it delivered to the various places along the various postal routes. It must be evident, therefore, that the cost of handling that class of matter is not at all equal to the cost of handling first-class matter.

"But let us give an illustration of the methods of reckoning adopted by the committee with reference to this matter. Now, it is alleged—and the attack made upon the existing law is based upon the allegation—that it costs $8\frac{1}{2}$ cents per pound to carry all of this matter which it is sought by the bill to cut out of the privilege it enjoys under the present rate.

"During the year ending June 30, 1894, there was an increase of 43,000,000 pounds of second-class mail matter carried. The methods of computation adopted by the committee give the expense of carrying this increase in the amount of second-class matter to the department, and, according to their methods of computation, it must have been the sum found by multiplying 43,000,000 pounds by $8\frac{1}{2}$ cents per pound, which it is alleged to have cost, or in the aggregate \$3,655,000.

"Now, it is shown by the report of the Second Assistant Postmaster-General of the same year that the total increase of the expenses of the department was but \$1,777,362.22, and that increase covered not only the cost of carrying the mails, but it covered also the cost of securing 766 new routes, representing an increase of 913,37 miles, with an actual increase in the distance traveled of 15,310,780.61 miles, and included the salaries of railway and post-office clerks necessary, and special facilities and mail equipment. The average cost of carrying the mails per mile for that year is stated to have been 11.43 cents. At that rate, the cost to the department of the increased facilities must have been \$1,750,022.21. Take away from the increased cost of running the department in that year the cost of obtaining and conducting the increased mail facilities for that year, and it leaves the total increase of cost of carrying the mails at \$27,340.01. And yet we are told by the committee in the face of these facts, which are in the reports cited by the committee and approved by them, that the chief cost due to the carrying of this second-class matter to which they object at the pound rate was \$3,655,000.

"Now, if the committee can present any sort of demonstration to the House which will unravel that problem, it will do more than has yet been done by any member of the committee and more than I believe to be within the possibilities. If the increased expense for transportation and mail service generally costs \$1,777,362.22, and the increased facilities thereby secured are valued at \$1,750,022.21, how much did it actually cost the department to carry the 43,000,000 additional pounds of second-class matter?

"The cost of carrying the second-class matter is not at all what it is alleged to be. For the reason that I stated at the outset, a large proportion of the cost is paid by the publishers of these publications, who assort them, separate them, put them into sacks for delivery along the postal routes, at no expense to the Government other than the mere transportation and delivery by the Post Office Department at the points of destination. It does not require a very wise carrier to understand that if he has a wagon and team capable of carrying 50 boxes of goods of any kind and he has but 40 to carry, the expense of his trip is not thereby reduced. On the contrary, the humblest drayman understands that the offer of 10 additional boxes would increase his receipts without increasing his expenses (wear and tear excepted). In fact, it would be just that much money found.

"I have not time to say all that I should like to say upon this bill. It seems to me that, instead of having the title which is given to it, it ought to be entitled 'A bill to tax the dissemination of intelligence among the people.'

"While there have been and are abuses which ought to be remedied in the administration of the postal system, it is unquestionably true that under the operation of existing laws and regulations the United States leads the world in the production of newspapers and periodicals of the highest grade and at the lowest prices. The publishing business of the country is not conducted as a charity; it is a business, and is engaged in and conducted for a profit. When the profit ceases the business fails or is abandoned. The postage is an item of expense that is taken into account as is any other item of expense. Had this bill been in operation during the past twenty years the magnificent daily newspapers now published at 1 cent per copy in all parts of the country, a mirror of the world's doings up to the hour of going to press, would have been an 'iridescent dream.' If there were no other objection to the bill, this ought to be sufficient to insure its defeat.

"But it strikes a harder blow, if possible, at the country newspapers, which at best have a hard row to hoe. And the country newspapers are entitled to the highest consideration in any legislation which proposes to change existing postal laws and regulations. The right to send out sample copies, the right to send a copy free to a friend, the right to exchange with other papers, the right to continue a subscription after the time paid for has expired, the right to offer as an inducement for additional subscribers a premium in the shape of a supplement containing some work of fiction, the right to combine his own paper with some metropolitan weekly which is furnished at a very low price, are all regarded as valuable, and, speaking from personal experience, they are valuable. All of these rights are jeopardized by this bill, if they are not entirely swept away. It is not a hazardous prediction to say that if this bill becomes a law the country press, the mainstay of patriotism and devotion to free institutions among the masses of the people, will be weakened financially and weakened in its ability for good. The splendid country weeklies

of to-day, carrying to the homes of the people each week a volume of excellent and varied information, will in all probability be reduced to the decrepit weeklies of a quarter of a century ago, in which were merely chronicled the sayings and doings of the neighborhoods in which they were published. This would be a calamity.

"The bill proposes to drive out of the second class into the third class, or out of the mails entirely, all books or reprints of books, whether they be issued complete or in parts, whether they be bound or unbound, whether they be sold by subscription or otherwise, or whether they purport to be premiums or supplements or parts of regular newspapers; all sample copies of newspapers or periodicals; all exchange copies of newspapers or periodicals; all copies sent free by the publisher; all unsold copies returned to news companies or to the publishers. And, in addition to all this, it invests the Post Office Department with supreme power to adopt such rules and regulations for the determination of any question affecting the right of a newspaper or periodical to be carried in the mails as second-class matter as practically creates a press censorship; narrows the field now occupied by a large portion of the press of the country, and necessarily cripples its usefulness. All this is proposed in the interest of economy in the service, upon a theory which has been shown to be visionary and unsound.

"Third-class matter costs the Government to handle more than double what it costs to handle second-class matter. It covers printed matter other than periodical publications. In addition to the handling and furnishing and canceling of stamps, the packages must be handled and sorted, both at the office of deposit and that of delivery. The mails are used as a rule only to send small packages, or to places remote from the railroads, and which are not reached by the express companies.

"The express companies carry this class of matter to practically all of their delivery points, under a special 'printed-matter' rate, at 2 cents per package less than the mail rate. The rate is advertised as 10 cents for each 1½ pound or less, and for single packages exceeding 1½ pound, 1 cent for each additional 2 ounces. The third-class mail rate for 1½ pound is 12 cents, and 1 cent for each additional 2 ounces or fraction. This 'printed-matter' rate was evidently adopted by the express companies for the purpose of securing the handling of all such matter as can be handled profitably, leaving to the Government the handling of packages costing less than 10 cents per package, or destined to remote points not reached by the companies. This becomes very apparent when it is remembered that the 'printed-matter' rate was not the result of competition among the companies, but was a 'pool' agreement among them. For the year ending June 30, 1894, the pieces of third-class matter carried by the mails only amounted to about 12 per cent. of the whole number of pieces of mail carried, and the percentage has not increased very much, if any, since. Under the operation of this bill, should it become a law, all of the matter transferred from the second class to the third class which can be profitably handled will be carried by the express companies.

"When the declaration of the chairman of the committee that 'he does not care' is remembered, along with the significant fact that the express companies are all for the bill, is it wholly unwarrantable to inquire if the bill is not framed rather in the interest of the express companies than of the people? If the express companies continue to handle the profitable third-class matter, which they will do as long as they have a cheaper rate, how

will the increase of third-class matter through the transfer to that class of matter now in the second class decrease the deficit in the revenues of the department? Since it costs about as much to operate a postal car carrying 10 tons of mail as it does when it carries 20 tons, inasmuch as the operating expenses of the department are not seriously decreased by a decrease in the amount of mail handled, the question of how this bill enacted into law will enable the Post Office Department to become self-sustaining becomes a problem which will probably wait for a solution until it is demonstrated how one from 2 leaves 3."

The measure was reported with amendments in the Senate by a majority of the committee on post offices and post roads, and Mr. Butler, of South Carolina, presented a minority report in opposition.

The majority report said:

"This bill was received from the House on Jan. 7, 1897. The committee found a widespread interest in the bill prevailing throughout the country; on the one hand on the part of those patrons of the mails sending second-class matter, who appeared to desire to preserve the present system substantially as it exists, and on the other hand on the part of those who wish alleged abuses to be corrected, hoping that the saving in expenditure thereby effected will enable the Post Office Department, without too great an increase of its annual deficit in revenues, to give to the public a 1-cent rate of postage on single letters, or otherwise to give benefits to the community not now attainable. Hearings were asked for on both sides and given by the committee on the 16th, 23d, and 30th days of January.

"As time has passed, it has seemed to the committee that with the wide difference of opinion existing between the various interests and also among members of the committee as to the extent of existing abuses and the proper method of providing remedies, it will not be possible to secure passage of the bill through the Senate at the present session.

"The committee, however, report the bill to the Senate, with certain amendments prepared by the acting chairman, in order that it may be taken up for consideration, if time permits, each member reserving opinion upon the amendments and the bill until they come up for consideration.

"The committee also recommend that a postal commission be created by legislation, as follows:

"That the questions concerning the correction of alleged abuses in the postal service in connection with second-class mail matter, the extension of free delivery to rural regions, the reduction of the cost of the railroad transportation of the mails, the adoption of 1-cent postage for single letters, and other like questions, shall be examined by a postal reform commission of five, to consist of the two chairmen in the Senate and House of the present Committees on Post Offices and Post Roads, the Postmaster-General, and two citizens to be appointed by the President, who shall make their report and recommendations for legislation to the next Congress; and for the services of said civilian commissioners and the expenses of said commission the sum of \$10,000 is hereby appropriated, to be immediately available and to be expended according to the direction of the Postmaster-General; said commission to expire on the 31st day of December, 1897."

The minority report asserts the deficiencies in the Post Office Department to be due to exorbitant rates paid for mail service:

"The attempt to reform the mail service and reduce expenses in the manner proposed by this bill, without any information from the department or otherwise as to what are the abuses, seems to the

undersigned as very inopportune, and is, at least, a leap in the dark, if there are no interested parties promoting the legislation. It will be seen by a letter from the Postmaster-General, attached to this report, that the department has no information which will enable it to point out what class of matter sent through the mails occasions the deficit. The department is unable to make any estimate of the cost of carrying newspapers, and particularly the great Sunday dailies, through the mails, and the cost of carrying the literature which is authorized by law. It is stated that the average cost of all mail matter is over 8 cents per pound, or \$160 per ton. It seems to the undersigned that a great reduction might be made in the aggregate cost of carrying the mails. It will be observed that the second-class matter pays 1 cent per pound, or \$20 per ton, and as this goes in bulk the expense of handling it can not be greatly in excess of the expense of handling ordinary freight. The average distance which this second-class matter would, we should suppose, without accurate information, certainly make the charge more than 1 cent per ton per mile, which is largely in excess of ordinary freight rates. The enormous cost of \$160 per ton for carrying the mails, it seems to the undersigned, can not be accounted for by the expense of handling the letter mails and business connected with the first-class mail matter. This amount is certainly many times the cost of the service rendered. Neither the express companies nor private individuals pay any such rate.

"Without any means of making an accurate examination ourselves, our attention has been called by various persons professing to be experts to the extravagance of the department in dealing with the railroad companies. A very able and carefully prepared article on this subject, written by Hon. James L. Cowles, the author of 'A General Freight and Passenger Post,' appeared in the February number of the 'Outlook.' This article proves very clearly that the deficit is caused by the very exorbitant and unreasonable rates which the Government now pays to railroads for carrying the mails. The New York 'World,' among others, published a statement on Jan. 30, showing that a saving could be made of more than the deficiency by proper supervision and contract with the railroads and the enormous amount paid for the leasing of cars, which could be largely saved if the Government owned its own cars. The saving which could be made in this respect alone is estimated by experts to amount to at least \$10,000,000 per year. Of course, the undersigned is unable at this time to go into details with regard to these matters, but, on a cursory examination, is thoroughly satisfied that the deficiency in the mails results from—

"First, the exorbitant charges paid the railroads for the use of mail cars.

"Second, the very liberal contracts which the Government makes with the railroad corporations for carrying the mails. The amount paid per ton is enormously and absurdly high.

"Third, the lax supervision which the Government exercises over the performance of the service, and especially with reference to the amount of matter which the railroads profess to haul, and for which the Government is charged.

"The statements that the present postal deficit is due to the transportation of second-class postal matter at 1 cent per pound are altogether misleading—I had almost said intentionally misleading. It seems perfectly clear from the facts presented in the articles above referred to that the postal deficit is not due to the 1-cent-a-pound postal rate paid to the Government by the people, but to the 8-cent-a-

pound tax levied on the Government by our railway kings, and this, although the service would yield a handsome profit at one half a cent per pound. The Government pays the railroads for a great deal more weight than the roads really haul. It is the fault of the Government that this is done. Besides, the contract price is entirely too high. During the last twenty years freight rates have been reduced about 40 per cent., yet the Government is now paying about the same rates that it did twenty years ago. Why do not those who are so much concerned about the deficit in the Post Office Department turn their attention to these big leakages and gross abuses? Let those who profess to favor economy and reform help to correct these abuses."

The measure was not put to a passage in the Senate.

Copyright.—Feb. 9, 1897, the House passed a bill amending the copyright law, which the Senate amended and passed on March 3, as follows:

"*Be it enacted, etc.,* That section 4963 of the Revised Statutes of the United States be, and the same is hereby, amended so as to read as follows:

"SEC. 4963. Every person who shall insert or impress such notice, or words of the same purport, in or upon any book, map, chart, dramatic or musical composition, print, cut, engraving, or photograph, or other article, whether such article be subject to copyright or otherwise, for which he has not obtained a copyright, or shall knowingly issue or sell any article bearing a notice of United States copyright which has not been copyrighted in this country; or shall import any book, photograph, chromo, or lithograph, or other article bearing such notice of copyright or words of the same purport, which is not copyrighted in this country, shall be liable to a penalty of \$100, recoverable one half for the person who shall sue for such penalty and one half to the use of the United States; and the importation into the United States of any book, chromo, lithograph, or photograph, or other article bearing such notice of copyright, when there is no existing copyright thereon in the United States, is prohibited; and the circuit courts of the United States sitting in equity are hereby authorized to enjoin the issuing, publishing, or selling of any article marked or imported in violation of the United States copyright laws, at the suit of any person complaining of such violation: *Provided,* That, this act shall not apply to any importation of or sale of such goods or articles brought into the United States prior to the passage hereof.

"SEC. 2. That all laws and parts of laws inconsistent with the foregoing provision be, and the same are hereby, repealed."

The measure was approved by the President.

The Congress passed, for the protection of dramatic and musical authors, the following amendment to the copyright laws, which the President duly approved:

"*Be it enacted, etc.,* That section 4966 of the Revised Statutes be, and the same is hereby, amended so as to read as follows:

"SEC. 4966. Any person publicly performing or representing any dramatic or musical composition for which a copyright has been obtained, without the consent of the proprietor of said dramatic or musical composition, or his heirs or assigns, shall be liable for damages therefor, such damages in all cases to be assessed at such sum, not less than \$100 for the first and \$50 for every subsequent performance, as to the court shall appear to be just. If the unlawful performance and representation be willful and for profit, such person or persons shall be guilty of a misdemeanor and upon conviction be imprisoned for a period not exceeding one year. Any injunction that may be granted upon hearing after

notice to the defendant by any circuit court of the United States, or by a judge thereof, restraining and enjoining the performance or representation of any such dramatic or musical composition may be served on the parties against whom such injunction may be granted anywhere in the United States, and shall be operative and may be enforced by proceedings to punish for contempt or otherwise by any other circuit court or judge in the United States; but the defendants in said action, or any or either of them, may make a motion in any other circuit in which he or they may be engaged in performing or representing said dramatic or musical composition to dissolve or set aside the said injunction upon such reasonable notice to the plaintiff as the circuit court or the judge before whom said motion shall be made shall deem proper; service of said motion to be made on the plaintiff in person or on his attorneys in the action. The circuit courts or judges thereof shall have jurisdiction to enforce said injunction and to hear and determine a motion to dissolve the same, as herein provided, as fully as if the action were pending or brought in the circuit in which said motion is made.

“The clerk of the court, or judge granting the injunction, shall, when required so to do by the court hearing the application to dissolve or enforce said injunction, transmit without delay to said court a certified copy of all the papers on which the said injunction was granted that are on file in his office.”

The reasons for this action are set forth in the committee report in favor of the measure:

“The purpose of the proposed measure is twofold: First to secure to musical compositions the same measure of protection under the copyright law as is now afforded to productions of a strictly dramatic character. There can be no reason why the same protection should not be extended to one species of literary property of this general character as to the other, and the omission to include protective provisions for musical compositions in the law sought to be amended was doubtless the result of oversight. The committee is of the opinion that the existing law should be so amended as to provide adequate protection to this species of literary production.

“The bill provides, secondly, for added means for the protection of authors of dramatic and operatic works.

“In recent years the business of producing and staging plays and operas by American authors has largely increased, and in many instances have met with the very highest measure of success. Many of the best stage productions of modern times have been the work of American authors.

“These productions in many instances have been carefully and elaborately placed upon the stage at very heavy expense to proprietors and managers, and their representation has given employment in various ways to thousands of people.

“The existing law relative to copyrights has been found to be inadequate to properly protect authors and producers of American plays and operas in the enjoyment of their rights of property in these duly copyrighted productions.

“Persons in various sections of the country have, without the shadow of right or authority, pirated these works, and, confining their operations chiefly to the smaller and more remote towns, have given representations of these stolen productions for their own individual profit, and without making any compensation whatever to authors or owners. Under existing conditions no adequate remedy exists for this unlawful usurpation of property rights.

“The offenders are almost uniformly men without attachable means, and defy all the ordinary processes by which they might be mulcted in damages. The representation of these pirated produc-

tions is generally given for a night or two only at a given place, and the offenders flit from section to section and from State to State and bid defiance to the processes of the courts seeking to restrain their unlawful acts.

“Serious embarrassments have arisen in the efforts to enforce these judicial orders and to punish offenders for disobedience of them.

“While it is true that an injunction order issued by a court of competent jurisdiction is operative upon the conscience of the party restrained everywhere in the United States, it appears that an attachment for contempt of such order can not be executed except in the circuit of the court which issued the original order, and this bill seeks to overcome this difficulty.

“The bill further provides that the piracy, the unlawful production of any duly copyrighted play or opera, if it be determined that such unlawful representation was willful and for profit, shall be a misdemeanor, and shall subject the offender, upon conviction, to the liability of imprisonment for a period not exceeding one year.

“The reason for the enactment of this provision has already been outlined.

“The unauthorized publication of a copyrighted book may ordinarily be adequately punished through civil proceedings and under the provisions of existing law. The offender in such case is a person of fixed domicile, and has a press and the implements of his business, so that the ordinary processes of the court may readily be served upon him, and he may be compelled to respond in damages for his wrongdoing.

“These conditions do not exist, as a rule, in the case of the professional play pirate.

“It is difficult to serve him with injunction and court orders because of his migratory habits, and as he is frequently without attachable means it is impossible to satisfy a money judgment against him.

“Testimony has been adduced before the committee showing that the losses accruing to authors and owners of copyrighted productions by these piracies amount to large sums each year. So little protection is in fact afforded under existing conditions that many prominent American dramatic authors no longer go to the trouble and expense of taking out copyrights for their works.

“Conceding that for light causes nothing should be added to the jurisdiction or powers of the Federal courts, it would seem that the circumstances in connection with the wholesale piracy of these productions of native authors demand that something more nearly akin to drastic measures should be invoked to remedy the evil.”

Selling Liquor to Indians.—Jan. 18, 1897, the House took up and passed the following measure, to prohibit the sale of intoxicating drinks to Indians, providing penalties therefor, and for other purposes:

Be it enacted, etc., That any person who shall sell, give away, dispose of, exchange, or barter any malt, spirituous, or vinous liquor, including beer, ale, and wine, or any ardent or other intoxicating liquor of any kind whatsoever, or any essence, extract, bitters, preparation, compound, composition, or any article whatsoever, under any name, label, or brand, which produces intoxication, to any Indian to whom allotment of land has been made while the title to the same shall be held in trust by the Government, or to any Indian a ward of the Government under charge of any Indian superintendent or agent, or any Indian, including mixed bloods, over whom the Government, through its departments, exercises guardianship, and any person who shall introduce, or attempt to introduce, any malt, spirituous, or vinous liquor, including beer,

ale, and wine, or any ardent or intoxicating liquor of any kind whatsoever into the Indian country, which term shall include any Indian allotment while the title to the same shall be held in trust by the Government, or while the same shall remain inalienable by the allottee without the consent of the United States, shall be punished by imprisonment for not less than sixty days, and by a fine of not less than \$100 for the first offense and not less than \$200 for each offense thereafter: *Provided, however,* That the person convicted shall be committed until fine and costs are paid. But it shall be a sufficient defense to any charge of introducing, or attempting to introduce, ardent spirits, ale, beer, wine, or intoxicating liquors into the Indian country that the acts charged were done under authority, in writing, from the War Department or any officer duly authorized thereunto by the War Department.

"SEC. 2. That so much of the act of the 23d day of July, 1892, as is inconsistent with the provisions of this act is hereby repealed."

The necessity for such legislation was set forth in the report of the Committee on Indian Affairs, which said:

"This proposed legislation amends the existing statutes in three particulars: First, it makes it unlawful to sell, give away, dispose of, exchange, or barter 'any essence, extract, bitters, preparation, compound, composition, or any article whatsoever under any name, label, or brand which produces intoxication'; second, the punishment 'by imprisonment for not more than two years, or by a fine of not more than \$300 for each offense' is changed to 'imprisonment for not less than sixty days and by a fine of not less than \$100 for the the first offense, and not less than \$200 for each offense thereafter'; third, the term Indian is defined to embrace an Indian 'to whom allotment of land has been made, while the title to the same shall be held in trust by the Government'; an Indian 'a ward of the Government under charge of any Indian superintendent or agent'; or an Indian, 'including mixed bloods, over whom the Government, through its departments, exercises guardianship.'

"The vendors of intoxicating liquors on Indian reservations have used every possible device and scheme to evade the Indian Bureau, the authorities, and law, until they have gone to the extreme of having intoxicating liquors, under labels or brands of essences, extracts, bitters, preparations, compounds, or compositions containing pickles, fruits, and other articles of diet, specially prepared for this traffic with the Indians.

"The violators under the present law, which provides they 'shall be punished by imprisonment for not more than two years, or by a fine of not more than \$300 dollars for each offense,' are pleased to pay the small fine imposed by the courts, gain their liberty, and return to the reservation to continue the occupation of their nefarious traffic. The minimum punishment in this bill is sixty days' imprisonment and a fine of \$100 for the first offense, and a fine of \$200 for each offense thereafter.

"The district courts of the United States have held that a sale of intoxicating liquors to an Indian to whom an allotment of land has been made does not, under the existing statutes, constitute an offense."

The measure was strongly urged by the Secretary of the Interior, the Commissioner of Indian Affairs, the United States district attorney, and the Indian Rights Association. The Senate passed it Jan. 23, and it was approved by the President Feb. 5.

Commerce and Navigation.—The House passed a bill to amend the laws relating to navigation; and the Senate adopted a substitute measure, in which the House refused to concur. A conference

committee was appointed, and reported the bill in the following form, which was accepted by House and Senate on the last day of the session and approved by the President:

"*Be it enacted, etc.,* That section 4507 of the Revised Statutes be, and is hereby, amended to read as follows:

"SEC. 4507. The Secretary of the Treasury shall assign in public buildings or otherwise procure suitable offices and rooms for the shipment and discharge of seamen, to be known as shipping commissioners' offices, and shall procure furniture, stationery, printing, and other requisites for the transaction of the business of such offices."

"SEC. 2. That on and after June 30, 1898, every place appropriated to the crew of a seagoing vessel of the United States, except a fishing vessel, yacht, or pilot boat, and all vessels under 200 tons register, shall have a space of not less than 72 cubic feet and not less than 12 square feet measured on the deck or floor of that place for each seamen or apprentice lodged therein: *Provided,* That any such seagoing sailing vessel built or rebuilt after June 30, 1898, shall have a space of not less than 100 cubic feet and not less than 16 square feet measured on the deck or floor of that space for each seaman or apprentice lodged therein. Such place shall be securely constructed, properly lighted, drained, heated, and ventilated, properly protected from weather and sea, and, as far as practicable, properly shut off and protected from the effluvium of cargo or bilge water.

"Fishing vessels, yachts, and pilot boats are hereby exempted from the provisions of section 1 of chapter 173 of the laws of 1895, entitled 'An Act to amend section 1 of chapter 398 of the laws of 1882, entitled 'An Act to provide for deductions from the gross tonnage of vessels of the United States,''" so far as said section prescribes the amount of space which shall be appropriated to the crew and provides that said space shall be kept free from goods or stores not being the personal property of the crew in use during the voyage.

"And on and after June 30, 1898, every steamboat of the United States plying upon the Mississippi river or its tributaries shall furnish an appropriate place for the crew, which shall conform to the requirements of this section so far as they shall be applicable thereto by providing sleeping room in the engine room of the steamboats, properly protected from the cold, winds, and rain by means of suitable awnings or screens on either side of the guards or sides and forward, reaching from the boiler deck to the lower or main deck, under the direction and approval of the Supervising Inspector General of Steam Vessels, and shall be properly heated. Any failure to comply with this section shall subject the owner or owners to a penalty of \$500.

"SEC. 3. That section 4576 of the Revised Statutes be, and is hereby, amended to read as follows:

"SEC. 4576. The master of every vessel bound on a foreign voyage or engaged in the whale fishery shall exhibit the certified copy of the list of the crew to the first boarding officer at the first port in the United States at which he shall arrive on his return, and also produce the persons named therein to the boarding officer, whose duty it shall be to examine the men with such list and to report the same to the collector; and it shall be the duty of the collector at the port of arrival, where the same is different from the port from which the vessel originally sailed, to transmit a copy of the list so reported to him to the collector of the port from which such vessel originally sailed. For each failure to produce any person on the certified copy of the list

of the crew the master and owner shall be severally liable to a penalty of \$400, to be sued for, prosecuted, and disposed of in such manner as penalties and forfeitures which may be incurred for offenses against the laws relating to the collection of duties; but such penalties shall not be incurred on account of the master not producing to the first boarding officer any of the persons contained in the list who may have been discharged in a foreign country with the consent of the consul, vice-consul, commercial agent, or vice commercial agent there residing, certified in writing, under his hand and official seal, to be produced to the collector with the other persons composing the crew, nor on account of any such person dying or absconding or being forcibly impressed into other service, of which satisfactory proof shall also be exhibited to the collector.

"SEC. 4. That section 4541 of the Revised Statutes be, and is hereby, amended by striking out the words 'district judge for the district,' in the seventh line of said section, and substituting in place thereof the words 'circuit court of the circuit'; and that said section be, and is hereby, further amended by striking out the words 'district judge,' where they occur in the eleventh and twelfth lines of said section, and substituting in place thereof the words 'circuit court.'

"SEC. 5. That rule 11 of section 4233 of the Revised Statutes, relating to pilot boats, be amended by adding thereto a paragraph, as follows:

"'Steam pilot boats shall, in addition to the mast-head light and green and red side lights required for ocean steam vessels, carry a red light hung vertically from 3 to 5 feet above the foremast head-light, for the purpose of distinguishing such steam pilot boats from other steam vessels.'

"SEC. 6. That section 4542 of the Revised Statutes be, and is hereby, amended by adding thereto the words 'or where he died.'

"SEC. 7. That section 4545 of the Revised Statutes be, and is hereby, amended to read as follows:

"SEC. 4545. A circuit court, in its discretion, may at any time direct the sale of the whole or any part of the effects of a deceased seaman or apprentice, which it has received or may hereafter receive, and shall hold the proceeds of such sale as the wages of deceased seamen are held. When no claim to the wages or effects or proceeds of the sale of the effects of a deceased seaman or apprentice, received by a circuit court, is substantiated within six years after the receipt thereof by the court, it shall be in the absolute discretion of the court, if any subsequent claim is made, either to allow or refuse the same. Such courts shall, from time to time, pay any moneys arising from the unclaimed wages and effects of deceased seamen, which in their opinion is not necessary to retain for the purpose of satisfying claims, into the Treasury of the United States, and such moneys shall form a fund for, and be appropriated to, the relief of sick and disabled and destitute seamen belonging to the United States merchant-marine service.'

"SEC. 8. That chapter 97 of the laws of 1895, entitled 'An Act to amend an act entitled "An Act to amend the laws relative to shipping commissioners," approved Aug. 19, 1890,' is amended by striking therefrom the word 'seventh' in the eighteenth line, and inserting the words 'and four thousand six hundred and two' in the thirty-fourth line after the words 'four thousand five hundred and fifty-four.'

"SEC. 9. That fees for the entry direct from a foreign port and for the clearance direct to a foreign port of a vessel navigating the waters of the northern, northeastern, and northwestern frontiers of the United States otherwise than by sea, pre-

scribed by section 4382 of the Revised Statutes, are abolished. Where such fees, under existing laws, constitute in whole or in part the compensation of a collector of customs, such officer shall hereafter receive a fixed sum for each year equal to the amount which he would have been entitled to receive as fees for such services during said year.

"SEC. 10. That section 4165 of the Revised Statutes be, and is hereby, amended to read as follows:

"SEC. 4165. A vessel registered pursuant to law, which by sale has become the property of a foreigner, shall be entitled to a new register upon afterward becoming American property, unless it has been enlarged or undergone change in build outside the United States.'

"SEC. 11. That section 13 of chapter 344 of the laws of 1874 be, and is hereby, amended to read as follows:

"SEC. 13. That the Secretary of the Treasury may, upon application therefor, remit or mitigate any penalty provided for in this act, or discontinue any prosecution to recover the same, upon such terms as he, in his discretion, shall think proper, and shall have authority to ascertain the facts upon all such applications in such manner and under such regulations as he may think proper. All penalties herein provided may be sued for, prosecuted, recovered, and disposed of in the manner prescribed by section 4305 of the Revised Statutes.'

"SEC. 12. That rule 14, rule 15 (a), (b), (c), rule 16, and rule 17 of section 4233 of the Revised Statutes be, and are hereby, amended to read as follows:

"Rule 14. The exhibition of any light on board of a vessel of war of the United States may be suspended whenever, in the opinion of the Secretary of the Navy, the commander in chief of a squadron, or the commander of a vessel acting singly, the special character of the service may require it. The exhibition of any light on board of a revenue cutter of the United States may be suspended whenever, in the opinion of the commander of the vessel, the special character of the service may require it.

"Rule 15. Whenever there is a fog or thick weather, whether by day or night, fog signals shall be used as follows: (a) Steam vessels under way shall sound a steam whistle placed before the funnel, not less than 8 feet from the deck, at intervals of not more than one minute. Steam vessels, when towing, shall sound three blasts of quick succession repeated at intervals of not more than one minute. (b) Sail vessels under way shall sound a fog horn at intervals of not more than one minute. (c) Steam vessels and sail vessels, when not under way, shall sound a bell at intervals of not more than two minutes.

"Rule 16. Risk of collision can, when circumstances permit, be ascertained by carefully watching the compass bearing of an approaching vessel. If the bearing does not appreciably change, such risk should be deemed to exist.

"Rule 17. When two sailing vessels are approaching one another so as to involve risk of collision, one of them shall keep out of the way of the other as follows, namely:

"(a) A vessel which is running free shall keep out of the way of a vessel which is closehauled.

"(b) A vessel which is closehauled on the port tack shall keep out of the way of a vessel which is closehauled on the starboard tack.

"(c) When both are running free with the wind on different sides, the vessel which has the wind on the port side shall keep out of the way of the other.

"(d) When both vessels are running free with the wind on the same side, the vessel which is to the windward shall keep out of the way of the vessel which is to the leeward.

"(e) A vessel which has the wind aft shall keep out of the way of the other vessel."

"SEC. 13. That section 4233 of the Revised Statutes be, and is hereby, amended by adding thereto:

"Rule 25. A sail vessel which is being overtaken by another vessel during the night shall show from her stern to such last-mentioned vessel a torch or a flare-up light.

"Rule 26. Nothing in these rules shall exonerate any ship, or the owner, or master, or crew thereof, from the consequences of any neglect to carry lights or signals, or of any neglect to keep a proper lookout, or of the neglect of any precaution which may be required by the ordinary practice of seamen or by the special circumstances of the case."

"SEC. 14. That the Secretary of the Treasury be, and he is hereby, authorized to direct the inspection of any foreign vessel admitted to American registry, its steam boilers, steam pipes, and appurtenances, and to direct the issue of the usual certificate of inspection, whether said boilers, steam pipes, and appurtenances are or are not constructed pursuant to the laws of the United States, or whether they are or are not constructed of iron stamped pursuant to said laws. The tests in the inspection of such boilers, steam pipes, and appurtenances shall be the same in all respects as to strength and safety as are required in the inspection of boilers constructed in the United States for marine purposes.

"SEC. 15. That section 2834 of the Revised Statutes be, and is hereby, amended by repealing the following words therein:

"The master of any vessel bound to any district in Connecticut, through or by the way of Sandy Hook, shall, before he passes the port of New York, and immediately after his arrival, deposit with the collector for the district of New York a true manifest of the cargo on board such vessel. The master of any vessel bound to the district of Burlington shall, before he passes the port of Philadelphia, and immediately after his arrival, deposit with the collector thereof a like manifest; and the collector shall, after registering the manifest, transmit the same, duly certified to have been so deposited, to the officer with whom the entries are to be made; and the"

"SEC. 16. That sections 2570, 2571, 2572, 2573, 2574, 2575, 2584, 2585, 2824, 2835, 2897, 4133, 4134, 4234, 4589, and 4590 of the Revised Statutes are repealed.

"SEC. 17. That section 2797 of the Revised Statutes be, and is hereby, amended by adding thereto the following words:

"Sea stores and the legitimate equipment of vessels belonging to regular lines plying between foreign ports and the United States delayed in port for any cause may be transferred in such port of the United States, under the supervision of the customs officers, from one vessel to another vessel of the same owner without payment of duties, but duties must be paid on such stores or equipments landed for consumption except American products."

"SEC. 18. That section 5347 be amended to read:

"SEC. 5347. Every master or other officer of an American vessel on the high seas or on any other waters within the admiralty and maritime jurisdiction of the United States who, without justifiable cause, beats, wounds, or imprisons any of the crew of such vessel, or withholds from them suitable food and nourishment, or inflicts upon them any cruel and unusual punishment, shall be punished by a fine of not more than \$1,000, or by imprisonment not more than five years, or by both."

"Nothing herein contained shall be construed to repeal or modify section 4611 of the Revised Statutes.

"SEC. 19. That Article VII of section 4511 of the Revised Statutes be, and is hereby, amended to read:

"Seventh. Any regulations as to conduct on board and as to fines, short allowances of provisions, or other lawful punishments for misconduct, which may be sanctioned by Congress or authorized by the Secretary of the Treasury not contrary to or not otherwise provided for by law, which the parties agree to adopt."

"SEC. 20. That this act shall take effect July 1, 1897."

The bill as it originally passed the Senate made no mention of section 4611 of the Revised Statutes, which was a law enacted in 1850 to abolish flogging in the American merchant marine, and this omission was assumed by some friends of the sailors as virtually a restoration of the practice of flogging. As a consequence, there was some harsh criticism of the committee that reported the Senate bill; and suspicion still lingered on the last day of the session, for Mr. Allen, of Nebraska, on the reading of the conference report, said:

"I should like to have the section of the report read which applies to seamen, to see whether it contains any of the flogging features that were contained in the bill some time ago."

Mr. Frye, of Maine, said in answer: "Let me read it to the Senator, instead of the clerk. The existing law is this:

"SEC. 5347. Every master or other officer of any American vessel on the high seas, or on any other waters within the admiralty and maritime jurisdiction of the United States, who, from malice, hatred, or revenge, and without justifiable cause, beats, wounds, or imprisons any of the crew of such vessel, or withholds from them suitable food and nourishment, or inflicts upon them any cruel and unusual punishment, shall be punished by a fine of not more than \$1,000, or by imprisonment not more than five years, or by both."

"The courts held that those words 'malice, hatred, or revenge' imposed upon the beaten sailor the duty of proving not only that the beating was without justifiable cause, but that it was from malice or hatred or for the purpose of revenge. The Senate Committee on Commerce believed that to be an unjust burden on the sailor, and therefore they simply strike out of this law the words 'malice, hatred, or revenge.'

"I have been vicariously suffering for the Committee on Commerce, and a great deal of abuse has been heaped upon my unfortunate head within the last two months, the charge being made that I had restored flogging on American merchant ships. How anybody could have believed that is beyond my comprehension. The man who did must have been a fool or insane; and yet I was blackguarded in one or two great papers of the country as 'that brutal Senator Frye; that man who had restored flogging to the merchant marine.' Yet everything that that 'brutal man' had done had been done by the Committee on Commerce, and has been done to save the sailors of this country from being compelled, if they were beaten, to prove not only that it was without justifiable cause, but that it was from malice or hatred or revenge.

"I never undertook to defend myself in the United States Senate, as I might have done, from those charges. I never did defend myself in Congress since I have been here. I regarded it as furnishing amusement to ignorance and to incapacity, and as doing me no possible harm. Now, the committee, paying the same consideration to ignorance that I did by keeping still, has in conference added to this section these words:

"But nothing herein contained shall be con-

strued to repeal or modify section 4611 of the Revised Statutes.'

"Which those wise gentlemen never had read, which was passed in 1850, and which says, 'Flogging on board of vessels of commerce is hereby prohibited.' In order to relieve those wise men, we have consented that an amendment shall be added to this section that we do not intend to restore flogging in the merchant marine by repealing section 4611. I trust that that will be entirely satisfactory to any sailor, no matter how crazy he may be."

As to what may be justifiable causes for assaulting a sailor the following colloquy arose:

Mr. Allen: "I should like to know from the Senator from Maine, who is familiar with these matters, especially matters of commerce, what circumstances will justify the assault of a sailor, either on shore or on a vessel?"

Mr. Frye: "Oh, Mr. President, there are any quantity of circumstances that would justify it. If a sailor with a sheath knife came at the captain, it would be his duty to knock him down; if he was on duty at the wheel and undertook to cast away the ship, or run it on a rock, it would be the duty of the captain to deprive him of the power of doing so. There are any quantity of circumstances."

Mr. Allen: "I understand that quite well; but I want to know if there are any circumstances, aside from the mere fact that it occurred upon a vessel which may be thrown upon the rocks, or cast aside from its course, and so forth—whether there are any circumstances on board a vessel that will justify an assault upon a sailor that would not justify an assault on land by one private citizen upon another?"

Mr. Frye: "Yes, I think so; because if a gale of wind was seen approaching and the captain of the ship should order the sailors to reef sails, and they refused, when there are lives in his charge and when there is an immense amount of property endangered, I have no doubt the captain would be justified in making an assault upon a sailor who refused."

The Congress also passed and the President approved a law for the inspection of small craft kept for hire, as follows:

"Be it enacted, etc., That all vessels of above 15 tons burden, carrying freight or passengers for hire, propelled by gas, fluid, naphtha, or electric motors, shall be, and are hereby, made subject to all the provisions of section 4426 of the Revised Statutes of the United States, relating to the inspection of hulls and boilers and requiring engineers and pilots; and all vessels so propelled, without regard to tonnage or use, shall be subject to the provisions of section 4412 of the Revised Statutes of the United States, relating to the regulation of steam vessels in passing each other; and to so much of sections 4233 and 4234 of the Revised Statutes, relating to lights, fog signals, steering, and sailing rules, as the Board of Supervising Inspectors shall, by their regulations, deem applicable and practicable for their safe navigation."

A measure entitled "An Act for the protection of American yacht owners and shipbuilders" was passed by the Congress, and became a law without the approval of the President. It is designed to prevent Americans who become members of foreign yacht clubs from having vessels built abroad, and yet escaping the disabilities of owners of other foreign-built vessels.

A bill amending the laws relating to American seamen passed the House, and in the Senate a substitute was proposed which contained the following clause:

"That section 4522 of the Revised Statutes be, and is hereby, amended so as to read as follows:

"SEC. 4522. At the foot of every such contract to ship upon such a vessel of the burden of 50 tons or upward there shall be a memorandum in writing of the day and the hour when such seaman who shipped and subscribed shall render himself on board to begin the voyage agreed upon. If any seaman shall neglect to render himself on board the vessel for which he has shipped at the time mentioned in such memorandum without giving twenty-four hours' notice of his inability to do so, and if the master of the vessel shall, on the day in which such neglect happened, make an entry in the log book of such vessel of the name of such seaman, and shall in like manner note the time that he so neglected to render himself after the time appointed, then every such seaman shall forfeit, for every hour which he shall so neglect to render himself, one half of one day's pay, according to the rate of wages agreed upon, to be deducted out of his wages. If any such seaman shall wholly neglect to render himself on board of such vessel, or having rendered himself on board shall afterward desert, he shall forfeit all of the wages or emoluments which he has then earned; and, also, in the discretion of the court, he shall be liable to imprisonment for not more than one month."

The forfeit of wages and the summary imprisonment are the new features in the statute, and Mr. Frye, of Maine, said in defense of the policy of the amendment:

"I desire to call the attention of the Senate to this matter. It is said that foreign countries have nothing of this kind. Great Britain has a law to-day that if a sailor signs the papers of a ship and then declines to serve on that ship the master may call on any policeman who is in view or who can be found to take the sailor and carry him on board the ship, put him in irons, and keep him there until the ship sails.

"What are ships going to do without some such provision as this bill makes? You can not run a ship as you can a coach; you can not run a ship as you can a railroad. Here is a ship loaded for sea, the crew engaged, the papers signed. She is subject to a demurrage of hundreds of dollars a day for every day she is detained. A sailor having been brought and put on board of that ship, the next morning, without the slightest cause, leaves, and thus the ship is left without the requisite crew, and she is obliged to pay demurrage for every day she is detained. A storm may arise, and she may be delayed by head winds for a week, a fortnight, or three weeks. There is nothing of the kind about a coach; there is nothing of the kind about a railroad. I wish to say right here that I have had something to do with these sailors. There is a sailors' union in California which has had its attorney here for the last six years, and he is here now—a sailor. There is a sailors' union in Philadelphia; there is a sailors' unions in New York. If Senators suppose that the sailors are not being taken care of, they are entirely mistaken. There is not a port where there is not a sailors' lawyer. The sailor has every advantage of the ship and every advantage of the shipmaster in any port into which a vessel may go. The ships are entitled to some consideration. They carry our commerce.

"When the bill was pending two Congresses ago in the first place, I had conferences with these sailors and the sailors' union. They lasted over three or four days; Gov. Dingley was with me; and we finally drew up that which seemed to satisfy the sailor from California, and it was enacted into law. But there is no satisfying them without giving them the earth; you can not do it.

"They still cry 'Give!' after we have made them all these concessions. Taking this entire Congress, this bill has been under consideration for six months, and the sailors have had hearings over and over again in our committee, and the shipowners have had their hearings. Finally shipowners and sailors undertook to get together and see if there could not be some agreement by which the condition of the sailor might be ameliorated. There is not a line in that bill, except this particular one, that is not for the amelioration of the condition of the sailor—not one. Wherever there was imprisonment before, and it was compulsory on the court to imprison, it has been made in the discretion of the court, and wherever the imprisonment was for four months before it is two months now, and where it was six months before it is three months now in that bill. In that bill there is provided a *menu* for these sailors almost equal to that which any hotel in the city of Washington furnishes. In every single item in that bill, except this single one, there is what the sailors have demanded, what they have prayed for, and what has been granted by the shipowners and by our committee, except as to the single matter of what they call 'crimping.'"

None the less the bill failed in the Senate, as there was a decided reluctance on the part of some of the Senators to authorize arbitrary punishment to enforce what they considered a civil contract.

The Atlantic and Pacific Railroad Company.

—The Senate passed a brief bill providing that whenever a sale of the road, equipment, lands, franchises, and privileges of this company are sold through mortgage foreclosure, the purchasers and their associates shall succeed to all the rights, powers, privileges, grants, and franchises, including the franchise to be a corporation given to the original corporation.

In the House of Representatives the Committee on Pacific Railroads reported a substitute with a proviso limiting the issue of stock by the new company and another declaring that the rights of the United States to enforce forfeiture of lands and the vested rights of purchasers and settlers are not to be affected.

Mr. McRae, of Arkansas, representing those who considered the measure as a surreptitious renewal of forfeited grants and trusts carelessly, if not dishonestly administered, proposed a substitute, with many other safeguards embodied in it; but the House took up the committee measure, amended it in several important respects, and passed it.

The Atlantic and Pacific Railroad Company was created by act of July 27, 1866, to construct, maintain, and operate a line of railroad and telegraph, from Springfield, Mo., across Indian, New Mexico, and Arizona Territories, and California to the Pacific coast. To aid in its construction a heavy subsidy in public lands was given. The issuance of \$100,000,000 in capital stock was authorized, but popular subscription was slow, and the company secured from Congress, under the act of April 20, 1871, the authority to mortgage its road, equipment, lands, franchises, privileges, and other rights and property. The line from Springfield to Indian Territory was built out of the proceeds of the sale of these mortgage bonds, but it was sold some years ago on default and is now part of the St. Louis and San Francisco Railroad. The line through Indian Territory to Albuquerque, New Mexico, and the line thence into California were constructed and each was separately mortgaged; and foreclosure proceedings were pending on account of default. The land grant was conditioned on the completion of the road by July 4, 1878; but at that date only about 125 miles of the line were constructed; and July 6, 1886,

Congress declared a forfeiture of lands along the uncompleted portions of the road.

Mr. Powers, of Vermont, in advocating the measure said:

"Now, Mr. Speaker, as the report states, this bill simply provides that the mortgage bondholders of the Atlantic and Pacific Railroad Company may reorganize into a corporation—in other words, may have the right to be a corporation. The necessity for this bill arises from the fact that the Supreme Court in two cases has decided that the mortgage of a railroad company, together with its franchises, does not carry the right to be a corporation. Everybody connected with this original company supposed that the right to mortgage, given them by Congress in 1871, which in terms embraced the franchises, was broad enough to enable them, on a foreclosure sale, to organize as a corporation; but the Supreme Court says no; hence the necessity for the passage of this bill.

"The House will remember that this company was started in 1866, was given a mammoth land grant of 42,000,000 acres, and that in 1871 it became necessary for the company, in order to build its road, to issue a mortgage. That mortgage was issued, covering the property and franchises of the road, but lacking this essential, vital point—the franchise to be a corporation.

"Now, when this question was before the House on a former occasion it was said that this land grant was a monstrous land grant, that it was fraudulent, that great wrong was done to the Government in the amount of land granted to the railroad. Concede that to be true for the purposes of this argument; what has that to do with the pending question? Congress enacted the law. It became a part of the rights of that company to take those lands; but it turns out upon investigation that the lands are in the arid region; they are good for nothing. The company itself, out of the 42,000,000 acres, has only succeeded in selling 700,000 and odd acres. A great proportion of the land has been forfeited to the Government, and a suit is now pending, and is up for argument in court to-day, to determine the right of the Government to forfeit the balance.

"But be that as it may, this is the practical question that is presented to the House: This company, however fraudulent it may have been, however disproportionate its land grant may have been to its right to build a railroad to the California coast, nevertheless that wrongdoing is not to be imputed to the applicants for this charter. The applicants for this charter are the innocent parties who advanced their money upon a mortgage of this road. That money built the road. It could not have been built otherwise. As the report shows, it was supposed that private subscriptions along the line of the road would be ample to build the road, but those hopes proved to be delusive. The company were obliged to borrow money. They did borrow it, and innocent parties, who had nothing whatever to do with any wrongdoing connected with the making of the land grant, advanced their money and the road was completed.

"Now, it is highly improper to visit upon these innocent parties any wrongdoing that may have been practiced by the original promoters of the enterprise. There is no justice or propriety in that. These mortgage bonds are held by guardians, by trustees, by women, and by other parties, and the proposition of the gentleman from Arkansas is that they may be visited with the consequences and be made to suffer for that former wrongdoing, for which they are in no wise responsible. But now, Mr. Speaker, there was not any wrongdoing. The gift on the part of the Government of this 42,000,000 acres of land did not amount to anything to this company.

As I have already said, they have sold only 708,000 acres out of the 42,000,000 acres given to them, for the simple reason that you might turn a razorback pig loose on the land in that country and it could not get a living."

In opposition to the measure Mr. McRae, of Arkansas, said, when proposing his substitute:

"Mr. Speaker, as a general proposition I am opposed to the granting of Federal charters at all. I think such should be done by the States. In this case it does not appear to me that there is any necessity for it. Beyond all question the bill as presented should not pass unless amended in several particulars.

"The original act of July 27, 1866, granted to the Atlantic and Pacific Railroad Company 42,000,000 acres of land, and authorized 175 private individuals, named in the granting act, scattered all the way from Maine to California, upon the conditions that they should build something over 2,000 miles of railroad from Springfield, Mo., to the Pacific Ocean, before July 4, 1878. That is to say, that before the title finally passed from the Government this construction was to be fully completed. Within the time fixed by the granting act for the completion of the entire road they built only 125 miles of it. They came to Congress and asked Congress to give them the right to mortgage the road. That authority brought them no money. They then asked and obtained authority to mortgage the lands, franchises, privileges, and other rights and property. They executed the mortgages, but, as I have said, they completed only 125 miles of the road within the time fixed in the granting act.

"The mortgagees deliberately, with the full knowledge of the terms of the grant as to the time prescribed for the completion of the road, made the mortgages due at a later day. There was inserted in the act authorizing the mortgage a provision that any forfeiture should extend only to as much thereof as shall be conterminous with or appertain to that part of said road which shall have been constructed at the time of the foreclosure of said mortgagee. These mortgagees, at every meeting of the committee when the forfeiture bill was being considered, and when Congress sought to forfeit the grant, contended that Congress had no authority to do so under the law. The act of July 6, 1886, was passed with the understanding that it would restore to the public domain 10,795,480 acres of land. And yet in the face of the record they have made, after they have violated every condition imposed on them by the granting act, they still deny the power to forfeit. Congress, on the 6th day of July, 1886, declared a forfeiture of all lands adjacent to and conterminous with the uncompleted portions of the road at that time, and attempted in this manner to exercise its sovereign right and power to restore to the public domain something over 10,000,000 acres of the lands granted. These mortgagees and this faithless corporation in the courts of law have ever since been fighting the Government and the settlers, and are to-day contesting in the Supreme Court of the United States for these lands upon the same old contention that the Congress of the United States had no authority to declare the forfeiture. And yet the mortgagees of this corporation come to us with its record of broken pledges and asks that we give them the same rights and powers and privileges granted by the grant of July 27, 1866. Thirty years have elapsed since the grant was made, and yet more than one half of the road is unconstructed, the corporation bankrupted and now in the hands of a receiver, being unable to pay interest on its bonds. Across the great Mojave desert, where it was expected that by this grant we would secure railroad

facilities, no road has yet been constructed, and there is but little prospect of any by this concern.

"Now, if any relief is to be given to these debtors who come here as mortgagees—and I will grant for the sake of argument that some of them have acted honestly and in good faith in the investment of their money—we should see to it (1) that no relief is given to the men who acquired this charter and afterward violated every promise made by them and broke every condition imposed upon them by the grant; (2) that the terms of the forfeiture act of July 6, 1886, shall be first accepted by the new corporation as a condition precedent, and that this act shall not take effect until they reconvey the lands thus forfeited; (3) that the settlers shall have the lands which have been earned and not sold at the minimum Government price of \$1.25 per acre, and those who have purchased fully protected in their titles; (4) that the *bona fide* debts due for work, labor, material, etc., shall be paid; and (5) the stock should be limited to the actual value of the road, so as to prevent the watering of the stock, and that the interest shall not exceed 4 per cent. The substitute which I have offered will secure all of this. If it is not adopted, I hope amendments will be that will secure the same things.

"Mr. Speaker, shall we, by breathing into this corporation a new life, permit it to repudiate the honest debts of those who have performed labor for it? I have provided that all the debts, except those due to the old Atchison, Topeka and Santa Fé and to the St. Louis and San Francisco Railroad Companies, shall be paid. As for these railroad corporations, who have wrecked the Atlantic and Pacific and themselves and reorganized, I have no concern. They have second mortgages, and as they have been relieved of the payment of a part of their debts by similar reorganization, so if Congress sees fit to give the Atlantic and Pacific relief against them, I have no objection; but as to the laborer and the mechanic and those who have legitimate claims growing out of the operation of the road, I say it would be legalized repudiation to permit these mortgage creditors to defeat the payment of their debts, or be preferred to them, even though they may have originally invested their money in good faith. So I have endeavored to provide for the protection of these men. I think that the settlers along the line of the road should be protected in their purchases already made, and also by reducing the price for which these lands may be sold, so that the price shall be no more than the Government price. These lands have been withheld from settlement for thirty years. The act of forfeiture of 1886 reduced the Government price of land along this grant to \$1.25 an acre, and I think the railroad lands should not exceed that sum. Let us say to this corporation: 'If you are to be reorganized under authority from Congress, you shall first accept as a condition precedent the terms imposed by the forfeiture act of 1886; and you shall sell the lands you have earned or acquired to actual settlers at the price at which the Government sells its public lands.'

"Why should there be any objection to my proposition to limit the stock to be issued by this company as reorganized to the actual amount due upon mortgages and other just indebtedness? Why should we give this new corporation authority from the Congress of the United States to do what the old one did—water its stock and enrich its stockholders at the expense of the Government and the people? The old incorporators contributed nothing to the building of this road. These do not propose to contribute anything to it. I question whether the old set honestly and in good faith appropriated the money they borrowed from the

bondholders. The most that ought to be done under any circumstances is to protect the honest bonded debt; but so far as the outstanding stock is concerned, I appeal to Congress to study the history of this grant before authorizing a reissue of any part of it with a charter to go forth and ship- pers and settlers.

"While I dislike to vote for a charter to reorganize or organize a Federal corporation by authority of the Congress of the United States, I am willing to do so in this case if gentlemen will accept these conditions; but I want it understood that the forfeiture which was declared ten years ago must be made a condition precedent to the reorganization. They shall not, with my consent, stand in one branch of this Government denying the right of Congress to make a forfeiture, and in the other branch asking permission from Congress to live."

These arguments are given as presenting the adverse views of the measure and marking the limits within which the discussion of it ranged.

The Senate nonconcurred in the House amendments, and a conference committee was appointed and made a report which sacrificed the amendment requiring the new company as a condition precedent to surrender any claim to ownership of land declared forfeited by Congress, and that concession the House refused to approve. A second conference resulted in a report retaining that amendment, which had lost its importance, in view of the fact that the Supreme Court had in the interim decided in favor of the authority of Congress to declare the forfeiture. The following is the final form of the measure:

"*Be it enacted etc.*, That whenever any mortgage made by the Atlantic and Pacific Railroad Company under and by virtue of acts of Congress is foreclosed in any court of the United States, or of any State or Territory thereof, and any sale of the road, equipment, lands, franchises, privileges, and other rights and property covered by said mortgage is made under a decree or decrees of such courts, the purchaser at any such sale or sales, and their associates or assigns, shall constitute a new company, which shall have and shall be entitled to hold and possess the franchises and property so sold, and to exercise the same rights, powers, privileges, grants, and franchises, including the franchise to be a corporation, granted by the act of Congress approved July 27, 1866, incorporating the Atlantic and Pacific Railroad Company, and by acts amendatory thereof and supplemental thereto, which were owned and possessed by said Atlantic and Pacific Railroad Company, or said mortgagees at the time of such decree of foreclosure; and the incorporation as hereby provided shall be completed and become effective whenever the said purchasers and their associates or assigns shall file with the Secretary of the Interior a certificate of incorporation hereunder, duly acknowledged, specifying the name of such new corporation, its president, and the names of its directors, the amount of its proposed capital stock and bonds, together with certified copy of the decree or decrees ratifying such sale.

"But such new company shall be subject to all the obligations and duties to the United States to which said Atlantic and Pacific Railroad Company was subject under its charter or act of incorporation; and nothing in this act shall be held to deprive the United States of any right or remedy they may at any time have had against said Atlantic and Pacific Railroad Company; but nothing in this act shall make such purchasers and their associates or such new corporation liable for any debts or claims or contracts of the old corporation except all debts, demands, and liabilities which were due or owing by the old company, which were contracted, accrued,

or were incurred, or are due or owing for tickets and freight balances, or for wages, work, labor, materials, machinery, fixtures, and supplies of every kind and character, done, performed, or furnished in the repair, equipment, operation, or extension of said road, and its branches so purchased, and all liabilities incurred by said old company in the transportation of freight and passengers thereon, including damages for injuries to employees or other persons, and to property, and which debts, demands, and liabilities have accrued or upon which suit had been brought or was pending, or judgment rendered, within twelve months prior to the appointment of a receiver or receivers in the foreclosure proceeding or since the appointment of any such receiver, but such liabilities shall not include any liabilities to other railroad companies except for tickets and freight balances.

"The capital stock of the corporation herein authorized shall be divided into shares each of the par value of \$100, and shall not exceed the amount of the mortgage debt due and unpaid at the time of the decree of foreclosure: *Provided*, That additional stock and bonds may be issued by the corporation upon the payment into its treasury therefor the full par value thereof in cash. No stock shall be issued until the Secretary of the Interior shall approve its issue and certify that it is issued in conformity to the provisions of this act. The total stock issued under the provisions of this act shall not exceed \$100,000,000.

"*Provided further*, That nothing herein contained shall be construed as making any additional grant of lands or other franchises to such successor corporation, or as a waiver of any rights of the United States now existing to enforce any forfeiture of lands heretofore granted to the said Atlantic and Pacific Railroad Company, or as in any manner affecting the vested rights of any settler or settlers on any of the lands heretofore granted to the Atlantic and Pacific Railroad Company or of any purchaser or purchasers of said lands from said company.

"*Provided further*, That as a condition precedent to reorganization the purchasers of the railroad property and their associates shall relinquish in writing and convey to the United States (by a proper deed or instrument to be filed with and approved by the Secretary of the Interior within six months after the passage of this act and before the act shall take effect) all claim, right, title, and interest to all lands granted to the Atlantic and Pacific Railroad Company embraced within both the granted and indemnity limits which were adjacent to and coterminous with the uncompleted portions of the road on the 6th day of July, 1886.

"*And provided further*, That in every case of failure of the title to any lands conveyed or contracted to be sold by said Atlantic and Pacific Railroad Company to any *bona fide* settler and occupant in a tract of 640 acres or less, any and all rights of such purchaser or his assigns, in respect of such land, or in respect of the failure of such title, or in respect to the liability of said Atlantic and Pacific Railroad Company on any such contract, shall survive and may be enforced against such successor company with the same force and effect and in the same manner as against the Atlantic and Pacific Railroad Company; and such successor company, upon making compensation for such loss of any title or failure to comply with the conditions of such land contracts, shall be subrogated to the rights of such purchaser in respect of the lands for which such compensation shall have been made.

"*Provided further*, That in case any uncompleted contracts for the purchase of lands shall be pending at the time of such foreclosure sale, such new company shall, upon payment to it of any unpaid bal-

ance of purchase money for such land at the time provided in such contracts for the sale thereof, convey and release to the holders of such contracts all its title, interest, and estate in and to the land embraced in such contracts."

"SEC. 2. That Congress shall at all times have the power to alter, amend, or repeal this act."

"SEC. 3. Where the line of such railway is now located within the limits of any State, or where such line is now located within a Territory which may hereafter become a State, such State, or such Territory when it shall become a State, shall be empowered to require such corporation to become incorporated within such State or States as may be provided by the laws thereof."

The President approved the measure March 3.

International Money Conference.—The Congress passed and the President approved the following measure "to provide for the representation of the United States by commissioners at any international money conference hereafter to be called :

"*Be it enacted, etc.,* That whenever after March 4, 1897, the President of the United States shall determine that the United States should be represented at any international conference called by the United States or any other country with a view to securing by international agreement a fixity of relative value between gold and silver as money by means of a common ratio between these metals, with free mintage at such ratio, he is hereby authorized to appoint five or more commissioners to such international conference; and for compensation of said commissioners, and for all reasonable expenses connected therewith, to be approved by the Secretary of State, including the proportion to be paid by the United States of the joint expenses of any such conference, the sum of \$100,000, or so much thereof as may be necessary, is hereby appropriated.

"SEC. 2. That the President of the United States is hereby authorized, in the name of the Government of the United States, to call, in his discretion, such international conference, to assemble at such point as may be agreed upon.

"And he is further authorized, if in his judgment the purpose specified in the first section hereof can thus be better attained, to appoint one or more special commissioners or envoys to such of the nations of Europe as he may designate to seek by diplomatic negotiations an international agreement for the purpose specified in the first section hereof. And in case of such appointment so much of the appropriation herein made as shall be necessary shall be available for the proper expenses and compensation of such commissioners or envoys."

It may be worth while to quote from speeches made by three Senators representing the various views on the measure.

Mr. Chandler, of New Hampshire, said :

"Mr. President, this bill represents a new movement beginning in the United States for the establishment of bimetalism, the unlimited coinage of silver and gold as standard money.

"The provisions of the bill are in the form desired by its friends; substantially in the language of three previous authorizations under which United States delegates were appointed to international monetary conferences, and of one under which no action was taken.

"It simply authorizes the coming President to appoint delegates to any conference which may be called by the United States or any other nation, and provides for paying their expenses.

"It does not compel the President to initiate an international conference, whether the time has arrived and due preparations have been made for it or not; and it is not desirable that such compul-

sion should be ordered. The responsibility for action or nonaction will be his, and there need be no desire to take it from him in view of his utterance upon accepting the nomination of his party, namely:

"The Republican party has declared in favor of an international agreement, and if elected President it will be my duty to employ all proper means to promote it."

"The bill does not name the place where a conference must be held, but leaves that question to be settled according to the preferences of the nations which are to participate in it, and to the convenience of the greater number of the delegates. It would be exceedingly unwise to absolutely require that the conference shall be held in the United States.

"The bill does not undertake to declare what the action of this Government will be in case the conference shall fail to establish bimetalism. To insert a legislative provision that in such an event the United States alone will proceed to the free coinage of silver would necessarily prevent a successful outcome of the conference if one ensues, and, moreover, would certainly defeat the passage of this bill through both Houses and its signature by the President. It would be as complete a rejection of the bill as would be a vote of the Senate to indefinitely postpone it, and the responsibility for the first defeat of the new movement for bimetalism would fatally rest upon those who claim to be the special champions of silver.

"Mr. President, this bill for an international bimetallic conference has been deliberately presented in a body a majority of whose members are well known to be in favor of the free coinage of silver by the United States independently of other nations, and who believe that no successful result will come from the conference. But it is presented to them in the belief and after the assurance that they are not unwilling to allow the experiment to be again tried, under favorable auspices, and with a universal hope that it may secure the adoption of a system of bimetalism by the leading commercial nations of the world."

Mr. Stewart of Nevada said :

"There are many grave objections to international money which ought to make us hesitate before we enter into any compact with the world to have international money. In the first place, if we had an international money that was legal tender throughout the world our business would be subject to the fluctuations and changes of every country of the world. A business man would not only have to calculate about the business of his own country, but he would have to know the world in order to guard himself against fluctuations and disturbances which might occur anywhere. The idea that commerce can not be carried on without international money is against the experience of mankind. International money never has existed, to my knowledge, except in one instance. The Latin Union in 1865 formed a compact whereby the money of France, Italy, Greece, Belgium, and Switzerland should be a legal tender throughout that combination. But those were small countries, dependent upon France and under France's protection at the time. That is the only instance I know of international money.

"Money is essentially domestic. It is a great misfortune if it has to be exported and sold in other countries. We do not want to export our money. We should not make an effort to have a kind of money that can be exported as such. When we export our money we disturb our own business. We might as well export our tools and attempt to carry on farming and other vocations. If you export

money you take away the tools of commerce and destroy the prosperity of our country.

"The idea of an international conference to establish an international money is against experience, and will cause great inconvenience to every nation involved in the complication. We should avoid entangling alliances, if possible. This would be the worst; and we see what grows out of it. The London press say: 'If we make a bargain with you in regard to finances, you must make a bargain with us in regard to the tariff.' Thereby they assume to have jurisdiction in this country, to control our domestic affairs. Shall we surrender it? Shall we surrender to other countries that jurisdiction which we think so important? The Constitution enjoins upon Congress the duty 'to coin money, regulate the value thereof, and of foreign coin.' Shall we give that up and say we have no right to coin money according to the Constitution? We exercised that right for over seventy years with great benefit to our country, and no inconvenience to anybody.

"So I am opposed to international money. I am opposed to allowing any other country to participate in our domestic affairs. I am in favor of the United States furnishing to the people an adequate supply of money. Individuals can not supply money. If they attempt it it is a criminal offense. The Government has a complete monopoly. It is a part of the sovereignty of the Government to exercise that monopoly; and here we are going to Europe to ascertain whether we can legislate for the people of the United States. We are going to Europe, to our creditors, to the creditor nations of Europe, to the money powers of Europe, to see what measure they will mete out to us—what amount of money it is to their interest for us to have. The influence of Europe has brought this country to a sad condition."

Mr. Vilas, of Wisconsin, said:

"In what it says, still more in its implications, the bill is worse than useless—it is highly vicious. It is another of the ambiguous and timid utterances, of the projects, illusory—perhaps it is not too much to say deceitful—by which those of our countrymen who put faith in the declarations of Congress, as guided by wisdom, are perversely taught misconception of the true principles of government, of finance, and commerce.

"I do not charge that the scheme is not supported with sincerity, nor that, in fact, no conference is purposed to be held, or, if held, no practical result is anticipated—though for this there might be grounds of suspicion, as the Senator from California intimated yesterday. I take it rather as being what its words indicate, and there find it worse in effect than if merely insincere.

"It proffers again to the public as sound and wise the theory that bimetallism, in the sense that a stable, practicable, and useful standard of value may be compounded of the two metals, gold and silver, both enjoying free and unlimited coinage at an arbitrary ratio, if only many nations will try it together instead of ours alone. In that it defies the teaching of history, the advice of experience and experienced men, and the deductions of sound reason.

"No such bimetallism has ever existed in fact; in no country of the world does it exist now. Always and everywhere the concurrent unlimited coinage of the two metals, at any ratio, has resulted in the involuntary, unconscious, but inevitable fixation, for the time being, of one or the other metal as the standard, the vain though constant pursuit of an unattainable adjustment of relation between two different and confending standards at the same time by continual shifts of legislation, always ac-

companied by instability of values of the current coins, profitable only to money changers, but inflicting distress on business, and especial injury on those who depend on their labor for life and its enjoyments.

"The pretense that any such system of bimetallism as created the standard out of both metals so that the value of both became necessary components of it, has ever had existence in the world is overwhelmed by the most trustworthy historical researches and must be consigned to the limbo where the ghosts of witchcraft, astrology, demonology, and kindred superstitions have been driven by the advancing intelligence and wisdom of mankind.

"It would matter little if it were granted to have once had some footing on earth, for it has none now. As I said, no country furnishes example of it. Some base their reckoning of business on silver coins; some on gold; but none on a bimetallic standard. If such ever existed, then it has disappeared; and let him who would demand its resurrection confront the experienced progress of human intelligence.

"In either aspect the pursuit of a bimetallic standard of such a character is as idle as would be human effort to divert the Gulf Stream or warm the climate of the poles.

"But still more this bill implies to the public mind, and the inference is certain that such a standard of value is far better and more desirable than the present. It is complete acknowledgment of the fundamental assumption of the Bryan campaign that a gold standard of monetary measurement, however freely silver may be used within the sphere of its practical usefulness, is wrong, not right, a false, not a true, standard, the product of evil law, not of just and natural law, an injury done society by human error which can be in some way redressed, and therefore ought to be. And it fairly leads to the recent issue that but for the wicked resistance of other countries the grievous wrong might be righted and the woes of mankind, here and elsewhere, vastly alleviated. Sir, no wonder men listened to the siren tones that lured them toward this fancied blessing and said, 'Let us try it alone, let us be free and independent, let us have the boon of prosperity,' without the consent of any other nation on earth."

"If they had been right in their basis, which this vicious and misleading bill now implies, they were right in this insistence, for it is assuredly a truth, sir, in my poor opinion, that any people under the sun may pursue alone the sound principles of finance, commerce, business, and good government, without any exception whatever of a single principle among all that rule those subjects, independently of other nations, and be gainers, not losers, by their faithful adherence to them. Not always to the full extent that co-operation with others would insure, but always to advantage and benefit far beyond any attainable by not pursuing them.

"Why, then, if the free coinage of both metals at an arbitrary ratio be a principle of finance or commerce valuable to many nations together, it is not, like all sound principles of finance and commerce, helpful to the nation which pursues it alone? Sir, that appears to me a question which the average common sense of man does not find answered by the refinements and mysticism which proffer all the benefits of principle only to some hopeless application of it; and it can not be thus answered to any sound judgment. 'The hills are green far away' is the sententious Irish saying that dispatches such fantastic theories."

Inspection of Tea.—The Senate passed Feb. 25, 1897, a bill to prevent the importation of impure and unwholesome tea; the House passed the meas-

ure the following day, and the President approved it March 2. The act is as follows:

"*Be it enacted, etc.*, That from and after May 1, 1897, it shall be unlawful for any person or persons or corporation to import or bring into the United States any merchandise as tea which is inferior in purity, quality, and fitness for consumption to the standards provided in section 3 of this act, and the importation of all such merchandise is hereby prohibited.

"SEC. 2. That immediately after the passage of this act, and on or before Feb. 15 of each year thereafter, the Secretary of the Treasury shall appoint a board, to consist of seven members, each of whom shall be an expert in teas, and who shall prepare and submit to him standard samples of tea; that the persons so appointed shall be at all times subject to removal by the said Secretary, and shall serve for the term of one year; that vacancies in the said board occurring by removal, death, resignation, or any other cause shall be forthwith filled by the Secretary of the Treasury by appointment, such appointee to hold for the unexpired term; that said board shall appoint a presiding officer, who shall be the medium of all communications to or from such board; that each member of said board shall receive as compensation the sum of \$50 per annum, which, together with all necessary expenses while engaged upon the duty herein provided, shall be paid out of the appropriation for 'expenses of collecting the revenue from customs.'

"SEC. 3. That the Secretary of the Treasury, upon the recommendation of the said board, shall fix and establish uniform standards of purity, quality, and fitness for consumption of all kinds of teas imported into the United States, and shall procure and deposit in the customhouses of the ports of New York, Chicago, San Francisco, and such other ports as he may determine, duplicate samples of such standards; that said Secretary shall procure a sufficient number of other duplicate samples of such standards to supply the importers and dealers in tea at all ports desiring the same at cost. All teas, or merchandise described as tea, of inferior purity, quality, and fitness for consumption to such standards shall be deemed within the prohibition of the first section hereof.

"SEC. 4. That on making entry at the customhouses of all teas, or merchandise described as tea, imported into the United States, the importer or consignee shall give a bond to the collector of the port that such merchandise shall not be removed from the warehouse until released by the collector, after it shall have been duly examined with reference to its purity, quality, and fitness for consumption; that for the purpose of such examination samples of each line in every invoice of tea shall be submitted by the importer or consignee to the examiner, together with the sworn statement of such importer or consignee that such samples represent the true quality of each and every part of the invoice and accord with the specifications therein contained; or in the discretion of the Secretary of the Treasury, such samples shall be obtained by the examiner and compared by him with the standards established by this act; and in cases where said tea, or merchandise described as tea, is entered at ports where there is no qualified examiner as provided in section 7, the consignee or importer shall in the manner aforesaid furnish under oath a sample of each line of tea to the collector or other revenue officer to whom is committed the collection of duties, and said officer shall also draw or cause to be drawn samples of each line in every invoice and shall forward the same to a duly qualified examiner as provided in section 7: *Provided, however*, That the bond above required shall also be conditioned

for the payment of all customhouse charges which may attach to such merchandise prior to its being released or destroyed (as the case may be) under the provisions of this act.

"SEC. 5. That if, after an examination as provided in section 4, the tea is found by the examiner to be equal in purity, quality, and fitness for consumption to the standards hereinbefore provided, and no re-examination shall be demanded by the collector as provided in section 6, a permit shall at once be granted to the importer or consignee declaring the tea free from the control of the customs authorities; but if on examination such tea, or merchandise described as tea, is found, in the opinion of the examiner, to be inferior in purity, quality, and fitness for consumption to the said standards the importer or consignee shall be immediately notified, and the tea, or merchandise described as tea, shall not be released by the customhouse unless on a re-examination called for by the importer or consignee the finding of the examiner shall be found to be erroneous: *Provided*, That should a portion of the invoice be passed by the examiner, a permit shall be granted for that portion and the remainder held for further examination, as provided in section 6.

"SEC. 6. That in case the collector, importer, or consignee shall protest against the finding of the examiner, the matter in dispute shall be referred for decision to a board of three United States general appraisers, to be designated by the Secretary of the Treasury, and if such board shall, after due examination, find the tea in question to be equal in purity, quality, and fitness for consumption to the proper standards, a permit shall be issued by the collector for its release and delivery to the importer; but if upon such final re-examination by such board the tea shall be found to be inferior in purity, quality, and fitness for consumption to the said standards, the importer or consignee shall give a bond, with security satisfactory to the collector, to export said tea, or merchandise described as tea, out of the limits of the United States within a period of six months after such final re-examination; and if the same shall not have been exported within the time specified, the collector, at the expiration of that time, shall cause the same to be destroyed.

"SEC. 7. That the examination herein provided for shall be made by a duly qualified examiner at a port where standard samples are established, and where the merchandise is entered at ports where there is no qualified examiner the examination shall be made at that one of said ports which is nearest the port of entry, and that for this purpose samples of the merchandise, obtained in the manner prescribed by section 4 of this act, shall be forwarded to the proper port by the collector or chief officer at the port of entry; that in all cases of examination or re-examination of teas, or merchandise described as tea, by examiners or boards of United States general appraisers under the provisions of this act, the purity, quality, and fitness for consumption of the same shall be tested according to the usages and customs of the tea trade, including the testing of an infusion of the same in boiling water, and, if necessary, chemical analysis.

"SEC. 8. That in cases of re-examination of teas, or merchandise described as teas, by a board of United States general appraisers in pursuance of the provisions hereof, samples of the tea, or merchandise described as tea, in dispute, for transmission to such board for its decision, shall be put up and sealed by the examiner in the presence of the importer or consignee, if he so desires, and transmitted to such board, together with a copy of the finding of the examiner, setting forth the cause of

condemnation and the claim or ground of the protest of the importer relating to the same, such samples, and the papers therewith, to be distinguished by such mark that the same may be identified; that the decision of such board shall be in writing, signed by them, and transmitted, together with the record and samples, within three days after the rendition thereof, to the collector, who shall forthwith furnish the examiner and the importer or consignee with a copy of said decision or finding. The board of United States general appraisers herein provided for shall be authorized to obtain the advice, when necessary, of persons skilled in the examination of teas, who shall each receive for his services in any particular case a compensation not exceeding \$5.

"Sec. 9. That no imported teas which have been rejected by a customs examiner or by a board of United States general appraisers, and exported under the provisions of this act, shall be reimported into the United States under the penalty of forfeiture for a violation of this prohibition.

"Sec. 10. That the Secretary of the Treasury shall have the power to enforce the provisions of this act by appropriate regulations.

"Sec. 11. That teas actually on shipboard for shipment to the United States at the time of the passage of this act shall not be subject to the prohibition hereof, but the provisions of the act entitled 'An Act to prevent the importation of adulterated and spurious teas,' approved March 2, 1883, shall be applicable thereto.

"Sec. 12. That the act entitled 'An Act to prevent the importation of adulterated and spurious teas,' approved March 2, 1883, is hereby repealed, such repeal to take effect on the date on which this act goes into effect."

In explanation of the purpose of the act Mr. Payne, of New York, said:

"Mr. Speaker, in 1883 Congress passed an act to prevent the importation of impure and unwholesome tea, or tea harmful to health. We tried then to make as good a law as we knew how; but notwithstanding the stringency of that law, which provided for the re-exportation of all teas which did not come up to the standard, we find that to-day more poor, unwholesome tea, more tea sweepings and drug teas, are thrown upon the American market than upon all the other markets of the world. Our people consume more bad tea than all other countries. This is a subject about which we have heard a good deal for several years past in the Committee on Ways and Means. People interested in the tea trade, and interested in having only pure, wholesome teas imported into the United States, have appeared before that committee and set forth their various grievances and the difficulty of enforcing the old law. That law provided for inspectors to be appointed from men who were importers. Of course it was only human nature for those merchants to favor each other sometimes, and to favor themselves always in their decisions, and there was no appeal except to this board of merchants. The consequence is that the importation of poor teas into this country has increased.

"This bill is the result of the united efforts of the people engaged in the tea trade, the people anxious for wholesome food, the Treasury Department, the Senate of the United States, and the Committee on Ways and Means. A bill nearly identical in language and entirely identical in character was recommended by the Ways and Means Committee some days ago, and reported unanimously from that committee to the House. This particular bill was introduced into the Senate, and referred to the Committee on Commerce there, was unanimously reported to the Senate by that committee, and was passed by the Senate and sent

over here this morning. In brief, the bill provides that the Secretary of the Treasury shall appoint seven inspectors of tea in the United States, to be chosen from those who are experts in tea. These seven men are to receive each a salary of \$50 a year, to be paid out of the moneys appropriated for customs expenses.

"They are to meet every year and establish uniform standards of purity and fitness for consumption, which standards are to be embodied in samples. Those samples are to be duplicated. There will be one at New York, one at Chicago, one at San Francisco, and the others are to be at such other places of import as the Secretary of the Treasury shall designate, and with those samples all importations of teas are to be compared. If the importation comes up to the samples, it can come in free of duty for consumption in the United States. If the importation does not come up to the standard, it is to be re-exported and excluded from consumption here."

Patent Laws.—The Congress passed, and the President approved March 3, 1897, an act revising and amending the statutes relating to patents, as follows:

"*Be it enacted, etc.,* That section 4886 of the Revised Statutes be, and the same hereby is, amended by inserting on line 4, after the word 'country,' the words 'before his invention or discovery thereof,' and on line 5, after the word 'thereof,' the words 'or more than two years prior to his application,' so that the clause so amended will read as follows:

"SEC. 4886. Any person who has invented or discovered any new and useful art, machine, manufacture, or composition of matter, or any new and useful improvements thereof, not known or used by others in this country before his invention or discovery thereof, and not patented or described in any printed publication in this or any foreign country before his invention or discovery thereof, or more than two years prior to his application, and not in public use or on sale in this country for more than two years prior to his application, unless the same is proved to have been abandoned, may, upon payment of the fees required by law and other due proceeding had, obtain a patent therefor."

"SEC. 2. That section 4920 of the Revised Statutes be, and the same hereby is, amended by adding to the third clause of said section after 'thereof' and before 'or' the following words: 'or more than two years prior to his application for a patent therefor'; so that the section so amended will read as follows:

"SEC. 4920. In any action for infringement the defendant may plead the general issue, and, having given notice in writing to the plaintiff or his attorney thirty days before, may prove on trial any one or more of the following special matters:

"First. That for the purpose of deceiving the public the description and specification filed by the patentee in the Patent Office was made to contain less than the whole truth relative to his invention or discovery, or more than is necessary to produce the desired effect; or,

"Second. That he had surreptitiously or unjustly obtained the patent for that which was in fact invented by another, who was using reasonable diligence in adapting and perfecting the same; or,

"Third. That it has been patented or described in some printed publication prior to his supposed invention or discovery thereof, or more than two years prior to his application for a patent therefor; or,

"Fourth. That he was not the original and first inventor or discoverer of any material and substantial part of the thing patented; or,

"Fifth. That it had been in public use or on sale in this country for more than two years before his application for a patent, or had been abandoned to the public.

"And in notices as to proof of previous invention, knowledge, or use of the thing patented, the defendant shall state the names of the patentees and the dates of their patents, and when granted, and the names and residences of the persons alleged to have invented or to have had the prior knowledge of the thing patented, and where and by whom it had been used; and if any one or more of the special matters alleged shall be found for the defendant, judgment shall be rendered for him with costs. And the like defenses may be pleaded in any suit in equity for relief against an alleged infringement; and proofs of the same may be given upon like notice in the answer of the defendant, and with the like effect."

"SEC. 3. That section 4887 of the Revised Statutes be, and the same hereby is, amended by inserting on line 1, after the words 'no person,' the words 'otherwise entitled thereto,' and on line 3, after the words 'caused to be patented,' the words 'by the inventor or his legal representatives or assigns,' and by erasing therein all that portion of the section which follows the words 'in a foreign country,' on lines 3 and 4, and substituting in lieu thereof the following: 'unless the application for said foreign patent was filed more than seven months prior to the filing of the application in this country, in which case no patent shall be granted in this country,' that the section so amended will read as follows:

"SEC. 4887. No person otherwise entitled thereto shall be debarred from receiving a patent for his invention or discovery, nor shall any patent be declared invalid, by reason of its having been first patented or caused to be patented by the inventor or his legal representatives or assigns in a foreign country, unless the application for said foreign patent was filed more than seven months prior to the filing of the application in this country, in which case no patent shall be granted in this country."

"SEC. 4. That section 4894 of the Revised Statutes be, and the same hereby is, amended by striking out the words 'two years' in every place where they occur and substituting in lieu thereof the words "one year"; so that the section so amended will read as follows:

"SEC. 4894. All applications for patents shall be completed and prepared for examination within one year after the filing of the application, and in default thereof, or upon failure of the applicant to prosecute the same within one year after any action therein, of which notice shall have been given to the applicant, they shall be regarded as abandoned by the parties thereto, unless it be shown to the satisfaction of the Commissioner of Patents that such delay was unavoidable."

"SEC. 5. That section 4898 of the Revised Statutes be, and the same hereby is, amended by adding thereto the following sentence:

"If any such assignment, grant, or conveyance of any patent shall be acknowledged before any notary public of the several States or Territories or the District of Columbia, or any commissioner of the United States circuit court, or before any secretary of legation or consular officer authorized to administer oaths or perform notarial acts under section 1750 of the Revised Statutes, the certificate of such acknowledgment, under the hand and official seal of such notary or other officer, shall be *prima facie* evidence of the execution of such assignment, grant, or conveyance"; so that the section so amended will read as follows:

"SEC. 4898. Every patent or any interest therein shall be assignable in law by an instrument in writing, and the patentee or his assigns or legal representatives may in like manner grant and convey an exclusive right under his patent to the whole or any specified part of the United States. An assignment, grant, or conveyance shall be void as against any subsequent purchaser or mortgagee for a valuable consideration, without notice, unless it is recorded in the Patent Office within three months from the date thereof.

"If any such assignment, grant, or conveyance of any patent shall be acknowledged before any notary public of the several States or Territories or the District of Columbia, or any commissioner of the United States circuit court, or before any secretary of legation or consular officer authorized to administer oaths or perform notarial acts under section 1750 of the Revised Statutes, the certificate of such acknowledgment, under the hand and official seal of such notary or other officer, shall be *prima facie* evidence of the execution of such assignment, grant, or conveyance."

"SEC. 6. That section 4921 of the Revised Statutes be, and the same hereby is, amended by adding thereto the following sentence:

"But in any suit or action brought for the infringement of any patent there shall be no recovery of profits or damages for any infringement committed more than six years before the filing of the bill of complaint or the issuing of the writ in such suit or action, and this provision shall apply to existing causes of action"; so that the section so amended will read as follows:

"SEC. 4921. The several courts vested with jurisdiction of cases arising under the patent laws shall have power to grant injunctions according to the course and principles of courts of equity, to prevent the violation of any right secured by patent, on such terms as the court may deem reasonable; and upon a decree being rendered in any such case for an infringement the complainant shall be entitled to recover, in addition to the profits to be accounted for by the defendant, the damages the complainant has sustained thereby; and the court shall assess the same or cause the same to be assessed under its direction. And the court shall have the same power to increase such damages, in its discretion, as is given to increase the damages found by verdicts in actions in the nature of actions of trespass upon the case.

"But in any suit or action brought for the infringement of any patent there shall be no recovery of profits or damages for any infringement committed more than six years before the filing of the bill of complaint or the issuing of the writ in such suit or action, and this provision shall apply to existing causes of action."

"SEC. 7. That in case where the head of any department of the Government shall request the Commissioner of Patents to expedite the consideration of an application for a patent, it shall be the duty of such head of department to be represented before the commissioner in order to prevent the improper issue of a patent.

"SEC. 8. That this act shall take effect Jan. 1, 1898, and sections 1, 2, 3, and 4, amending sections 4886, 4920, 4887, and 4894 of the Revised Statutes, shall not apply to any patent granted prior to said date, nor to any application filed prior to said date, nor to any patent granted on such an application."

Mr. Draper, of Massachusetts, said, in explanation of the measure, on reporting it to the House:

"Mr. Speaker, this bill proposes half a dozen minor amendments to the patent law which have been recommended unanimously by the American Bar Association. A year ago or more a committee of

that association was appointed to consider such amendments as might be found desirable in the patent law, and that committee, while unable to agree on matters which they considered of great moment, did agree to recommend the half dozen amendments which are embodied in this bill. I will not discuss the matter generally at length, but will take up these modifications one at a time and explain them to the House. I may say in the outset that the bill, in the reading, sounded somewhat formidable, because the entire statutes that are proposed to be amended were read.

"The first amendment is to section 4886. It provides that the patenting or publication of an invention in any foreign country more than two years prior to the application in this country shall be a bar to obtaining a patent. That is to say, if a patent is granted in a foreign country, then after two years from the grant of that patent the applicant can not obtain a patent in the United States, as he now can. As the law now stands, a man may publish or patent an invention in a foreign country and years afterward it may be patented in this country. In the United States if an inventor has his invention in public use more than two years before he applies for a patent he can not obtain a patent upon it. It seems to me, and it seems to your committee, that this amendment would be a very proper addition to the law, and an addition in the interest of the public.

"Section 5 of the bill is a matter of detail. It provides that a certificate of acknowledgment of assignment of a patent, before a proper officer, shall be *prima facie* evidence of execution.

"Section 6 provides a statute of limitation in patent causes. This is the only section upon which there was any difference of opinion in your committee. Some members of the committee thought that the statutes of limitation of the several States should control, whereas this bill proposes to make a universal statute of six years, covering the entire country. No minority report, however, has been filed, so that the bill stands as the recommendation of the committee.

"It is also sought in the bill to remedy an evil which some have considered almost an abuse in the Patent Office, namely, that an applicant for a patent can make his application, receive a rejection, wait two years before making an answer to the rejection, and continue in that way, so that the application may remain in the Patent Office a long time, a term of five or ten or possibly fifteen years, and then may come out of the office and cover the invention for seventeen years from the date of issue. This bill proposes an amendment to that part of the law by substituting the words 'six months' for the words 'two years,' so that after receiving a reply from the office to his application the applicant shall be required to make his answer within six months, thus reducing the length of time that an application can remain in the office. This, however, did not seem a sufficient limitation to your committee, and the amendments which they have proposed go still further in the direction of limiting not only the time that the applicant can delay answering the reply of the Patent Office to his application, but also limiting the time that his application can remain without final action in the office, except in cases of interference.

"A recent decision of the Supreme Court, to the effect that under the present law, properly interpreted, the term of a United States patent is to be limited by that of a foreign patent if the foreign patent was for the same invention and was issued before the patent granted by the United States. The fact is, that when this bill was prepared it was intended to cover cases of foreigners taking patents

in the United States. But there have arisen cases in which Americans, having made inventions, have applied simultaneously for an American patent and a foreign patent; and in such cases, owing to the fact that in most foreign countries there is no system of examination, while in our country there is such a system, which delays the issue of the patent for months, at least, and possibly for years, the foreign patent has frequently come out first. In such cases, according to the decision to which I refer, the American patent expires at the date of the expiration of the foreign patent. The amendment to section 4887 was intended to cover these cases. It is proposed as an amendment to the existing law that the granting of a foreign patent to the same inventor or his assigns shall not affect the term of the United States patent unless the application for said foreign patent was filed more than seven months prior to the filing of the application in this country, in which case no patent shall be granted here. A similar provision exists in the laws or treaties of most European countries, and this provision, it is believed, will accomplish the object which the legislators had in view in framing the present law, and will obviate all of its present inconveniences."

Alien Ownership.—The Congress passed and the President, on March 2, 1897, approved an act to better define and regulate the rights of aliens to hold and own real estate in the Territories. It is as follows:

"*Be it enacted, etc.,* That an act entitled 'An Act to restrict the ownership of real estate in the Territories to American citizens, etc.,' approved March 3, 1887, except so far as it affects real estate in the District of Columbia, be, and the same is hereby, amended so as to read as follows:

"That no alien or person who is not a citizen of the United States, or who has not declared his intention to become a citizen of the United States in the manner provided by law, shall acquire title to or own any land in any of the Territories of the United States except as hereinafter provided: *Provided*, That the prohibition of this section shall not apply to cases in which the right to hold or dispose of lands in the United States is secured by existing treaties to citizens or subjects of foreign countries, which rights, so far as they may exist by force of any such treaty, shall continue to exist so long as such treaties are in force, and no longer.

"SEC. 2. That this act shall not apply to land now owned in any of the Territories of the United States by aliens which was acquired on or before March 3, 1887, so long as it is held by the then owners, their heirs or legal representatives, nor to any alien who shall become a *bona fide* resident of the United States, and any alien who shall become a *bona fide* resident of the United States, or shall have declared his intention to become a citizen of the United States in the manner provided by law, shall have the right to acquire and hold lands in either of the Territories of the United States upon the same terms as citizens of the United States: *Provided*, That if any such resident alien shall cease to be a *bona fide* resident of the United States, then such alien shall have ten years from the time he ceases to be such *bona fide* resident in which to alienate such lands. This act shall not be construed to prevent any persons not citizens of the United States from acquiring or holding lots or parcels of lands in any incorporated or platted city, town, or village, or in any mine or mining claim, in any of the Territories of the United States.

"SEC. 3. That this act shall not prevent aliens from acquiring lands or any interests therein by inheritance or in the ordinary course of justice in the collection of debts, nor from acquiring liens on real estate or any interest therein, nor from lending

money and securing the same upon real estate or any interest therein, nor from enforcing any such lien, nor from acquiring and holding title to such real estate or any interest therein upon which a lien may have heretofore or may hereafter be fixed, or upon which a loan of money may have been heretofore or hereafter made and secured: *Provided, however*, That all lands so acquired shall be sold within ten years after title shall be perfected in him under said sale or the same shall escheat to the United States and be forfeited as hereinafter provided.

"SEC. 4. That any alien who shall hereafter hold lands in any of the Territories of the United States in contravention of the provisions of this act may nevertheless convey his title thereto at any time before the institution of escheat proceedings as hereinafter provided: *Provided, however*, That if any such conveyance shall be made by such alien, either to an alien or to a citizen of the United States, in trust and for the purpose and with the intention of evading the provisions of this act, such conveyance shall be null and void, and any such lands so conveyed shall be forfeited and escheat to the United States.

"SEC. 5. That it shall be the duty of the Attorney-General of the United States, when he shall be informed or have reason to believe that lands in any of the Territories of the United States are being held contrary to the provisions of this act, to institute or cause to be instituted suit in behalf of the United States in the district court of the Territory in the district where such land or a part thereof may be situated, praying for the escheat of the same on behalf of the United States to the United States: *Provided*, That before any such suit is instituted the Attorney-General shall give or cause to be given ninety days' notice by registered letter of his intention to sue, or by personal notice directed to or delivered to the owner of said land, or the person who last rendered the same for taxation, or his agent, and to all other persons having an interest in such lands of which he may have actual or constructive notice. In the event personal notice can not be obtained in some one of the modes above provided, then said notice shall be given by publication in some newspaper published in the county where the land is situate, and if no newspaper is published in said county, then the said notice shall be published in some newspaper nearest said county.

"SEC. 6. That if it shall be determined upon the trial of any such escheat proceedings that the lands are held contrary to the provisions of this act, the court trying said cause shall render judgment condemning such lands and shall order the same to be sold as under execution; and the proceeds of such sale, after deducting costs of such suit, shall be paid to the clerk of such court so rendering judgment, and said fund shall remain in the hands of such clerk for one year from the date of such payment, subject to the order of the alien owner of such lands, or his heirs or legal representatives; and if not claimed within the period of one year, such clerk shall pay the same into the treasury of the Territory in which the lands may be situated, for the benefit of the available school fund of said Territory: *Provided*, That the defendant in any such escheat proceedings may, at any time before final judgment, suggest and show to the court that he has conformed with the law, either becoming a *bona fide* resident of the United States, or by declaring his intention of becoming a citizen of the United States, or by the doing or happening of any other act which, under the provisions of this act, would entitle him to hold or own real estate, which being admitted or proved, such suit shall be dismissed on payment of costs and a reasonable attorney fee.

"SEC. 7. That this act shall not in any manner be construed to refer to the District of Columbia, nor to authorize aliens to acquire title from the United States to any of the public lands of the United States or to in any manner affect or change the laws regulating the disposal of the public lands of the United States. And the act of which this act is an amendment shall remain in force and unchanged by this act so far as it refers to or affects real estate in the District of Columbia.

"SEC. 8. That all laws and parts of laws so far as they conflict with the provisions of this act are hereby repealed."

In the Senate Mr. White, of California, made this brief explanation of the scope of the measure:

"The object to be attained is this: The present law in reference to the holding of lands in the Territories by aliens virtually shuts out all capital. For instance, in the case of a corporation, aliens can not hold over 20 per cent. of the capital stock. While this bill imposes a great many restrictions, as Senators will see, to holdings by aliens, it is not as drastic as the law which it amends. So far as I am personally concerned, I would impose no restriction, for I should be delighted to see money put into the Territories, whether by aliens or not. In fact, in some cases, I should a little rather see it come from aliens than from anybody in this country. To-day there are hundreds of thousands of dollars which can be invested in the Territories, and, notwithstanding our present ideas regarding diplomacy, I do not suppose any one will contend that the foreigner could run away with the Territory. He might possibly have the title, and if he put in his money it is hard to say which would be the better off. The people of the Territories, so far as I know, those who have interests there and who wish to see the Territories built up, are in favor of the bill. The representatives are in favor of it, and those of us who know something about it, so far as I am aware, favor the measure."

Patent Cases.—The Congress passed, and the President, on March 3, 1897, approved the following act defining the jurisdiction of the United States circuit courts in cases brought for the infringement of patents:

"*Be it enacted, etc.*, That in suits brought for the infringement of letters patent the circuit courts of the United States shall have jurisdiction, in law or in equity, in the district of which the defendant is an inhabitant, or in any district in which the defendant, whether a person, partnership, or corporation, shall have committed acts of infringement and have a regular and established place of business. If such suit is brought in a district of which the defendant is not an inhabitant, but in which such defendant has a regular and established place of business, service of process, summons, or subpoena upon the defendant may be made by service upon the agent or agents engaged in conducting such business in the district in which suit is brought."

Mr. Lacey, of Iowa, said in support of the measure, which was not seriously opposed:

"Mr. Speaker, I introduced this bill at the suggestion of a number of gentlemen who live in the Northwest, and who have interest in patent rights that are frequently infringed in distant localities, and yet the sales of the patented articles so infringed are largely, or mainly, made in the vicinity where the owners of the patent happen to be located. For instance, the manufactory may be established at some distant point and the office where the goods are sold is opened in Chicago or in St. Louis or some other distant city. They have a permanent place of business at either city, and yet no relief can be had in the courts where the infringement is mainly carried on.

"The main purpose of the bill is to give original jurisdiction to the court where a permanent agency transacting the business is located, and that business is engaged in the infringement of the patent rights of some one who has such rights anywhere in the United States.

"Jurisdiction would be had thus in Chicago, St. Louis, or any Western city if the manufacturer is established there, or if there is a permanent agency there, but not otherwise. It provides that the court shall have jurisdiction in the district of which the defendant is an inhabitant, and that is the existing law now, or 'in any district in which the defendant, whether a person, partnership, or corporation, shall have committed acts of infringement and have a regular and established place of business.' That is all there is of it. Isolated cases of infringement would not confer this jurisdiction, but only where a permanent agency is established."

Petroleum Lands.—The Congress passed without discussion and the President approved, Feb. 11, 1897, the following act to authorize the entry and patenting of lands containing petroleum and other mineral oils under the placer mining laws of the United States:

"*Be it enacted, etc.,* That any person authorized to enter lands under the mining laws of the United States may enter and obtain patent to lands containing petroleum or other mineral oils, and chiefly valuable therefor, under the provisions of the laws relating to placer mineral claims: *Provided,* That lands containing such petroleum or other mineral oils which have heretofore been filed upon, claimed or improved as mineral, but not yet patented, may be held and patented under the provisions of this act the same as if such filing, claim, or improvement were subsequent to the date of the passage hereof."

"It had been the custom for some years to deal with such lands under the provision of the placer mining laws; but the necessity for new legislation was thus explained in a committee report:

"Under a decision of the Secretary of the Interior, dated Aug. 27, 1896, in the case of mineral entry No. 140, Los Angeles district, California, the Secretary held that lands containing oils could not be patented under the placer-mining acts, for the reason that the acts did not originally contemplate the extension of their provisions to lands of this character. It has never been held by any authority that the provisions of the placer acts were not adequate to meet the conditions surrounding the development of mineral oils. The effect of the above cited decision of Aug. 27, 1896, is to preclude the possibility of obtaining title to lands containing oils, and as there are large arrears of such lands in various of the public-land States, and as upon these lands in many instances large expenditures have already been made, and as it is manifestly for the public good that there should be some provision whereby these lands may be held and patented, the committee believe this bill should pass.

"The honorable Commissioner of the General Land Office, to whom the bill was referred, states that there is urgent necessity for some legislation on this subject, and in this view the Secretary of the Interior concurs. The bill simply provides by legislation for procedure in the entry and patenting of these lands along the lines that have been pursued in the past under the decisions of the General Land Office, so that there is no departure whatever from the procedure in the past for the development and acquirement of such properties.

"While it is quite probable, as recited by the honorable Secretary of the Interior in his decision of Aug. 27, 1896, the provisions of the placer acts were not originally intended to extend to lands

containing mineral oils, the legislators at that time, possibly, having in mind only metalliferous minerals, and the existence of petroleums on the public lands being at that time not generally known, it is nevertheless true that the provisions of these acts are calculated to aid in the development and purchase of lands of this character, and their provisions having been extended to such lands in the past, under rulings of the department well understood, it is entirely proper that the provisions of these acts shall now be extended so as to embrace oil-bearing lands."

Belated Pensions.—The Congress passed a bill granting pensions to Gray's Battalion of Arkansas Volunteers as follows:

"*Be it enacted, etc.,* That the Secretary of the Interior be, and he is hereby authorized and directed to place on the pension roll the names of all of the honorably discharged surviving officers and enlisted men of Gray's Battalion of Arkansas Volunteers raised under the act of Congress of May 13, 1846, for service during the war with Mexico; and the names of surviving widows of such officers and enlisted men, subject to the limitations and regulations of the pension laws of the United States for pensioning the survivors of the war with Mexico."

Mr. Mill, of Arkansas, made this explanation of the measure:

"This little bill, Mr. Chairman, carries relief to less than thirty people. These men in 1846 and 1847 were citizens of the State of Arkansas. Those who are affected by the bill are now all old men and widows, people standing with one foot in the grave and the other hard by. In 1846 they volunteered and signed a muster roll which pledged them to go to Mexico. They were not sent there, because the authorities concluded to send them up into the Indian Territory. They served there from six to eight months, the five companies of this little battalion. When the Mexican War act was passed in June, 1887, and when that grand soldier, Gen. John C. Black, of Illinois, was administering the Pension Office, he took a liberal view of that law and placed these people upon the pension rolls under the Mexican War act as fast as they made their proofs. But with the advent of the Harrison administration the then Commissioner of Pensions took a different view of the law and refused to place any more of them upon the roll, holding that they did not come within the purview of the Mexican War act.

"When I came to Congress, in July, 1893, I came with a petition or two in my pocket from men who had been suspended from the rolls, men who were members of this little Gray's battalion. I went to see Commissioner Lochren, who told me the history of the matter, which I have here and which is embodied in the report. He said that he had found the ruling of his predecessor upon the record, and that he was not inclined to reverse it and to hold that he could place these men and their widows upon the pension rolls under the Mexican War act.

"Immediately after that I introduced this special bill for their relief, and I have pressed it, Mr. Chairman, continuously, in season and out of season—no; not out of season, because it was never out of season; but all the time that was proper and legitimate I have tried to get relief for these few people left this side of the grave.

"Now, Mr. Chairman, I do not think it is necessary to detain the committee longer in the consideration of this question. I confess to a great deal of interest in this bill, because it is a matter that has occupied more of my attention than almost any other, on account of the injustice that has been done to a few old people in this land, old soldiers and their widows, men who volunteered in 1847 and

followed the flag of their country even to the halls of the Montezumas, braving death and disease, but who have been unable to get in under the Mexican War pension act."

The claim to pensions for these men was the same as that of Powell's battalion of Missouri Mounted Volunteers, whose surviving members were pensioned in 1891, though they never went to Mexico. The President allowed the measure to become a law without his signature.

Pass a Loutre Crevasse.—The Congress passed and the President approved, Feb. 26, 1897, an act to provide for closing the crevasse in Pass a Loutre, one of the outlets of the Mississippi. It is as follows:

"That the sum of \$250,000, or so much thereof as may be necessary, be, and is hereby, appropriated, out of any money in the Treasury not otherwise appropriated, to close the crevasse in Pass a Loutre of the Mississippi river, to be expended under the direction and according to the plans and specifications of the Secretary of War.

"SEC. 2. That nothing herein contained shall be held or construed to destroy or impair any right or rights of the United States arising under the acts of March 3, 1875, June 19, 1878, and March 3, 1879, containing the contract or contracts between James B. Eads and such persons as might become associated with him and the United States, or to release the legal representatives of said James B. Eads or other persons associated with him, jointly or severally, from any obligation, expressed or implied, arising under and from said acts or other acts pertaining thereto: *Provided*, That nothing herein contained shall be held or construed to release in any wise the executors of the estate of James B. Eads as such executors, or the associates of said James B. Eads, jointly or severally, in whole or in part, from any liability which now exists, if any such liability does exist, for a failure to close said Pass a Loutre crevasse, and the question of such liability shall be referred to the Attorney-General, after a full hearing to both parties, for his decision; and should the decision of the Attorney-General be to the effect that the responsibility for the closing of the said Pass a Loutre crevasse rests upon the executors of the estate of James B. Eads as such executors, and the associates of the said James B. Eads, jointly or severally, under existing laws, then upon the completion of the twenty years' contract for the maintenance of the channel in South Pass outlet of the Mississippi river, as the same now exists, the Secretary of War shall withhold so much of the money then to be paid to the executors of the estate of James B. Eads as such executors, or to the associates of the said James B. Eads, jointly or severally, as shall have been expended under the authority of this act, until the same shall be judicially or otherwise legally determined in favor of such executors as such executors, or said associates of James B. Eads, jointly or severally."

The reason for the measure was thus set forth by Mr. Reeves, of Illinois:

"Mr. Speaker, I do not know that the House needs any special information on this bill, and I shall only offer a word in explanation. Of the three outlets of the Mississippi river, only one of them, known as South Pass, is navigable at the present time. A crevasse has occurred within the last few years in one of these passes, and has been constantly enlarging, at a distance of about a mile and a quarter below the head of the pass. The effect of this crevasse has been to draw away from the other two passes of the river a portion of the water that should go through the navigable outlet of the river. The engineers of the Government in charge at this part of the river inform us, and we are also informed by

men engaged in business on the river, that if this crevasse is not stopped the entire commerce of the Mississippi river below New Orleans is threatened.

"The Committee on Rivers and Harbors, after hearing from the engineers of the Government and others, among them business men from New Orleans, decided to inspect the condition of affairs down there, and 12 of us went to this place and closely examined it. The committee are unanimously of the opinion that unless this crevasse is stopped the entire commerce of the river, which is more than 5,000,000 tons annually, is threatened. I take it that the necessity of keeping this river open is not a question before this House or the country. The only question is as to the necessity for doing this at this time. The best judgment we have been able to obtain is that this crevasse can now be stopped for \$250,000, whereas if it is not stopped until the high floods come again and again it will cost the Government \$1,000,000 to do it. The committee are unanimously of the opinion that an emergency does exist, that it is outside of and away from the functions or duty of the executors of the Eads estate, and that there is nothing left for us to do but to take this course, or jeopardize the commerce of the river."

The Military Parks.—The Congress passed and, on March 3, 1897, the President approved the following measure to prevent trespassing upon and providing for the protection of the national military parks:

"*Be it enacted, etc.*, That every person who willfully destroys, mutilates, defaces, injures, or removes any monument, statue, marker, guidepost, or other structure, or who willfully destroys, cuts, breaks, injures, or removes any tree, shrub, or plant within the limits of any national park shall be deemed guilty of a misdemeanor, punishable by a fine of not less than \$10 nor more than \$1,000 for each monument, statue, marker, guidepost, or other structure, tree, shrub, or plant destroyed, defaced, injured, cut, or removed, or by imprisonment for not less than fifteen days and not more than one year, or by both fine and imprisonment.

"SEC. 2. That every person who shall trespass upon any national park for the purpose of hunting or shooting, or who shall hunt any kind of game thereon with gun or dog, or shall set trap or net or other device whatsoever thereon for the purpose of hunting or catching game of any kind, shall be guilty of a misdemeanor, punishable by a fine of not more than \$1,000, or by imprisonment for not less than five days or more than thirty days, or by both fine and imprisonment.

"SEC. 3. That the superintendent or any guardian of such park is authorized to arrest forthwith any person engaged or who may have been engaged in committing any misdemeanor named in this act, and shall bring such person before any United States commissioner or judge of any district or circuit court of the United States within either of the districts within which the park is situated, and in the district within which the misdemeanor has been committed, for the purpose of holding him to answer for such misdemeanor, and then and there shall make complaint in due form.

"SEC. 4. That any person to whom land lying within any national parks may have been leased, who refuses to give up possession of the same to the United States after the termination of said lease, and after possession has been demanded for the United States by any park commissioner or the park superintendent, or any person retaining possession of land lying within the boundary of said park which he or she may have sold to the United States for park purposes and have received payment therefor, after possession of the same has been

demanded for the United States by any park commissioner or the park superintendent, shall be deemed guilty of trespass, and the United States may maintain an action for the recovery of the possession of the premises so withheld in the courts of the United States according to the statutes or code of practice of the State in which the park may be situated.

"SEC. 5. This act shall apply only to the military parks of the United States."

Reservoir Sites.—Feb. 17, 1897, the House of Representatives passed the following measure to provide for the use and occupation of reservoir sites reserved by the Geological Survey:

"*Be it enacted, etc.,* That all reservoir sites reserved or to be reserved by the Geological Survey be open to use and occupation under the right-of-way act of March 3, 1891.

"*Provided,* That the charges for water coming in whole or part from reservoir sites used and occupied under the provisions of this act shall always be subject to the control of the respective States and Territories in which such reservoirs are in whole or part situate."

The bill as originally reported was without any proviso in the way of safeguard. In support of the measure, Mr. Lacey, of Iowa, said:

"In 1888 a clause was inserted in a general appropriation bill which was not considered by either the Committee on Arid Lands or the Committee on the Public Lands, in the following language, and I read now from page 527 of the Acts of the Fiftieth Congress, near the top of the page:

"All the lands which may hereafter be designated or selected by such United States surveys for sites for reservoirs, ditches, or canals for irrigation purposes and all the lands made susceptible of irrigation by such reservoirs, ditches, or canals are from this time henceforth hereby reserved from sale as the property of the United States, and shall not be subject after the passage of this act to entry, settlement, or occupation until further provided by law."

"That bill appropriated \$100,000 for the purpose of setting apart and selecting certain sites for reservoirs for the impounding of water for the irrigation of the lands in the arid regions of the United States.

"This proposition was considered by the department as broad enough to practically withdraw from settlement, improvement, and occupation the arid lands of the country. Such was not the intention of the Committee on Appropriations, such was not the intention of the House, but this act, segregating the reservoir sites from occupation and settlement, drawn as it was, went further, and practically withdrew from settlement and improvement the arid region of the United States.

"In 1891 a bill was passed—the 'right-of-way bill'—which had been prepared, I believe, by a commission of nine Senators. This bill was intended to take the place of the crude provisions of the act of 1888, and it was the manifest purpose and intention of that bill to provide that the very reservoir sites that had been theretofore set apart by the Geological Survey should be used and occupied under this right-of-way act of 1891. But the act of 1891 provided that reservoirs of the United States should not be affected by the bill.

"The very pith and marrow of the whole question involved in the bill now being considered by the House is contained in the statement that it was not contemplated that these sites should be 'reserved from use, but for use.' The act of 1888, as amended by the act of 1891, as construed by the Secretary of the Interior, reserves these reservoirs from use and not for use. A reservoir site without water is entirely useless. The water is the particular thing in question, and the waters are controlled

by the States through which they flow, and not by the United States of America. These are surface waters, the waters of small streams not navigable, and the States control them.

"Now, the act of 1888, as amended by the act of 1891, having set apart the most eligible reservoir sites all over the United States, and having been construed as reserving them from occupation, the Government is placed in the position of a dog in the manger. We will neither eat the hay ourselves nor let anybody else eat it. The result is that these sites, instead of being flooded with water and a source of plenty and wealth to the regions in which they are located and where they ought to be used, stand as arid as the surrounding country, and persons who desire, under the act of 1891, to impound water, must select some less eligible site outside of the boundary of the Government site, and there collect the water. In a number of instances this has already been done, and the water has been diverted from the Government reservoir and used for irrigation, at an increased expense, because the natural sites have been reserved and are not allowed to be used for the purpose for which the Almighty evidently intended them in the formation of that country.

"It is proposed by amendment that the act of 1891 should be enlarged, so that not only corporations and individuals, under the right-of-way act, may select reservoir sites upon these lands, but that the States in which they are located may, by proper legislation and under suitable regulations to be prescribed by the Secretary of the Interior, likewise use them for the same purpose.

"There are a very large number of these sites. They have been selected at great expense in every part of the arid regions of the United States, with the possible exception of Idaho, and the Government does not propose now, for a single moment, to consider this proposition of inserting an appropriation into any of the various appropriation acts for the purpose of utilizing these sites at the expense of the United States. For all of these years the Government has not utilized a single one of them. The present director of the Geological Survey, I am informed, is heartily in favor of modifying the law, so that the sites selected may be utilized.

"The provision that was inserted into the appropriation bill of 1888 had this beneficial effect: It prevented settlers from going in and locating homesteads in the controlling portions of land especially suited to the purpose of a reservoir; it prevented private individuals from taking possession for the purpose of selling out subsequently to water companies; the act prevented them from blocking the way of progress by withdrawing these tracts from settlement. To that extent the act of 1888 has proved beneficial and wise, and these sites are now where they can be occupied. Shall they be used? Shall water companies, shall private individuals, shall the States in which the sites are located be permitted now to go on and exercise their right under the act of 1891 and utilize these sites, or shall they be continued indefinitely as a blotch or a blight upon the Territories or the States in which they are located?

"That, Mr. Speaker, is substantially all there is involved in this bill. The commissioner of the General Land Office thought that no further legislation was necessary; that under the act of 1891 the people had full power to do what is proposed by this bill; but the Secretary of the Interior, upon appeal, has held differently; and whatever we may think about the act of 1891, it is now adjudicated that under that act these reservoir sites can not be utilized, and therefore this bill becomes necessary."

Mr. Terry, of Arkansas, said, in urging the adop-

tion of certain additional safeguards that he had offered in the form of a substitute:

"Let us, here and now, when we are making this concession, reserve to the Government of the United States, through their Congress, the power to prevent injustice and abuse by any of these corporations. As I stated the other day, I have no arid lands in my district or State, but years ago I spent a good deal of time in the great West, and there I heard numerous complaints on all sides from the ranchmen of the extortion and monopolistic oppression that was practiced by some of the water companies. I understand that since that time some of the States have taken the matter in hand and have passed laws to regulate it; but there is a certain point beyond which we might lose the power of regulation. If we make no such regulation now, it might be contended at some time in the future that, as we had given the right without reserving the right to regulate charges, the States could not interpose to regulate them. The States may, of course, control the water within their borders to a certain extent, but many of these reservoirs are of a peculiar kind—lakes which do not flow at all except when there has been a considerable melting of snow on the mountains, so that the entire body of water is found on the Government's land.

"Now, if we give to companies or individuals the right to enter upon these reservoirs and do not make any reservation, it might become a question hereafter as to whether the States could control or regulate them.

"I seriously believe, Mr. Speaker, that when we are making a concession such as is proposed to be made here, we have the right to prescribe the conditions upon which it shall be made. I believe we have the power to say that any company or corporation that shall avail itself of the concessions that we here grant shall do so upon certain terms. You have a right to sell a piece of land to a man, and when you do sell it you part with the title, but at the same time you have a right to make the sale upon the condition that no saloon shall ever be put upon it. Now, when the United States makes a concession like this, it has a right to fix the conditions, and I have no doubt whatever that Congress has the right to make the reservation that is contemplated in the proposed fourth section of the substitute.

"Wherever the fact is brought to the attention of the Secretary of the Interior that there are already sufficient regulations provided for the protection of the people, he will not step in. But if it should ever be found that a corrupt set of officials have refused to protect the people, let us have the remedy here to protect the people in the benefits of those reservoir sites. Whenever it is found that the States have done their duty, then, under the provision I proposed, the matter will be left in the hands of the State. Where it is found that the Territorial Legislature has done its duty, this provision allows the control of the matter to remain in the hands of the local assembly. But until we have such an assurance, let us retain control of the matter here in our own hands."

The act was approved by the President, Feb. 26, 1897.

Mutilating United States Coins.—The Congress passed and the President, on March 3, 1897, approved the following act, to amend section 5459 of the Revised Statutes, prescribing the punishment for mutilating United States coins and for uttering or passing or attempting to utter or pass such mutilated coins:

"Sec. 5459. Every person who fraudulently, by any art, way, or means, defaces, mutilates, impairs, diminishes, falsifies, scales, or lightens, or causes

or procures to be fraudulently defaced, mutilated, impaired, diminished, falsified, scaled, or lightened, or willingly aids or assists in fraudulently defacing, mutilating, impairing, diminishing, falsifying, scaling, or lightening the gold or silver coins which have been, or which may hereafter, be coined at the mints of the United States, or any foreign gold or silver coins which are by law made current or are in actual use or circulation as money within the United States, or who passes, utters, publishes, or sells, or attempts to pass, utter, publish, or sell, or bring into the United States from any foreign place knowing the same to be defaced, mutilated, impaired, diminished, falsified, scaled, or lightened, with intent to defraud any person whatsoever, or has in his possession any such defaced, mutilated, impaired, diminished, falsified, scaled, or lightened coin, knowing the same to be defaced, mutilated, impaired, diminished, falsified, scaled, or lightened, with intent to defraud any person whatsoever, shall be imprisoned not more than five years and fined not more than \$2,000.

Much Discussed, but not Decided.—The policy of the Government with regard to Cuba was the subject of much discussion during this session of Congress, and various resolutions were introduced and discussed relating to the recognition of belligerent rights, Cuban independence, and the treatment of Americans on the island. But no important action was taken, as there was less disposition than heretofore to force the Executive into aggressive measures.

A bill to establish a uniform law on the subject of bankruptcy throughout the United States was debated in the Senate at great length as usual, and as usual the matter remained unsettled.

The affairs of the Pacific Railroads were the subject of discussion in various phases, but nothing definite was accomplished.

Both House and Senate passed an act for the appointment of a nonpartisan commission to collate information and to consider and recommend legislation to meet the problems presented by labor, agriculture, and capital; but the President failed to take up the matter before the close of the session.

One of the most interesting and important topics was the bill to amend the act entitled "An Act to incorporate the Maritime Canal Company of Nicaragua approved Feb. 20, 1889." It involved a change of Government policy in regard to the enterprise, and the Senate, though coming to no conclusion, gave the matter a full discussion.

Less important measures that went more or less close to a final passage were an act to amend section 1858 of the Revised Statutes, covering the appointment of Territorial officers; a bill to amend an act entitled "An Act to repeal the timber-culture laws and for other purposes"; an act for the prevention of the introduction and spread of contagious diseases into the United States; a bill providing for free homesteads on the public lands in Oklahoma Territory for actual and *bona fide* settlers, and reserving the public lands for that purpose; an act to simplify the system of making sales in the subsistence department to officers and enlisted men of the army; a bill to limit the effect of the regulation of commerce between the several States and with foreign countries in certain cases.

Three of the regular appropriation bills—the agricultural, the Indian, and the Sunday civil—fell by the way, the President taking no action before the close of the session. A deficiency bill failed through disagreement of the House and the Senate.

Miscellaneous.—Apart from the various private pension bills and measures granting American registry to certain vessels, the following minor acts were passed:

For the better improvement of the Government reservation at the city of Fort Smith, in the State of Arkansas, and for other purposes.

To validate the appointments, acts, and services of certain deputy United States marshals in the Indian Territory, and for other purposes.

Approving certain acts of the Legislative Assembly of the Territory of New Mexico, authorizing the issue of certain bonds of said Territory.

Providing for the erection of a lighthouse at Orient Point, Long Island, New York.

Authorizing every judge of a district court of the United States to appoint a stenographic reporter, and fixing the duties and compensation of such reporter.

To provide for appointment by brevet of active or retired officers of the United States army.

To provide for the removal of the Interstate National Bank of Kansas City, Kan., to Kansas City, Mo.

To aid and encourage the holding of the Tennessee Centennial Exposition at Nashville, Tenn., in the year 1897, and making an appropriation therefor.

To provide for an examination and survey of a water route from the mouth of the jetties at the city of Galveston, Texas, through the ship canal and up Buffalo Bayou to the city of Houston, Texas.

To permit a part of the Fort Lyon Military Reservation to be occupied, improved, and controlled for a soldier's home by the State of Colorado.

Relating to mortgages in the Indian Territory.

To grant a right of way through the Fort Spokane Military Reservation, in the State of Washington, to the St. Paul, Minneapolis and Manitoba Railway Company.

To amend an act entitled "An Act granting to the Eastern Nebraska and Gulf Railway Company right of way through the Omaha and Winnebago Indian reservations, in the State of Nebraska," by extending the time for the construction of said railway.

To extend the time for the completion of the St. Paul, Minneapolis and Manitoba Railway Company through the White Earth, Leech Lake, Chippewa, and Fond du Lac Indian reservations in the State of Minnesota.

To authorize the Muskogee, Oklahoma and Western Railroad Company to construct and operate a line of railway through Oklahoma and the Indian Territory, and for other purposes.

To provide times and places for holding terms of United States courts in Utah.

Extending the time within which the University of Utah shall occupy lands heretofore granted to it.

To provide a life-saving station at or near Point Arena, Mendocino County, in the State of California.

To amend the act creating the circuit court of appeals in regard to fees and costs, and for other purposes.

To vacate Sugar Loaf Reservoir site in Colorado, and to restore the lands contained in the same to entry.

To authorize the establishment of a life-saving station at or near Great Boars Head, on the coast of New Hampshire.

To enable the town of Flagstaff, in the Territory of Arizona, to issue bonds to construct a water system.

To amend an act entitled "An Act to forfeit certain lands heretofore granted for the purpose of aiding in the construction of railroads, and for other purposes, approved Sept. 29, 1890, and the several acts amendatory thereof."

To constitute a new division of the eastern judi-

cial district of Texas, and to provide for the holding of terms of court at Beaumont, Texas, and for the appointment of a clerk for said court.

To reorganize the judicial districts of Arkansas, and for other purposes.

To authorize the Secretary of the Interior to use Fort Bidwell for an Indian training school.

To prevent forest fires on the public domain.

Providing for a comprehensive index to Government publications from 1881 to 1893.

To authorize officers who served during the war of the rebellion in the regular army to bear the title, and, on occasions of ceremony, wear the uniform of their highest rank.

To amend "An Act to amend 'An Act to amend section 4400 of Title LII of the Revised Statutes of the United States, concerning the regulation of steam vessels,' approved Aug. 7, 1882"; and also to amend section 4414, Title LII, of the Revised Statutes, "Regulation of steam vessels."

To detach the county of Audrain from the western district of Missouri and to attach the same to the eastern district of said State of Missouri.

Concerning certain homestead lands in Florida.

To amend an act granting to the Duluth and Winnepeg Railroad Company a right of way through the Chippewa and White Earth Indian reservations in the State of Minnesota.

To quiet title and possession with respect to certain unconfirmed and located private land claims in Louisiana.

Continuing in force section 2 of the act approved June 3, 1896, entitled "An Act to repeal section 61 of an act to reduce taxation, to provide revenue for the Government, and for other purposes," which became a law Aug. 28, 1894. The subject-matter is the use of alcohol in the arts.

To amend an act entitled "An Act authorizing the appointment of receivers of national banks, and for other purposes," approved June 30, 1876, as amended by an act approved Aug. 3, 1892.

That lighthouses and other aids to navigation be established and erected as hereinafter set forth, to wit: Completing the removal of Cape San Blas light station, Florida, to Blacks Island. Building a light-keeper's dwelling at Egmont Key light station, Florida. Reconstructing the front beacon of Appalaehicola Bay range-light station, Florida. Establishing a light station at or near St. Joseph Point, in St. Joseph Bay, west coast of Florida. Establishing range lights to mark the channel over the bar, entrance to Choctawhatchee Bay. Repairing wharf and buildings of the depot at Key West, Fla.

To amend section 40 of "An Act to reduce the revenue and equalize duties on imports, and for other purposes," approved Oct. 1, 1890, so as to authorize the sale of forfeited domestic smoking opium to the highest bidder.

To extend and amend an act entitled "An Act to grant the right of way to the Kansas, Oklahoma Central and Southwestern Railway Company through the Indian Territory and Oklahoma Territory, and for other purposes," approved Dec. 21, 1893.

To prevent the purchasing of or speculating in claims against the Federal Government by United States officers.

To authorize the Montgomery, Hayneville and Camden Railroad Company to construct and maintain a bridge across the Alabama river between Lower Peachtree and Prairie Bluff, Ala.

To approve and ratify the construction of a bridge over and across Caddo lake, at Mooringsport, La., by the Kansas City, Shreveport and Gulf Railway Company.

To amend the act entitled "An Act to authorize

the construction of a bridge across the Missouri river at or near the city of Lexington, Mo.," approved July 26, 1894.

To authorize the construction of a bridge over the Monongahela river from the borough of Brad-dock to the township of Mifflin, Pa.

To authorize the construction and maintenance of a bridge across the St. Lawrence river.

To authorize the mayor and city council of Mon-roc and the police jury of the parish of Ouachita, La., to construct a traffic bridge across the Ouachita river opposite said city.

Authorizing the Kansas City, Watkins and Gulf Railway Company to construct and maintain a bridge across the Black river, in Louisiana.

Authorizing the Kansas City, Watkins and Gulf Railway Company to construct and maintain a bridge across Red river at the city of Alexandria, La.

To approve and ratify the construction of a bridge across the Sulphur river, in the State of Arkansas, by the Texarkana and Fort Smith Rail-way Company.

To approve and ratify the construction of a bridge across the Red river, between the States of Arkansas and Texas, at a point above the town of Fulton, in Arkansas, on said river, built by the Texarkana Northern Railway Company, but now owned and operated by the Texarkana and Fort Smith Railway Company, and to authorize the latter company to maintain said bridge over said water way, subject to certain stipulations and conditions.

To authorize a survey for construction of a bridge across the eastern branch of the Potomac river in line with Massachusetts Avenue extended east-ward.

Authorizing the construction of a bridge over the Mississippi river to the city of St. Louis, in the State of Missouri, from some suitable point be-tween the north line of St. Clair County, Illinois, and the southwest line of said county.

To authorize the construction by the Kansas City, Shreveport, and Gulf Railroad Company of a bridge across the Sabine river between the States of Louisiana and Texas.

To authorize the construction of a bridge over the Monongahela river from the city of McKees-port to the township of Mifflin, Alleghany County, Pa.

Extending the time for the completion of the bridge across the East river, between the city of New York and Long Island, now in course of construction, as authorized by the act of Congress ap-proved March 3, 1887.

To authorize the construction of a bridge across the Yazoo river at or near the city of Greenwood, in Leflore County, in the State of Mississippi.

To establish railroad bridges across the Cumber-land and Tennessee rivers in Kentucky.

Authorizing the construction of a bridge across the Columbia river, in the State of Washington.

To authorize the construction or acquisition of a bridge across the Rio Grande river at El Paso, in the State of Texas.

To amend an act entitled "An Act to authorize the Chattanooga Western Railway Company to construct a bridge across the Tennessee river near Chattanooga," giving the said company more time in which to begin and complete said bridge.

To repeal so much of chapter 189 of the Statutes of the United States of America, passed at the third session of the Fifty-third Congress, and ap-proved March 2, 1895, as requires that the lower portion of the Rock Island bridge shall not be oc-cupied by any street railway company without pay-ing a reasonable rent therefor.

To repeal chapter 1061, Fiftieth Congress, ap-proved Oct. 1, 1888, being an act to grant right of way through the military reservation at Fort Morgan to the Birmingham, Mobile and Navy Cove Harbor Railway Company, and for other pur-poses.

Relating to the improvement of East Chester creek, State of New York.

To amend an act authorizing the West Braddock Bridge Company to construct a bridge over the Monongahela river from the borough of Rankin to Mifflin township.

To revive and re-enact a law to authorize the Pittsburg, Monongahela and Wheeling Railroad Company to construct a bridge over the Mononga-hela river.

To authorize the Union Railroad Company to construct and maintain a bridge across the Monon-gahela river.

To grant to the Hudson Reservoir and Canal Company the right of way through the Gila River Indian Reservation.

To amend section 4 of an act entitled "An Act to define the jurisdiction of the police court of the District of Columbia."

To punish the impersonation of inspectors of the health and other departments of the District of Columbia.

Authorizing the commissioners of the District of Columbia to charge a fee for the issuance of tran-scripts from the records of the health department.

To extend North Capitol Street northward through the property of the Prospect Hill Ceme-tery, to pay for land taken for such purpose, and for other purposes.

To authorize the construction by the Duluth and North Dakota Railroad Company of two bridges across the Red River of the North between the States of Minnesota and North Dakota.

For the relief of farmers and truckmen in the city of Washington, D. C.

To prevent the spread of contagious diseases in the District of Columbia.

Regulating fraternal beneficiary societies, orders, or associations in the District of Columbia.

To cure the title to certain real estate in the Dis-trict of Columbia.

Declaring the Potomac Flats a public park, un-der the name of Potomac Park.

To remove doubts as to the power of the Supreme Court of the District of Columbia to provide for a vacancy in the office of attorney of the United States for the district of Columbia.

For the removal of snow and ice from the side-walks, cross walks, and gutters in the District of Columbia, and for other purposes.

To amend an act entitled "An Act to prohibit the interment of bodies in Graceland Cemetery, in the District of Columbia," passed Aug. 3, 1884.

To authorize the extension of the lines of the Metropolitan Railroad Company, of the District of Columbia.

Conferring jurisdiction upon the Supreme Court of the District of Columbia, or any court in said district having general equity jurisdiction, to de-cree a sale of real estate in said district belonging to insane persons for purpose of reinvestment, and for other purposes.

To provide for the payment of certain claims against the District of Columbia by drawback cer-tificates.

The Fifty-fifth Congress.—There was a special session of the Senate March 4, 1897, and Vice-President Hobart, who had taken the oath of office at the close of the last regular session of the Fifty-fourth Congress, took the chair. He said:

"Senators, to have been elected to preside over

the Senate of the United States is a distinction which any citizen would prize, and the manifestation of confidence which it implies is an honor which I sincerely appreciate.

"My gratitude and loyalty to the people of the country, to whom I owe this honor, and my duty to you, as well, demand such a conservative, equitable, and conscientious construction and enforcement of your rules as shall promote the well-being and prosperity of the people, and at the same time conserve the time-honored precedents and established traditions which have contributed to make this tribunal the most distinguished of the legislative bodies of the world.

"In entering upon the duties of the office to which I have been chosen, I feel a peculiar delicacy, for I am aware that your body, with whom, for a time, I will be associated, has had but a small voice in the selection of its presiding officer, and that I am called upon to conduct your deliberations, while not perhaps your choice in point of either merit or fitness.

"It will be my constant effort to aid you, so far as I may, in all reasonable expedition of the business of the Senate, and I may be permitted to express the belief that such expedition is the hope of the country. All the interests of good government and the advancement toward a higher and better condition of things call for prompt and positive legislation at your hands. To obstruct the regular course of wise and prudent legislative action after the fullest and freest discussion is neither consistent with true senatorial courtesy, conducive to the welfare of the people, nor in compliance with their just expectations.

"While assisting in the settlement of the grave questions which devolve upon the Senate of the United States it will be my endeavor to so guide its deliberations that its wisdom may be fruitful in works, at the same time exercising such fairness and impartiality within the rules of the Senate as shall deserve at least your good opinion for the sincerity of my effort.

"Unfamiliar with your rules and manner of procedure, I can only promise that I will bring all the ability I possess to the faithful discharge of every duty as it may devolve upon me, relying always upon your suggestions, your advice, and your co-operation, and I should feel unequal to the task did I not trustfully anticipate that indulgent aid and consideration which you have at all times given to my predecessors, and without which I could not hope to acquit myself to your satisfaction or with any degree of personal credit.

"It shall be my highest aim to justify the confidence the people have reposed in me by discharging my duties in such a manner as to lighten your labors, secure your appreciation of my honest effort to administer your rules with an eye single to the public good, and promote the pleasant and efficient transaction of the public business.

"I trust that our official and personal relations may be alike agreeable; that the friendships we may form here may be genuine and lasting, and that the work of the Senate may redound to the peace and honor of the country and the prosperity and happiness of all the people."

After roll call the ceremony of inauguration began; and the President-elect, having taken the oath of office, delivered the following inaugural address:

"Fellow-citizens: In obedience to the will of the people and in their presence, by the authority vested in me by this oath I assume the arduous and responsible duties of President of the United States, relying on the support of my countrymen and invoking the guidance of Almighty God. Our faith teaches that there is no safer reliance than upon the God of our fathers, who has so singularly

avored the American people in every national trial, and who will not forsake us so long as we obey his commandments and walk humbly in his footsteps.

"The responsibilities of the high trust to which I have been called—always of grave importance—are augmented by the prevailing business conditions, entailing idleness upon willing labor and loss to useful enterprises. The country is suffering from industrial disturbances from which speedy relief must be had. Our financial system needs some revision; our money is all good now, but its value must not further be threatened. It should all be put upon an enduring basis, not subject to easy attack, nor its stability to doubt or dispute. Our currency should continue under the supervision of the Government. The several forms of our paper money offer, in my judgment, a constant embarrassment to the Government and a safe balance in the Treasury. Therefore I believe it necessary to devise a system which, without diminishing the circulating medium or offering a premium for its contraction, will present a remedy for those arrangements which, temporary in their nature, might well in the years of our prosperity have been displaced by wiser provisions. With adequate revenue secured, but not until then, we can enter upon such changes in our fiscal laws as will, while insuring safety and volume to our money, no longer impose upon the Government the necessity of maintaining so large a gold reserve, with its attendant and inevitable temptations to speculation. Most of our financial laws are the outgrowth of experience and trial, and should not be amended without investigation and demonstration of the wisdom of the proposed changes. We must be both 'sure we are right' and 'make haste slowly.' If, therefore, Congress in its wisdom shall deem it expedient to create a commission to take under early consideration the revision of our coinage, banking, and currency laws, and give them that exhaustive, careful, and dispassionate examination that their importance demands, I shall cordially concur in such action. If such power is vested in the President, it is my purpose to appoint a commission of prominent, well-informed citizens of different parties, who will command public confidence both on account of their ability and special fitness for the work. Business experience and public training may thus be combined, and the patriotic zeal of the friends of the country be so directed that such a report will be made as to receive the support of all parties, and our finances cease to be the subject of mere partisan contention. The experiment is, at all events, worth a trial, and, in my opinion, it can but prove beneficial to the entire country.

"The question of international bimetallism will have early and earnest attention. It will be my constant endeavor to secure it by co-operation with the other great commercial powers of the world. Until that condition is realized when the parity between our gold and silver money springs from and is supported by the relative value of the two metals, the value of the silver already coined and of that which may hereafter be coined must be kept constantly at par with gold by every resource at our command. The credit of the Government, the integrity of its currency, and the inviolability of its obligations must be preserved. This was the commanding verdict of the people, and it will not be unheeded.

"Economy is demanded in every branch of the Government at all times, but especially in periods, like the present, of depression in business and distress among the people. The severest economy must be observed in all public expenditures, and ex-

travagance stopped wherever it is found, and prevented wherever in the future it may be developed. If the revenues are to remain as now, the only relief that can come must be from decreased expenditures. But the present must not become the permanent condition of the Government. It has been our uniform practice to retire, not increase, our outstanding obligations, and this policy must again be resumed and vigorously enforced. Our revenues should always be large enough to meet with ease and promptness not only our current needs and the principal and interest of the public debt, but to make proper and liberal provision for that most deserving body of public creditors, the soldiers and sailors and the widows and orphans who are the pensioners of the United States.

"The Government should not be permitted to run behind or increase its debt in times like the present. Suitably to provide against this is the mandate of duty—the certain and easy remedy for most of our financial difficulties. A deficiency is inevitable so long as the expenditures of the Government exceed its receipts. It can only be met by loans or an increased revenue. While a large annual surplus of revenue may invite waste and extravagance, inadequate revenue creates distrust and undermines public and private credit. Neither should be encouraged. Between more loans and more revenue there ought to be but one opinion. We should have more revenue, and that without delay, hindrance, or postponement. A surplus in the Treasury created by loans is not a permanent or safe reliance. It will suffice while it lasts, but it can not last long while the outlays of the Government are greater than its receipts, as has been the case during the past two years. Nor must it be forgotten that however much such loans may temporarily relieve the situation, the Government is still indebted for the amount of the surplus thus accrued, which it must ultimately pay, while its ability to pay is not strengthened, but weakened by a continual deficit. Loans are imperative in great emergencies to preserve the Government or its credit, but a failure to supply needed revenue in time of peace for the maintenance of either has no justification.

"The best way for the Government to maintain its credit is to pay as it goes—not by resorting to loans, but by keeping out of debt—through an adequate income secured by a system of taxation, external or internal, or both. It is the settled policy of the Government, pursued from the beginning and practiced by all parties and administrations, to raise the bulk of our revenue from taxes upon foreign productions entering the United States for sale and consumption, and avoiding, for the most part, every form of direct taxation, except in time of war. The country is clearly opposed to any needless additions to the subjects of internal taxation, and is committed by its latest popular utterance to the system of tariff taxation. There can be no misunderstanding, either, about the principle upon which this tariff taxation shall be levied. Nothing has ever been made plainer at a general election than that the controlling principle in the raising of revenue from duties on imports is zealous care for American interests and American labor. The people have declared that such legislation should be had as will give ample protection and encouragement to the industries and the development of our country. It is, therefore, earnestly hoped and expected that Congress will, at the earliest practicable moment, enact revenue legislation that shall be fair, reasonable, conservative, and just, and which, while supplying sufficient revenue for public purposes, will still be signally beneficial and helpful to every section and every enterprise of the people. To this policy we are all, of whatever par-

ty, firmly bound by the voice of the people—a power vastly more potential than the expression of any political platform. The paramount duty of Congress is to stop deficiencies by the restoration of that protective legislation which has always been the firmest prop of the Treasury. The passage of such a law or laws would strengthen the credit of the Government both at home and abroad, and go far toward stopping the drain upon the gold reserve held for the redemption of our currency, which has been heavy and well-nigh constant for several years.

"In the revision of the tariff especial attention should be given to the re-enactment and extension of the reciprocity principle of the law of 1890, under which so great a stimulus was given to our foreign trade in the new and advantageous markets for our surplus agricultural and manufactured products. The brief trial given this legislation amply justifies a further experiment and additional discretionary power in the making of commercial treaties, the end in view always to be the opening up of new markets for the products of our country, by granting concessions to the products of other lands that we need and can not produce ourselves, and which do not involve any loss of labor to our own people, but tend to increase their employment.

"The depression of the past four years has fallen with especial severity upon the great body of toilers of the country, and upon none more than the holders of small farms. Agriculture has languished and labor suffered. The revival of manufacturing will be a relief to both. No portion of our population is more devoted to the institutions of free government nor more loyal in their support, while none bears more cheerfully or fully its proper share in the maintenance of the Government or is better entitled to its wise and liberal care and protection. Legislation helpful to producers is beneficial to all. The depressed condition of industry on the farm and in the mine and factory has lessened the ability of the people to meet the demands upon them, and they rightfully expect that not only a system of revenue shall be established that will secure the largest income with the least burden, but that every means will be taken to decrease, rather than increase, our public expenditure. Business conditions are not the most promising. It will take time to restore the prosperity of former years. If we can not promptly attain it, we can resolutely turn our faces in that direction and aid its return by friendly legislation. However troublesome the situation may appear, Congress will not, I am sure, be found lacking in disposition or ability to relieve it as far as legislation can do so. The restoration of confidence and the revival of business, which men of all parties so much desire, depend more largely upon the prompt, energetic, and intelligent action of Congress than upon any other single agency affecting the situation.

"It is inspiring, too, to remember that no great emergency in the one hundred and eight years of our eventful national life has ever arisen that has not been met with wisdom and courage by the American people, with fidelity to their best interests and highest destiny, and to the honor of the American name. These years of glorious history have exalted mankind and advanced the cause of freedom throughout the world and immeasurably strengthened the precious free institutions which we enjoy. The people love and will sustain these institutions. The great essential to our happiness and prosperity is that we adhere to the principles upon which the Government was established and insist upon their faithful observance.

"Equality of rights must prevail and our laws be always and everywhere respected and obeyed. We

may have failed in the discharge of our full duty as citizens of the great republic, but it is consoling and encouraging to realize that free speech, a free press, free thought, free schools, the free and unmolested right of religious liberty and worship, and free and fair elections are dearer and more universally enjoyed to-day than ever before. These guarantees must be sacredly preserved and wisely strengthened. The constituted authorities must be cheerfully and vigorously upheld. Lynching must not be tolerated in a great and civilized country like the United States, courts—not mobs—must execute the penalties of the law. The preservation of public order, the right of discussion, the integrity of our courts, and the orderly administration of justice must continue forever the rock of safety upon which our Government securely rests.

“One of the lessons taught by the late election, which all can rejoice in, is that the citizens of the United States are both a law-respecting and law-abiding people, not easily swerved from the path of patriotism and honor. This is in entire accord with the genius of our institutions, and but emphasizes the advantages of inculcating even a greater love for law and order in the future. Immunity should be granted to none who violate the laws, whether individuals, corporations, or communities; and as the Constitution imposes upon the President the duty of both its own execution and of the statutes enacted in pursuance of its provisions, I shall endeavor carefully to carry them into effect. The declaration of the party now restored to power has been in the past that of ‘opposition to all combinations of capital organized in trusts, or otherwise to control arbitrarily the condition of trade among our citizens,’ and it has supported ‘such legislation as will prevent the execution of all schemes to oppress the people by undue charges on their supplies, or by unjust rates for the transportation of their products to market.’ This purpose will be steadily pursued, both by the enforcement of the laws now in existence and the recommendation and support of such new statutes as may be necessary to carry it into effect.

“Our naturalization and immigration laws should be further improved to the constant promotion of a safer, a better, and a high citizenship. A grave peril to the republic would be a citizenship too ignorant to understand, or too vicious to appreciate the great value and beneficence of our institutions and laws, and against all who come here to make war upon them our gates must be promptly and tightly closed. Nor must we be unmindful of the need of improvement among our own citizens, but with the zeal of our forefathers encourage the spread of knowledge and free education. Illiteracy must be banished from the land if we shall attain that high destiny as the foremost of the enlightened nations of the world, which under Providence we ought to achieve.

“Reforms in the civil service must go on. But the changes should be real and genuine, not perfunctory or prompted by a zeal in behalf of any party simply because it happens to be in power. As a member of Congress I voted and spoke in favor of the present law, and I shall attempt its enforcement in the spirit in which it was enacted. The purpose in view was to secure the most efficient service of the best men who would accept appointment under Government, retaining faithful and devoted public servants in office, but shielding none, under the authority of any rule or custom, who are inefficient, incompetent, or unworthy. The best interests of the country demand this, and the people heartily approve the law wherever and whenever it has been thus administered.

“Congress should give prompt attention to the

restoration of our American merchant marine, once the pride of the seas in all the great ocean highways of commerce. To my mind few more important subjects so imperatively demand its intelligent consideration. The United States has progressed with marvelous rapidity in every field of enterprise and endeavor until we have become foremost in nearly all the great lines of inland trade, commerce, and industry. Yet, while this is true, our American merchant marine has been steadily declining until it is now lower both in the percentage of tonnage and the number of vessels employed than it was prior to the civil war. Commendable progress has been made of late years in the upbuilding of the American navy, but we must supplement these efforts by providing as a proper consort for it a merchant marine amply sufficient for our own carrying trade to foreign countries. The question is one that appeals both to our business necessities and the patriotic aspirations of a great people.

“It has been the policy of the United States since the foundation of the Government to cultivate relations of peace and amity with all the nations of the world, and this accords with my conception of our duty now. We have cherished the policy of non-interference with the affairs of foreign governments wisely inaugurated by Washington, keeping ourselves free from entanglement either as allies or foes, content to leave undisturbed with them the settlement of their own domestic concerns. It will be our aim to pursue a firm and dignified foreign policy, which shall be just, impartial, ever watchful of our national honor, and always insisting on the enforcement of the lawful rights of American citizens everywhere. Our diplomacy should seek nothing more and accept nothing less than is due us. We want no wars of conquest; we must avoid the temptation of territorial aggression. War should never be entered upon until every agency of peace has failed; peace is preferable to war in almost every contingency.

“Arbitration is the true method of settlement of international as well as local or individual differences. It was recognized as the best means of adjustment of differences between employers and employees by the Forty-ninth Congress, in 1886, and its application was extended to our diplomatic relations by the unanimous concurrence of the Senate and House of the Fifty-first Congress in 1890. The latter resolution was accepted as the basis of negotiations with us by the British House of Commons in 1893, and upon our invitation a treaty of arbitration between the United States and Great Britain was signed at Washington and transmitted to the Senate for its ratification in January last. Since this treaty is clearly the result of our own initiative; since it has been recognized as the leading feature of our foreign policy throughout our entire national history—the adjustment of difficulties by judicial methods rather than by force of arms; and since it presents to the world the glorious example of reason and peace, not passion and war, controlling the relations between two of the greatest nations of the world, an example certain to be followed by others, I respectfully urge the early action of the Senate thereon, not merely as a matter of politics, but duty to mankind. The importance and moral influence of the ratification of such a treaty can hardly be overestimated in the cause of advancing civilization. It may well engage the best thought of the statesmen and people of every country, and I can not but consider it fortunate that it was reserved to the United States to have the leadership in so grand a work.

“It has been the uniform practice of each President to avoid, as far as possible, the convening of Congress in extraordinary session. It is an exam-

ple which, under ordinary circumstances and in the absence of a public necessity, is to be commended, but a failure to convene the representatives of the people in Congress in extra session when it involves a public duty, places a responsibility of such neglect upon the Executive himself. The condition of the public treasury, as has been indicated, demands the attention of Congress. It alone has the power to provide revenue for the Government. Not to convene it under such circumstances, I can view in no other sense than the neglect of a plain duty. I do not sympathize with the sentiment that Congress in session is dangerous to our business interests. Its members are the agents of the people, and their presence at the seat of Government in the execution of the sovereign will should not operate as an injury, but a benefit. There could be no better time to put the Government upon a sound and economical basis than now. The people have only recently voted that this should be done, and nothing is more binding upon the agents of their will than the obligation of immediate action. It has always seemed to me that the postponement of the meetings of Congress until more than a year after it has been chosen deprived Congress too often of the inspiration of the popular will and the country of the corresponding benefits. It is evident, therefore, that to postpone action in the presence of so great a necessity would be unwise on the part of the Executive because unjust to the interests of the people. Our actions now will be freer from mere partisan consideration than if the question of tariff revision was postponed until the reorganization of Congress. We are nearly two years from a congressional election, and politics can not so greatly distract us as if such contest was immediately pending. We can approach the problem calmly and patriotically, without fearing its effect upon an early election. Our fellow-citizens who may disagree with us upon the character of this legislation prefer to have the question settled now, even against their preconceived views—and perhaps settled so reasonably, as I trust and believe it will, to insure great permanence—than to have further uncertainty menacing the varied business interests of the United States. Again, whatever action Congress may take will be given a fair opportunity for trial before the people are called to pass judgment on it, and this I consider a great essential to the rightful and lasting settlement of the question. In view of these considerations I shall deem it my duty as President to convene Congress in extraordinary session on Monday, the 15th day of March, 1897.

“In conclusion, I congratulate the country upon the fraternal spirit of the people and the manifestation of good will everywhere so apparent. The recent election not only most fortunately demonstrated the obliteration of sectional or geographical lines, but to some extent also the prejudices which for years have distracted our councils and marred our true greatness as a nation. The triumph of the people, whose verdict is carried into effect to-day, is not the triumph of one section, nor wholly of one party, but of all sections and all the people. The North and the South no longer divide on the old lines, but upon principles and policies; and in this fact surely every lover of the country can find cause for true felicitation. Let us rejoice in and cultivate this spirit; it is ennobling, and will be both a gain and blessing to our beloved country. It will be my constant aim to do nothing, and permit nothing to be done, that will arrest or disturb this growing sentiment of unity and co-operation, this revival of esteem and affiliation which now animates so many thousands in both the old antagonistic sections, but I shall cheerfully do everything possible to promote and increase it.

“Let me again repeat the words of the oath administered by the Chief Justice, which, in their respective spheres, so far as applicable, I would have all my countrymen observe: ‘I will faithfully execute the office of President of the United States, and will, to the best of my ability, preserve, protect, and defend the Constitution of the United States.’ This is the obligation I have reverently taken before the Lord Most High. To keep it will be my single purpose, my constant prayer; and I shall confidently rely upon the forbearance and assistance of all the people in the discharge of my solemn responsibilities.”

March 5 the Senate confirmed the Cabinet appointments; and March 6 the President issued a proclamation for an extra session of the Congress to assemble March 15, 1897.

On that day the first session of the Fifty-fifth Congress began.

The Senate was composed as follows, the date given with each name indicating the close of the term:

<i>Alabama.</i>		<i>Massachusetts.</i>	
1901. John T. Morgan, D.	1899. Henry C. Lodge, R.	1901. George F. Hoar, R.	
1903. Edmund W. Pettus, D.			
<i>Arkansas.</i>		<i>Michigan.</i>	
1901. James H. Berry, D.	1899. Julius C. Burrows, R.	1901. James McMillan, R.	
1903. James K. Jones, D.			
<i>California.</i>		<i>Minnesota.</i>	
1899. Stephen M. White, D.	1899. Cushman K. Davis, R.	1901. Knute Nelson, R.	
1903. George C. Perkins, R.	1901. Knute Nelson, R.		
<i>Colorado.</i>		<i>Mississippi.</i>	
1901. Edward O. Wolcott, R.	1899. James Z. George, D.	1901. Edward C. Walthall, D.	
1903. Henry M. Teller, R.			
<i>Connecticut.</i>		<i>Missouri.</i>	
1899. Joseph R. Hawley, R.	1899. Francis M. Cockrell, D.	1903. George G. Vest, D.	
1903. Orville H. Platt, R.			
<i>Delaware.</i>		<i>Montana.</i>	
1899. George Gray, D.	1899. Lee Mantle, R.	1901. Thomas H. Carter, R.	
1901. Richard R. Kenney, D.			
<i>Florida.</i>		<i>Nebraska.</i>	
1899. Samuel Pasco, D.	1899. William V. Allen, P.	1901. John M. Thurston, R.	
1903. Stephen R. Mallory, D.	1901. John M. Thurston, R.		
<i>Georgia.</i>		<i>Nevada.</i>	
1901. Augustus O. Bacon, D.	1899. William M. Stewart, P.	1903. John P. Jones, P.	
1903. Alex. Stephens Clay, D.			
<i>Idaho.</i>		<i>New Hampshire.</i>	
1901. George L. Shoup, R.	1901. William E. Chandler, R.	1903. Jacob H. Gallinger, R.	
1903. Henry Heitfield, R.			
<i>Illinois.</i>		<i>New Jersey.</i>	
1901. Shelby M. Cullom, R.	1899. James Smith, Jr., D.	1901. William J. Sewell, R.	
1903. William E. Mason, R.	1901. William J. Sewell, R.		
<i>Indiana.</i>		<i>New York.</i>	
1899. David Turpie, D.	1899. Edward Murphy, Jr., D.	1903. Thomas C. Platt, R.	
1903. Chas. W. Fairbanks, R.	1903. Thomas C. Platt, R.		
<i>Iowa.</i>		<i>North Carolina.</i>	
1901. John H. Gear, R.	1901. Marion Butler, P.	1903. Jeter C. Pritchard, F.	
1903. William B. Allison, R.	1903. Jeter C. Pritchard, F.		
<i>Kansas.</i>		<i>North Dakota.</i>	
1901. Lucien Baker, R.	1899. William N. Roach, D.	1903. H. C. Hansbrough, R.	
1903. William A. Harris, P.	1903. H. C. Hansbrough, R.		
<i>Kentucky.</i>		<i>Ohio.</i>	
1901. William Lindsay, D.	1899. Marcus A. Hanna, R.*	1903. Joseph B. Foraker, R.	
1903. William J. Deboe, R.	1903. Joseph B. Foraker, R.		
<i>Louisiana.</i>		<i>Oregon.</i>	
1901. Donelson Caffery, D.	1901. George W. McBride, R.		
1903. Samuel D. McEnery, D.			
<i>Maine.</i>		<i>Pennsylvania.</i>	
1899. Eugene Hale, R.	1899. Matthew S. Quay, R.	1903. Boies Penrose, R.	
1901. William P. Frye, R.	1903. Boies Penrose, R.		
<i>Maryland.</i>		<i>Rhode Island.</i>	
1899. Arthur P. Gorman, D.	1899. Nelson W. Aldrich, R.	1901. George P. Wetmore, R.	
1903. Geo. L. Wellington, R.	1901. George P. Wetmore, R.		

* To succeed John Sherman, resigned.

South Carolina.

1901. Benjamin R. Tillman, D
1903. John L. McLaurin, D.*

South Dakota.

1901. Richard F. Pettigrew, R.
1903. James H. Kyle, P.

Tennessee.

1899. William B. Bate, D.
1901. Thomas B. Turley, D.†

Texas.

1899. Roger Q. Mills, D.
1901. Horace Chilton, D.

Utah.

1899. Frank J. Cannon, R.
1903. Joseph L. Rawlins, D.

Vermont.

1899. Redfield S. Proctor, R.
1903. Justin S. Morrill, R.

Virginia.

1899. John W. Daniel, D.
1901. Thomas S. Martin, D.

Washington.

1899. John L. Wilson, R.
1903. George F. Turner, P.

West Virginia.

1899. Charles J. Faulkner, D.
1901. Stephen B. Elkins, R.

Wisconsin.

1899. John L. Mitchell, D.
1903. John C. Spooner, R.

Wyoming.

1899. Clarence D. Clark, R.
1901. Francis E. Warren, R.

Kansas.

Jere. D. Botkin, At large, F.
Case Broderick, R.
M. S. Peters, D.
E. R. Ridgley, P.
Charles Curtis, R.
W. D. Vincent, P.
N. B. McCormick, P.
Jerry Simpson, P.

Kentucky.

Charles K. Wheeler, D.
John D. Clardy, D.
John S. Rhea, D.
David H. Smith, D.
Walter Evans, R.
Albert S. Berry, D.
Evan E. Settle, D.
George M. Davison, R.
Samuel J. Pugh, R.
Thomas Y. Fitzpatrick, D.
David G. Colson, R.

Louisiana.

Adolph Meyer, D.
Robert C. Davey, D.
Robert Broussard, D.
Henry W. Ogden, D.
S. T. Baird, D.
Samuel M. Robertson, D.

Maine.

Thomas B. Reed, R.
Nelson Dingley, Jr., R.
Seth L. Milliken, R.*
Charles A. Boutelle, R.

Maryland.

Isaac A. Barber, R.
William B. Baker, R.
William S. Booze, R.
William W. McIntyre, R.
Sydney E. Mudd, R.
John McDonald, R.

Massachusetts.

Ashley B. Wright, R.
Frederick H. Gillett, R.
Joseph Henry Walker, R.
George W. Weymouth, R.
William S. Knox, R.
William H. Moody, R.
William E. Barrett, R.
Samuel W. McCall, R.
John F. Fitzgerald, D.
S. J. Barrows, R.
Charles F. Sprague, R.
William C. Lovering, R.
John Simpkins, R.

Michigan.

John B. Corliss, R.
George Spalding, R.
Albert M. Todd, F.
Edward L. Hamilton, R.
William Alden Smith, R.
Samuel W. Smith, R.
Horace G. Snover, R.
Ferdinand D. Brucker, D.
Roswell P. Bishop, R.
Rosseau O. Crump, R.
William S. Mesick, R.
Carlos D. Sheldon, R.

Minnesota.

James A. Tawney, R.
James T. McCleary, R.
Joel P. Heatwole, R.
F. C. Stevens, R.
Loren Fletcher, R.
Page Morris, R.
Frank M. Eddy, R.

Mississippi.

John M. Allen, D.
W. V. Sullivan, D.
Thomas C. Catchings, D.
A. F. Fox, D.
John S. Williams, D.
C. W. F. Love, D.
Patrick Henry, D.

Missouri.

Richard P. Giles, D.†
Robert N. Bodine, D.
Alexander M. Dockery, D.
Charles F. Cochran, D.
William S. Cowherd, D.
David A. De Armond, D.
James A. Cooney, D.
Richard P. Bland, D.
Champ Clark, D.
Richard Bartholdt, R.
Charles F. Joy, R.
Charles E. Pearce, R.
Edward A. Robb, D.
William D. Vandiver, D.
M. E. Benton, D.

Montana.

Charles S. Hartman, S.

Nebraska.

Jesse B. Strode, R.
David H. Mercer, R.
Samuel Maxwell, F.
William L. Stark, F.
J. D. Sutherland, F.
William L. Green, F.

Nevada.

Francis G. Newlands, S.

New Hampshire.

Cyrus A. Sulloway, R.
Frank G. Clark, R.

New Jersey.

H. C. Loudenslager, R.
John J. Gardner, R.
Benjamin F. Howell, R.
Mahlon Pitney, R.
James F. Stewart, R.
Richard Wayne Parker, R.
Thomas McEwan, Jr., R.
Charles Newell Fowler, R.

New York.

Joseph M. Belford, R.
Dennis M. Hurley, R.
Francis H. Wilson, R.
Israel F. Fischer, R.
Charles G. Bennett, R.
James R. Howe, R.
John H. G. Vehslage, D.
John M. Mitchell, R.
Thomas J. Bradley, D.
Amos J. Cummings, D.
John Henry Ketcham, R.
Aaron V. B. Cochran, R.
George N. Southwick, R.
David F. Wilbur, R.
Lucien L. Littauer, R.
Wallace T. Foote, Jr., R.
Charles A. Chickering, R.
John S. Sherman, R.
George W. Ray, R.
James J. Belden, R.

The House of Representatives was composed as follows:

Alabama.

George W. Taylor, D.
Jesse F. Stallings, D.
Henry D. Clayton, D.
T. S. Plowman, D.
Willis Brewer, D.
John H. Bankhead, D.
Milford W. Howard, P.
Joseph Wheeler, D.
Oscar W. Underwood, D.

Arkansas.

Philip D. McCulloch, D.
John S. Little, D.
Thomas C. McRae, D.
William L. Terry, D.
Hugh A. Dinsmore, D.
H. S. Brundidge, D.

California.

John A. Barham, R.
Marion De Vries, D.
Samuel G. Hilborn, R.
James G. Maguire, D.
Eugene F. Loud, R.
C. A. Barlow, P.
G. H. Castle, P.

Colorado.

John F. Shafroth, S.
John C. Bell, P.

Connecticut.

E. Stevens Henry, R.
Nehemiah D. Sperry, R.
Charles A. Russell, R.
Ebenezer J. Hill, R.

Delaware.

L. Irving Handy, D.

Florida.

Stephen M. Sparkman, D.
R. W. Davis, D.

Georgia.

Rufus E. Lester, D.
James M. Griggs, D.
E. B. Lewis, D.
W. C. Adamson, D.
Leonidas F. Livingston, D.
Charles L. Bartlett, D.
John W. Maddox, D.
W. M. Howard, D.
Farish Carter Tate, D.
W. H. Fleming, D.
W. G. Brantley, D.

Idaho.

James Gunn, D.

Illinois.

James R. Mann, R.
William Lorimer, R.
Hugh R. Belknap, R.
Daniel W. Mills, R.
George E. White, R.
Edward D. Cooke, R. †
George E. Foss, R.
Albert J. Hopkins, R.
Robert R. Hitt, R.
George W. Prince, R.
Walter Reeves, R.
Joseph G. Cannon, R.
Vespasian Warner, R.
Joseph V. Graff, R.
Benjamin F. Marsh, R.
W. H. Hinrichsen, D.
James A. Connolly, R.
Thomas M. Jett, F.
Andrew J. Hunter, D.
James R. Campbell, D.
Jehu Baker, F.
George W. Smith, R.

Indiana.

James A. Hemenway, R.
Robert W. Miers, D.
W. T. Zenor, D.
William S. Holman, D. ‡
George W. Faris, R.
Henry U. Johnson, R.
Jesse Overstreet, R.
Charles L. Henry, R.
Charles B. Landis, R.
E. D. Crumpacker, R.
George W. Steele, R.
James M. Robinson, F.
Lemuel W. Royse, R.

Iowa.

Samuel M. Clark, R.
George M. Curtis, R.
David B. Henderson, R.
Thomas Updegraff, R.
Robert G. Cousins, R.
John F. Lacey, R.
John A. T. Hull, R.
William P. Hepburn, R.
Alva L. Hager, R.
Jonathan P. Dolliver, R.
George D. Perkins, R.

* To succeed J. H. Earle, deceased.

† To succeed Isham G. Harris, deceased.

‡ Died June 23, 1897.

* Died April 22, 1897.

* Died April 18, 1897; succeeded by Edwin C. Burleigh.

† Died Nov. 17, 1896.

William Sulzer, D.
George B. McClellan, D.
Richard C. Shannon, R.
Lemuel E. Quigg, R.
Philip B. Low, R.
William L. Ward, R.
Benjamin B. Odell, Jr., R.

Sereno E. Payne, R.
Charles W. Gillet, R.
James W. Wadsworth, R.
Henry C. Brewster, R.
Rowland B. Mahany, R.
De Alva S. Alexander, R.
Warren B. Hooker, R.

North Carolina.

Harry Skinner, P.
George H. White, R.
John E. Fowler, P.
William F. Strowd, P.
W. W. Kitchin, D.

Charles H. Martin, P.
A. C. Shuford, P.
Romulus Z. Linney, R.
Richmond Pearson, R.

North Dakota.

Martin N. Johnson, R.

Ohio.

William B. Shattuc, R.
Jacob H. Bromwell, R.
John L. Brenner, F.
George A. Marshall, F.
David Meekison, F.
Seth W. Brown, R.
Walter L. Weaver, R.
Archibald Lybrand, R.
James H. Southard, R.
Lucien J. Fenton, R.
Charles H. Grosvenor, R.

John J. Lentz, D.
James A. Norton, D.
Winfield S. Kerr, R.
Henry C. Van Voorhis, R.
Lorenzo Danford, R.
John A. McDowell, F.
Robert W. Taylor, R.
Stephen A. Northway, R.
Clifton B. Beach, R.
Theodore E. Burton, R.

Oregon.

Thomas H. Tongue, R.

William R. Ellis, R.

Pennsylvania.

Galusha A. Grow, At large, R.
S. A. Davenport, At large, R.
Henry H. Bingham, R.
Robert Adams, Jr., R.
William McAleer, D.
James Rankin Young, R.
Alfred C. Harmer, R.
Thomas S. Butler, R.
Irving P. Wanger, R.
William S. Kirkpatrick, R.
Daniel Ermentrout, D.
Marriott Brosius, R.
William Connell, R.
Morgan B. Williams, R.
Charles N. Brumm, R.

R. Martin E. Olmstead, R.
James H. Coddington, R.
Horace B. Packer, R.
Monroe H. Kulp, R.
Thaddeus M. Mahon, R.
George J. Benner, D.
Josiah D. Hicks, R.
E. E. Robbins, R.
John Dalzell, R.
William A. Stone, R.
Ernest F. Acheson, R.
James J. Davidson, R.*
J. C. Sturtevant, R.
Charles W. Stone, R.
William C. Arnold, R.

Rhode Island.

Melville Bull, R.

Adin B. Capron, R.

South Carolina.

William Elliott, D.
W. Jasper Talbert, D.
Asbury C. Latimer, D.
Stanyarne Wilson, D.

Thomas J. Strait, D.
John L. McLaurin, D.
J. William Stokes, D. †

South Dakota.

John E. Kelly, At large, D. F. Knowles, At large, P.

Tennessee.

Walter P. Brownlow, R.
Henry R. Gibson, R.
John A. Moon, D.
Benton McMillin, D.
James D. Richardson, D.

John Wesley Gaines, D.
Nicholas N. Cox, D.
T. W. Sims, D.
Rice A. Pierce, D.
E. W. Carmack, D.

Texas.

Thomas H. Ball, D.
Sam. Bronson Cooper, D.
R. C. De Graffenreid, D.
John W. Crawford, D.
Joseph W. Bailey, D.
R. E. Burke, D.
R. L. Henry, D.

Samuel W. T. Lanham, D.
Joseph D. Sayers, D.
R. B. Hawley, R.
Rudolph Kleberg, D.
J. L. Slayden, D.
John H. Stephens, D.

Utah.

William H. King, D.

Vermont.

H. Henry Powers, R.

William W. Grout, R.

Virginia.

William A. Jones, D.
William A. Young, D.
John B. Lamb, D.
Sydney P. Epes, D.
Claude A. Swanson, D.

Peter J. Otey, D.
James Hays, D.
J. F. Rixey, D.
James A. Walker, R.
Jacob Yost, R.

Washington.

James H. Lewis, At large, F. William C. Jones, At large, F.

West Virginia.

Blackburn B. Dovenor, R.
Alston G. Dayton, R.

Charles P. Dorr, R.
Warren Miller, R.

Wisconsin.

Henry A. Cooper, R.
Edward Sauerhering, R.
Joseph W. Babcock, R.
Theobald Otjen, R.
Samuel S. Barney, R.

J. H. Davidson, R.
Michael Griffin, R.
Edward S. Minor, R.
Alexander Stewart, R.
John J. Jenkins, R.

Wyoming.

John E. Osborne, D.

The Territorial Delegates were as follow :

Arizona—Marcus A. Smith, D.
New Mexico—H. B. Ferguson, D.
Oklahoma—T. Y. Callahan, F.

After the roll call the House proceeded to the election of Speaker, and Thomas B. Reed, of Maine, was chosen by a vote of 200, to 114 for Joseph W. Bailey, of Texas, 21 for John C. Bell, of Colorado, and 1 for Francis G. Newlands, of Nevada.

On taking the chair, Mr. Reed said :

"Gentlemen of the House of Representatives, it has been the custom for more than a century for Speakers-elect to so fully express their gratitude and their sense of honor conferred that the language by which thanks are conveyed has been long ago exhausted. Will you pardon me if I confess that on all the occasions when I have stood here I have been more impressed by the sense of responsibility than cheered by the sentiment of thankfulness?"

"Yet I appreciate—no man more—the high honor of your vote and the confidence which has dictated it. But high as the honor is, it will surely fade unless your favor is permanent. I can not, having had experience, expect to please all of you always; but I do hope, with your kind assistance and your kinder forbearance, to administer justice to each member and to both sides of the Chamber, under the rules established by the House of Representatives, without fear, favor, or the hope of reward."

Alexander McDowell, of Pennsylvania, was then chosen Clerk; Benjamin F. Russell, of Missouri, Sergeant-at-Arms; William J. Glenn, of New York, Doorkeeper; Joseph C. McElroy, of Ohio, Postmaster; and Henry M. Conden, of Michigan, Chaplain.

The President, being notified that the Congress was organized and ready for business, sent in the following message :

To the Congress of the United States :

Regretting the necessity which has required me to call you together, I feel that your assembling in extraordinary session is indispensable because of the condition in which we find the revenues of the Government. It is conceded that its current expenditures are greater than its receipts, and that such a condition has existed for now more than three years. With unlimited means at our command, we are presenting the remarkable spectacle of increasing our public debt by borrowing money to meet the ordinary outlays incident upon even an economical and prudent administration of the Government. An examination of the subject discloses this fact in every detail and leads inevitably to the conclusion that the condition of the revenue which allows it is unjustifiable and should be corrected.

We find by the reports of the Secretary of the Treasury that the revenues for the fiscal year ending June 30, 1892, from all sources were \$425,868,260.22, and the expenditures for all purposes were \$415,953,806.56, leaving an excess of receipts over expenditures of \$9,914,453.66. During that fiscal year \$40,570,467.98 were paid upon the public debt, which had been reduced since March 1, 1889, \$259,076,890, and the annual interest charge decreased \$11,684,576.60. The receipts of the Government from all sources during the fiscal year ending June 30, 1893, amounted to \$461,716,561.94, and its expenditures to \$459,374,887.65, showing an excess of receipts over expenditures of \$2,341,674.29.

* Died Jan. 2, 1897.

† Resigned May 31, 1897.

Since that time the receipts of no fiscal year, and, with but few exceptions, of no month of any fiscal year, have exceeded the expenditures. The receipts of the Government from all sources during the fiscal year ending June 30, 1894, were \$372,802,498.29, and its expenditures \$442,605,758.87, leaving a deficit, the first since the resumption of specie payments, of \$69,803,260.58. Notwithstanding there was a decrease of \$16,769,128.78 in the ordinary expenses of the Government, as compared with the previous fiscal year, its income was still not sufficient to provide for its daily necessities, and the gold reserve in the Treasury for the redemption of greenbacks was drawn upon to meet them. But this did not suffice, and the Government then resorted to loans to replenish the reserve.

In February, 1894, \$50,000,000 in bonds were issued, and in November following a second issue of \$50,000,000 was deemed necessary. The sum of \$117,171,795 was realized by the sale of these bonds, but the reserve was steadily decreased until, on Feb. 8, 1895, a third sale of \$62,315,400 in bonds, for \$65,116,244, was announced to Congress.

The receipts of the Government for the fiscal year ending June 30, 1895, were \$390,373,203.30, and the expenditures \$433,178,426.48, showing a deficit of \$42,805,223.18. A further loan of \$100,000,000 was negotiated by the Government in February, 1896, the sale netting \$111,166,246, and swelling the aggregate of bonds issued within three years to \$262,315,400. For the fiscal year ending June 30, 1896, the revenues of the Government from all sources amounted to \$409,475,408.78, while its expenditures were \$434,678,654.48, or an excess of expenditures over receipts of \$25,203,245.70. In other words, the total receipts for the three fiscal years ending June 30, 1896, were insufficient by \$137,811,729.46 to meet the total expenditures.

Nor has this condition since improved. For the first half of the present fiscal year the receipts of the Government, exclusive of postal revenues, were \$157,507,603.76, and its expenditures, exclusive of postal service, \$195,410,000.22, or an excess of expenditures over receipts of \$37,902,396.46. In January of this year the receipts, exclusive of postal revenues, were \$24,316,994.05, and the expenditures, exclusive of postal service, \$30,269,389.29, a deficit of \$5,952,395.24 for the month. In February of this year the receipts, exclusive of postal revenues, were \$24,400,997.38, and expenditures, exclusive of postal service, \$28,796,056.66, a deficit of \$4,395,059.28, or a total deficiency of \$186,061,580.44 for the three years and eight months ending March 1, 1897. Not only are we without a surplus in the Treasury, but, with an increase in the public debt, there has been a corresponding increase in the annual interest charge from \$22,893,883.20 in 1892, the lowest of any year since 1862, to \$34,387,297.60 in 1896, or an increase of \$11,493,414.40.

It may be urged that even if the revenues of the Government had been sufficient to meet all its ordinary expenses during the past three years, the gold reserve would still have been insufficient to meet the demands upon it, and that bonds would necessarily have been issued for its repletion. Be this as it may, it is clearly manifest, without denying or affirming the correctness of such a conclusion, that the debt would have been decreased in at least the amount of the deficiency, and business confidence immeasurably strengthened throughout the country.

Congress should promptly correct the existing condition. Ample revenues must be supplied not only for the ordinary expenses of the Government, but for the prompt payment of liberal pensions and the liquidation of the principal and interest of the public debt. In raising revenue, duties should be

so levied upon foreign products as to preserve the home market, so far as possible, to our own producers; to revive and increase manufactures; to relieve and encourage agriculture; to increase our domestic and foreign commerce; to aid and develop mining and building; and to render to labor in every field of useful occupation the liberal wages and adequate rewards to which skill and industry are justly entitled. The necessity of the passage of a tariff law which shall provide ample revenue need not be further urged. The imperative demand of the hour is the prompt enactment of such a measure, and to this object I earnestly recommend that Congress shall make every endeavor. Before other business is transacted let us first provide sufficient revenue to faithfully administer the Government without the contracting of further debt or the continued disturbance of our finances.

WILLIAM MCKINLEY.

EXECUTIVE MANSION, *March 15, 1897.*

The Tariff Act.—Mr. Dingley, of Maine, introduced a tariff bill on the day the Congress assembled, and on March 19 a measure was reported from the Committee on Ways and Means. The same day the Committee on Rules submitted a privileged report, providing for the discussion of the measure and rapid action. It set Monday, March 22, as the day for opening debate in committee of the whole, and required sessions from ten o'clock in the morning to five in the afternoon and from eight to eleven in the evening, the general debate to close at that hour on Thursday, March 25; it arranged for a discussion of the measure by paragraphs until March 31 at three o'clock in the afternoon, when the measure was to be put on its passage. The special rule was adopted after a short discussion by a vote of 180 yeas to 132 nays.

The debate on the measure in the House and in the Senate was so voluminous that a summary would be out of the question; and the speeches were in the main along the old lines of argument opened up in the first Congress, reiterated at various periods since, and spun out to wearisome length within recent years.

It may be worth while, however, to present in brief the special point as to the necessity for tariff legislation in order to increase the revenue to meet excess of expenditure.

Mr. Dingley said: "Congress has been convened in extraordinary session by the President for the purpose of providing adequate revenue for carrying on the Government. The exigency which has brought us here is so clearly stated in the message of the President, and is so fully recited in the report of the Committee on Ways and Means submitting the pending revision of the tariff for the consideration of the House, that I need not detain you repeating the story so completely within your own knowledge. The salient facts are these:

"1. In the four fiscal years commencing July 1, 1893, and closing on the 30th of June next, the revenue of the Government has been insufficient to meet the expenditures to the extent of more than \$200,000,000, or an average of \$50,000,000 per annum.

Deficiency fiscal year ended June 30—

1894	\$69,803,260
1895	42,805,223
1896	25,203,246
1897 (estimated).....	65,000,000

Total deficiency..... \$203,811,729

"2. The late Secretary of the Treasury, in his last annual report, estimates that under existing conditions this deficiency will continue, and will reach \$45,000,000 more the next fiscal year.

"3. This deficiency of \$200,000,000 up to the close of the present fiscal year has been met by borrow-

ing; that is, of the two hundred and ninety-three and a half millions realized from the sale of two hundred and sixty-two and one third million bonds sold, in the last analysis over two hundred millions has been used to pay current expenditures in excess of revenue.

"4. This chronic deficiency of revenue and the use of the borrowed reserve, or (what is the same thing) of the United States demand notes, redeemed with gold obtained by borrowing, has promoted distrust, intensified and prolonged the run on the Treasury, and weakened business confidence.

"5. This deficiency of revenue has nearly all arisen from the falling off of revenue from duties on imports (and not from a decline of revenue from internal taxes) since the results of the national election in November, 1892, first forecasting and subsequently partially accomplishing a revolutionary change of tariff policy, began to arrest industries. In the fiscal year beginning July 1, 1892, the revenue derived from the duties on imports was two hundred and three millions, an increase of twenty-six millions over the previous year, and up to November, 1892, it was the confident expectation of the then Secretary of the Treasury that the revenue in the succeeding fiscal year would reach two hundred and twenty millions; but this expectation was blasted when anticipated tariff legislation that would largely reduce duties began to defer importations and subsequently to disorganize industries.

"The revenue derived from duties on imports and also from internal-revenue taxes for each fiscal year, beginning with 1892, was as follows:

YEAR.	From customs.	From internal revenue.
1892	\$177,452,964	\$153,971,073
1893	203,355,016	161,027,624
1894	131,818,530	147,111,233
1895	152,158,617	143,421,672
1896	160,021,751	146,762,864
1897 (estimated).....	140,000,000	150,000,000

"In the light of this course of events, and in the face of the chronic deficiency requiring immediate relief, the Committee on Ways and Means have reported the pending bill to revise the tariff for the ends indicated by the title, to wit, to provide additional revenue to carry on the Government, and at the same time, in adjusting the duties to secure this revenue, to encourage the industries of the United States.

"In this revision the committee have endeavored to discard mere theories, and have addressed themselves to the framing of a practical remedy, at least in part, for the ills which have for so many months overshadowed the country.

"It is a condition and not a theory which confronts us. Our problem is to provide adequate revenue from duties on imports to carry on the Government, and in imposing duties to secure this result to so adjust them as to secure to our own people the production and manufacture of such articles as we can produce or make for ourselves without natural disadvantage, and thus provide more abundant opportunities for our labor. For rest assured that no economic policy will prove a success unless it shall in some manner contribute to opening up employment to the masses of our people at good wages. When this shall be accomplished, and thus the purchasing power of the masses is restored, then, and not until then, will prices cease to feel the depressing effect of underconsumption, and the prosperity of our people rise to the standard of 1892.

"The great secret of the prosperity of the United States up to 1893, especially after the resumption of specie payments in 1879, was the fact that our people were all at work at good wages, and thus had large

purchasing power. It was this large consuming and purchasing power that made our markets the best in the world, that maintained prices at fair rates—in short, that made this country the admiration and envy of the world.

"When, by first the anticipated and then partially realized overthrow of protection, industries were arrested, machinery stopped, wages reduced, and employees discharged, through the transfer of the producing and making of part of what we had previously made to other lands, then the purchasing power of the masses was diminished and the demand for products decreased, and this gorged the markets, abnormally lowered prices, and prostrated industries and business.

"Mr. Chairman, the past four years have been enlightening, especially to candid investigators of economic problems. We have been attending a kindergarten on a gigantic scale. The tuition has come high, but no people ever learned so much in so brief a time. Hereafter theories, preached in however captivating language, will have to give way to the teachings of experience."

The plea against the necessity for legislation on the ground that the existing tariff would produce sufficient income was put by Mr. Wheeler, of Alabama, as follows:

"Mr. Chairman, from the day of the election of President McKinley up to March 4, the Republican press announced that Congress would be convened immediately upon the inauguration of the newly elected Republican President, the reason being assigned that the deficiency of revenue made it imperatively necessary.

"On March 6, the proclamation for the extraordinary session was issued. The message of the President, which was received the day we convened, was devoted exclusively to an argument which endeavored to prove that the condition of the finances were such that prompt measures to increase the revenue were imperative. The message told us that the expenditures of the Government had exceeded the receipts during the last three years as follows:

Year ending June 30, 1894.....	\$69,803,260.58
Year ending June 30, 1895.....	42,805,223.18
Year ending June 30, 1896.....	25,203,245.70

"This proves that had the income tax, which would have yielded \$40,000,000 annually, not been nullified by the Supreme Court of the United States, the receipts would have far exceeded the expenditures, which fully vindicates the Wilson bill as a revenue measure. It also shows that, notwithstanding the loss of the income tax, the deficit had been constantly decreasing—last year the deficiency being only \$25,203,245.70.

"The message of the President fails to mention the important fact that on the day of his inauguration there was \$212,725,207.74 in the Treasury available for the payment of Government expenditures. This proves that there was no possibility of this fund being exhausted or even seriously reduced until we could in the most orderly way pass revenue measures at the regular session if, indeed, at that time it became apparent that there was a necessity for additional revenue. In that event the large Republican majority in this House could enact some law which would give the necessary revenue without disturbing the general tariff laws of our country. Or if the necessity had been apparent, as contended as early as last November, a bill of that character could have been easily passed during the last session of Congress. The fact that nothing of this character was attempted during the Congress just closed (the last session of the Fifty-fourth Congress) shows very conclusively that other results were sought than to raise revenue.

"This apprehension is strengthened from the fact that for the first time in the history of our Government there is presented to the House of Representatives a revenue bill which confesses in its title that the purpose of the bill is to protect American industries. Even the framers of the famous McKinley bill, which was so severely condemned by the country, did not have the effrontery to incorporate any such expressions in the title of that bill.

"To further show that the condition of the revenue did not make this extraordinary session necessary, I will state that since March 4 the receipts of the Government, so far from being less than expenditures, have very far exceeded them, the excess of receipts over expenditures being as follows:

March 6.....	\$288,686.78	March 17.....	\$227,127.24
March 8.....	26,893.00	March 18.....	960,340.81
March 12.....	427,363.49	March 19.....	98,671.01
March 13.....	293,674.65	March 20.....	74,029.48
March 15.....	919,755.50	March 22.....	303,015.31
March 16.....	2,383,886.87		

"And the report of the Secretary of the Treasury tells us that the amount of money in the Treasury this morning available to pay expenditures is \$218,050,908.78. And yet with these facts staring them in the face, the distinguished chairman of the Committee on Ways and Means, who has just closed his speech, opened the debate in these words:

"Congress has been convened in extraordinary session by the President for the purpose of providing adequate revenue for carrying on the Government."

"But the most astounding feature in all this is yet to be told. The speech of the distinguished chairman of the Ways and Means Committee and the message of President McKinley both insist upon the immediate passage of what is practically the old McKinley bill, for the purpose, as they say, of preventing deficiencies in the revenue, when the fact is staring them in the face that the deficiencies under which we have suffered are due to the very legislation which is insisted upon by them as well as all the Republican members of this House, and when the further fact also stares them in the face that at this time the Wilson bill which they seek to repeal is yielding revenue far in excess of expenditure."

On March 31 the Dingley bill passed the House by the following vote:

YEAS—Acheson, Adams, Alexander, Arnold, Babcock, Baker of Maryland, Barber, Barham, Barney, Barrows, Bartholdt, Beach, Belden, Belford, Belknap, Bennett, Bingham, Bishop, Booze, Boutelle, Brewster, Broderick, Bromwell, Brosius, Broussard, Brown, Brownlow, Brumm, Bull, Burton, Butler, Cannon, Capron, Chickering, Clark of Iowa, Clarke of New Hampshire, Cochrane of New York, Coddington, Colson, Connell, Connolly, Cooke, Cooper of Wisconsin, Corliss, Cousins, Crump, Crumpacker, Curtis of Iowa, Dalzell, Danford, Davenport, Davey, Davidson of Wisconsin, Davison of Kentucky, Davton, Dingley, Dolliver, Dorr, Dovener, Eddy, Ellis, Evans, Faris, Fenton, Fischer, Fletcher, Foote, Foss, Fowler of New Jersey, Gardner, Gibson, Gillet of New York, Gillett of Massachusetts, Graff, Griffin, Grosvenor, Grout, Grow, Hager, Hamilton, Harmer, Hawley, Heatwole, Hemenway, Henderson, Henry of Connecticut, Henry of Indiana, Hepburn, Hicks, Hilborn, Hill, Hitt, Hooker, Hopkins, Howard of Alabama, Howe, Howell, Hull, Hurley, Jenkins, Johnson of Indiana, Johnson of North Dakota, Joy, Kerr, Ketcham, Kirkpatrick, Kleberg, Kulp, Lacey, Landis, Linney, Littauer, Lorimer, Loud, Loudenslager, Lovering, Low, Lybrand, McCall, McCleary, McDonald, McEwan, McIntire, Mahany, Mahon, Mann, Marsh, Mercer, Mesick, Meyer of Louisiana, Miller,

Mills, Minor, Mitchell, Moody, Morris, Mudd, Northway, Odell, Olmsted, Otjen, Overstreet, Packer of Pennsylvania, Parker of New Jersey, Payne, Pearce of Missouri, Pearson, Perkins, Pitney, Powers, Prince, Pugh, Quigg, Ray, Reeves, Robbins, Royse, Russell, Sauerharing, Shannon, Shattuc, Sheldon, Sherman, Simpkins of Massachusetts, Slayden, Smith of Illinois, S. W. Smith, William Alden Smith, Snover, Southard, Southwick, Spalding, Sperry, Sprague, Steele, Stevens of Minnesota, Stewart of New Jersey, Stewart of Wisconsin, C. W. Stone, W. A. Stone, Strode of Nebraska, Sturtevant, Sulloway, Tawney, Tayler of Ohio, Tongue, Updegraff, Van Voorhis, Wadsworth, Walker of Massachusetts, Walker of Virginia, Wanger, Ward, Warner, Weaver, Weymouth, White of Illinois, White of North Carolina, Wilber, Williams of Pennsylvania, Wilson of New York, Wright, Yost, Young of Pennsylvania, the Speaker—205.

NAYS—Adamson, Allen, Bailey, Baird, Baker of Illinois, Ball, Bankhead, Barlow, Bartlett, Benner, Benton, Berry, Bland, Bodine, Bradley, Brantley, Brenner, Brewer, Brucker, Brundidge, Burke, Campbell, Carmack, Castle, Catchings, Clardy, Clark of Missouri, Clayton, Cochran of Missouri, Cooney, Cooper of Texas, Cowherd, Cox, Davis, De Armond, De Graffenreid, De Vries, Dinsmore, Dockery, Elliott, Epes, Ermentrout, Fitzgerald, Fitzpatrick, Fleming, Fox, Gaines, Griggs, Handy, Hay, Henry of Mississippi, Henry of Texas, Hinrichsen, Holman, Howard of Georgia, Hunter, Jett, Jones of Virginia, King, Kitchin, Lamb, Lanham, Latimer, Lentz, Lester, Lewis of Georgia, Little, Livingston, Love, McAleer, McClellan, McCulloch, McDowell, McLaurin, McMillan, McRae, Maddox, Maguire, Marshall, Meekison, Miers of Indiana, Moon, Norton, Ogden, Osborne, Otey, Peters, Pierce of Tennessee, Plowman, Rhea, Richardson, Rixey, Robb, Robertson of Louisiana, Robinson of Indiana, Sayers, Settle, Simpson of Kansas, Sims, Smith of Kentucky, Sparkman, Stallings, Stephens of Texas, Stokes, Strait, Sullivan, Sulzer, Swanson, Talbert, Tate, Taylor of Alabama, Terry, Todd, Underwood, Vandiver, Vehslage, Wheeler of Alabama, Wheeler of Kentucky, Williams of Mississippi, Wilson of South Carolina, Young of Virginia, Zenor—122.

ANSWERED "PRESENT"—Bell, Botkin, Fowler of North Carolina, Greene, Gunn, Hartman, Jones of Washington, Kelley, Knowles, McCormick, Martin, Maxwell, Newlands, Ridgely, Shafroth, Shuford, Skinner, Stark, Strowd of North Carolina, Sutherland, Vincent—21.

NOT VOTING—Barrett, Cranford, Cummings, Curtis of Kansas, Knox, Milliken—6.

After a protracted discussion in the Senate and the incorporation of some 872 amendments the measure passed, July 7, by the following vote:

YEAS—Allison, Baker, Burrows, Carter, Clark, Cullom, Davis, Devoe, Elkins, Fairbanks, Foraker, Gallinger, Hale, Hanna, Hawley, Jones of Nevada, Lodge, McBride, McEnery, McMillan, Mantle, Mason, Morrill, Nelson, Penrose, Perkins, Platt of Connecticut, Platt of New York, Pritchard, Proctor, Quay, Sewell, Shoup, Spooner, Warren, Wellington, Wetmore, Wilson—38.

NAYS—Bacon, Bate, Berry, Caffery, Cannon, Chilton, Clay, Cockrell, Faulkner, Gray, Harris of Kansas, Jones of Arkansas, Kenney, Lindsay, Mallory, Martin, Mills, Mitchell, Morgan, Pasco, Pettus, Rawlins, Roach, Turner, Turpie, Vest, Walthall, White—28.

NOT VOTING—Aldrich, Allen, Butler, Chandler, Daniel, Frye, Gear, George, Gorman, Hansbrough, Harris of Tennessee, Heitfeld, Hoar, Kyle, McLaurin, Murphy, Pettigrew, Smith, Stewart, Teller, Thurston, Tillman, Wolcott—23.

The House nonconcurrent on the Senate amendments and a conference committee was appointed which reported in favor of a great majority of the Senate amendments. The report was agreed to and the President approved the act July 24, 1897.

The full text of the "Act to provide revenue for the Government and to encourage the industries of the United States" is as follows:

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That on and after the passage of this act unless otherwise specially provided for in this act, there shall be levied, collected, and paid upon all articles imported from foreign countries, and mentioned in the schedules herein contained, the rates of duty which are by the schedules and paragraphs respectively prescribed, namely:

SCHEDULE A.—CHEMICALS, OILS, AND PAINTS.

Acids.—1. Acetic or pyroligneous acid, not exceeding the specific gravity of one and forty-seven one thousandths, three fourths of one cent per pound; exceeding the specific gravity of one and forty-seven one thousandths, two cents per pound; boric acid, five cents per pound; chromic acid and lactic acid, three cents per pound; citric acid, seven cents per pound; salicylic acid, ten cents per pound; sulphuric acid or oil of vitriol not specially provided for in this act, one fourth of one cent per pound; tannic acid or tannin, fifty cents per pound; gallic acid, ten cents per pound; tartaric acid, seven cents per pound; all other acids not specially provided for in this act, twenty-five per centum ad valorem.

2. All alcoholic perfumery, including cologne water and other toilet waters and toilet preparations of all kinds, containing alcohol or in the preparation of which alcohol is used, and alcoholic compounds not specially provided for in this act, sixty cents per pound and forty-five per centum ad valorem.

3. Alkalies, alkaloids, distilled oils, essential oils, expressed oils, rendered oils, and all combinations of the foregoing, and all chemical compounds and salts not specially provided for in this act, twenty-five per centum ad valorem.

4. Alumina, hydrate of, or refined bauxite, six tenths of one cent per pound; alum, alum cake, patent alum, sulphate of alumina, and aluminous cake, and alum in crystals or ground, one half of one cent per pound.

5. Ammonia, carbonate of, one and one half cent per pound; muriate of, or sal ammoniac, three fourths of one cent per pound; sulphate of, three tenths of one cent per pound.

6. Argols or crude tartar or wine lees crude, containing not more than forty per centum of bitartrate of potash, one cent per pound; containing more than forty per centum of bitartrate of potash, one and one half cent per pound; tartars and lees crystals, or partly refined argols, containing not more than ninety per centum of bitartrate of potash, and tartrate of soda or potassa, or Rochelle salts, four cents per pound; containing more than ninety per centum of bitartrate of potash, five cents per pound; cream of tartar and patent tartar, six cents per pound.

7. Blacking of all kinds, twenty-five per centum ad valorem.

8. Bleaching powder, or chloride of lime, one fifth of one cent per pound.

9. Blue vitriol or sulphate of copper, one half of one cent per pound.

10. Bone char, suitable for use in decolorizing sugars, twenty per centum ad valorem.

11. Borax, five cents per pound; borates of lime or soda, or other borate material not otherwise provided for, containing more than thirty-six per centum of anhydrous boric acid, four cents per pound; borates of lime or soda, or other borate material not otherwise provided for, containing not more than thirty-six per centum of anhydrous boric acid, three cents per pound.

12. Camphor, refined, six cents per pound.

13. Chalk (not medicinal nor prepared for toilet purposes), when ground, precipitated naturally or artificially, or otherwise prepared, whether in the form of cubes, blocks, sticks or disks, or otherwise, including tailors', billiard, red, or French chalk, one cent per pound. Manufactures of chalk not specially provided for in this act, twenty-five per centum ad valorem.

14. Chloroform, twenty cents per pound.

15. Coal-tar dyes or colors, not specially provided for in this act, thirty per centum ad valorem; all other products or preparations of coal tar, not colors or dyes and not medicinal, not specially provided for in this act, twenty per centum ad valorem.

16. Cobalt, oxide of, twenty-five cents per pound.

17. Collodion and all compounds of pyroxylin, whether known as celluloid or by any other name, fifty cents per pound; rolled or in sheets, unpolished, and not made up into articles, sixty cents per pound; if in finished or partly finished articles, and articles of which collodion or any compound of pyroxylin is the component material of chief value, sixty-five cents per pound and twenty-five per centum ad valorem.

18. Coloring for brandy, wine, beer, or other liquors, fifty per centum ad valorem.

19. Copperas or sulphate of iron, one fourth of one cent per pound.

20. Drugs, such as barks, beans, berries, balsams, buds, bulbs, bulbous roots, excrescences, fruits, flowers, dried fibers, dried insects, grains, gums and gum resin, herbs, leaves, lichens, mosses, nuts, nutgalls, roots, stems, spices, vegetables, seeds (aromatic, not garden seeds), seeds of morbid growth, weeds, and woods used expressly for dyeing; any of the foregoing which are drugs and not edible, but which are advanced in value or condition by refining, grinding, or other process, and not specially provided for in this act, one fourth of one cent per pound, and in addition thereto ten per centum ad valorem.

21. Ethers: Sulphuric, forty cents per pound; spirits of nitrous ether, twenty-five cents per pound; fruit ethers, oils, or essences, two dollars per pound; ethers of all kinds not specially provided for in this act, one dollar per pound: *Provided*, That no article of this paragraph shall pay a less rate of duty than twenty-five per centum ad valorem.

22. Extracts and decoctions of logwood and other dye-woods, and extracts of barks, such as are commonly used for dyeing or tanning, not specially provided for in this act, seven eighths of one cent per pound; extracts of quebracho and of hemlock bark, one half of one cent per pound; extracts of sumac, and of woods other than dye-woods, not specially provided for in this act, five eighths of one cent per pound.

23. Gelatin, glue, isinglass or fish glue, and prepared fish bladders or fish sounds, valued at not above ten cents per pound, two and one half cents per pound; valued at above ten cents per pound and not above thirty-five cents per pound, twenty-five per centum ad valorem; valued above thirty-five cents per pound, fifteen cents per pound and twenty per centum ad valorem.

24. Glycerin, crude, not purified, one cent per pound; refined, three cents per pound.

25. Indigo, extracts, or pastes of, three fourths of one cent per pound; earmined, ten cents per pound.

26. Ink and ink powders, twenty-five per centum ad valorem.

27. Iodine, resublimed, twenty cents per pound.

28. Iodoform, one dollar per pound.

29. Licorice, extracts of, in paste, rolls, or other forms, four and one half cents per pound.

30. Chiclé, ten cents per pound.

31. Magnesia, carbonate of, medicinal, three cents per pound; calcined, medicinal, seven cents per pound; sulphate of, or Epsom salts, one fifth of one cent per pound.

Oils.—32. Alizarin assistant, sulpho-ricinoleic acid, and ricinoleic acid, by whatever name known, whether liquid, solid, or in paste, in the manufacture of which fifty per centum or more of castor oil is used, thirty cents per gallon; in the manufacture of which less than fifty per centum of castor oil is used, fifteen cents per gallon; all other alizarin assistant, not specially provided for in this act, thirty per centum ad valorem.

33. Castor oil, thirty-five cents per gallon.

34. Cod-liver oil, fifteen cents per gallon.

35. Cotton-seed oil, four cents per gallon of seven and one half pounds weight.

36. Croton oil, twenty cents per pound.

37. Flaxseed, linseed, and poppy-seed oil, raw, boiled, or oxidized, twenty cents per gallon of seven and one half pounds weight.

38. Fusel oil, or amylic alcohol, one fourth of one cent per pound.

39. Hemp-seed oil and rape-seed oil, ten cents per gallon.

40. Olive oil, not specially provided for in this act,

forty cents per gallon; in bottles, jars, tins, or similar packages, fifty cents per gallon.

41. Peppermint oil, fifty cents per pound.

42. Seal, herring, whale, and other fish oil, not specially provided for in this act, eight cents per gallon.

43. Opium, crude or unmanufactured, and not adulterated, containing nine per centum and over of morphia, one dollar per pound; morphia or morphine, sulphate of, and all alkaloids or salts of opium, one dollar per ounce; aqueous extract of opium, for medicinal uses, and tincture of, as laudanum, and other liquid preparations of opium, not specially provided for in this act, forty per centum ad valorem; opium containing less than nine per centum of morphia and opium prepared for smoking, six dollars per pound; but opium prepared for smoking and other preparations of opium deposited in bonded warehouses shall not be removed therefrom without payment of duties, and such duties shall not be refunded.

Paints, Colors, and Varnishes.—44. Baryta, sulphate of, or barytes, including barytes earth, unmanufactured, seventy-five cents per ton; manufactured, five dollars and twenty-five cents per ton.

45. Blues, such as Berlin, Prussian, Chinese, and all others, containing ferrocyanide of iron, in pulp, dry, or ground in or mixed with oil or water, eight cents per pound.

46. Blanc-fixe, or artificial sulphate of barytes, and satin white, or artificial sulphate of lime, one half of one cent per pound.

47. Black, made from bone, ivory, or vegetable substance, by whatever name known, including bone black and lampblack, dry or ground in oil or water, twenty-five per centum ad valorem.

48. Chrome yellow, chrome green, and all other chromium colors in the manufacture of which lead and bichromate of potash or soda are used, in pulp, dry, or ground in or mixed with oil or water, four and one half cents per pound.

49. Ocher and ochery earths, sienna and sienna earths, and umber and umber earths, not specially provided for, when crude or not powdered, washed or pulverized, one eighth of one cent per pound; if powdered, washed, or pulverized, three eighths of one cent per pound; if ground in oil or water, one and one half cent per pound.

50. Orange mineral, three and three eighths cents per pound.

51. Red lead, two and seven-eighths cents per pound.

52. Ultramarine blue, whether dry, in pulp, or mixed with water, and wash blue containing ultramarine, three and three fourths cents per pound.

53. Varnishes, including so-called gold size or japan, thirty-five per centum ad valorem; spirit varnishes, one dollar and thirty-two cents per gallon and thirty-five per centum ad valorem.

54. Vermilion red, and other colors containing quicksilver, dry or ground in oil or water, ten cents per pound; when not containing quicksilver but made of lead or containing lead, five cents per pound.

55. White lead, white paint and pigment containing lead, dry or in pulp, or ground or mixed with oil, two and seven eighths cents per pound.

56. Whiting and Paris white, dry, one fourth of one cent per pound; ground in oil, or putty, one cent per pound.

57. Zinc, oxide of, and white paint or pigment containing zinc, but not containing lead, dry, one cent per pound; ground in oil, one and three fourths cent per pound; sulfid of zinc white, or white sulphide of zinc, one and one fourth cent per pound; chloride of zinc and sulphate of zinc, one cent per pound.

58. All paints, colors, pigments, lakes, crayons, smalts, and frostings, whether crude or dry or mixed, or ground with water or oil or with solutions other than oil, not otherwise specially provided for in this act, thirty per centum ad valorem; all paints, colors, and pigments, commonly known as artists' paints or colors, whether in tubes, pans, cakes, or other forms, thirty per centum ad valorem.

59. Paris green and London purple, fifteen per centum ad valorem.

60. Lead: Acetate of, white, three and one fourth cents per pound; brown, gray, or yellow, two and one fourth cents per pound; nitrate of, two and one half cents per pound; litharge, two and three fourth cents per pound.

61. Phosphorus, eighteen cents per pound.

Potash.—62. Bichromate and chromate of, three cents per pound.

63. Caustic or hydrate of, refined, in sticks or rolls, one cent per pound; chlorate of, two and one half cents per pound.

64. Hydriodate, iodide, and iodate of, twenty-five cents per pound.

65. Nitrate of, or saltpeter, refined, one half cent per pound.

66. Prussiate of, red, eight cents per pound; yellow, four cents per pound; cyanide of potassium, twelve and one half per centum ad valorem.

Preparations.—67. Medicinal preparations containing alcohol, or in the preparation of which alcohol is used, not specially provided for in this act, fifty-five cents per pound, but in no case shall the same pay less than twenty-five per centum ad valorem.

68. Medicinal preparations not containing alcohol or in the preparation of which alcohol is not used, not specially provided for in this act, twenty-five per centum ad valorem; calomel and other mercurial medicinal preparations, thirty-five per centum ad valorem.

69. Plasters, healing or curative, of all kinds, and court-plaster, thirty-five per centum ad valorem.

70. Preparations used as applications to the hair, mouth, teeth, or skin, such as cosmetics, dentifrices, pastes, pomades, powders, and other toilet articles, and articles of perfumery, whether in sachets or otherwise, not containing alcohol or in the manufacture of which alcohol is not used, and not specially provided for in this act, fifty per centum ad valorem.

71. Santonin, and all salts thereof containing eighty per centum or over of santonin, one dollar per pound.

Soap.—72. Castile soap, one and one fourth cent per pound; fancy, perfumed, and all descriptions of toilet soap, including so-called medicinal or medicated soaps, fifteen cents per pound; all other soaps not specially provided for in this act, twenty per centum ad valorem.

Soda.—73. Bicarbonate of soda, or supercarbonate of soda, or saleratus, and other alkalies containing fifty per centum or more of bicarbonate of soda, three fourths of one cent per pound.

74. Bichromate and chromate of soda, two cents per pound.

75. Crystal carbonate of soda, or concentrated soda crystals, or monohydrate, or sesquicarbonate of soda, three tenths of one cent per pound; chlorate of soda, two cents per pound.

76. Hydrate of, or caustic soda, three fourths of one cent per pound; nitrite of soda, two and one half cents per pound; hyposulphite and sulphide of soda, one half of one cent per pound.

77. Sal soda, or soda crystals, not concentrated, two tenths of one cent per pound.

78. Soda ash, three eighths of one cent per pound; arseniate of soda, one and one fourth cent per pound.

79. Silicate of soda, or other alkaline silicate, one half of one cent per pound.

80. Sulphate of soda, or salt cake, or niter cake, one dollar and twenty-five cents per ton.

81. Sea moss, ten per centum ad valorem.

82. Sponges, twenty per centum ad valorem; manufactures of sponges, or of which sponge is the component material of chief value, not specially provided for in this act, forty per centum ad valorem.

83. Strychnia, or strychnine, and all salts thereof, thirty cents per ounce.

84. Sulphur, refined or sublimed, or flowers of, eight dollars per ton.

85. Sumac, ground, three tenths of one cent per pound.

86. Vanillin, eighty cents per ounce.

SCHEDULE B.—EARTHS, EARTHENWARE, AND GLASSWARE.

Brick and Tile.—87. Fire brick, weighing not more than ten pounds each, not glazed, enameled, ornamented, or decorated in any manner, one dollar and twenty-five cents per ton; glazed, enameled, ornamented, or decorated, forty-five per centum ad valorem; brick, other than fire brick, not glazed, enameled, painted, vitrified, ornamented, or decorated in any manner, twenty-five per centum ad valorem; if glazed, enameled, painted, vitrified, ornamented, or decorated in any manner, forty-five per centum ad valorem.

88. Tiles, plain unglazed, one color, exceeding two square inches in size, four cents per square foot; glazed, encaustic, ceramic, mosaic, vitrified, semivitrified, flint, spar, embossed, enameled, ornamental, hand painted, gold decorated, and all other earthenware tiles, valued at not exceeding forty cents per square foot, eight cents per

square foot; exceeding forty cents per square foot, ten cents per square foot and twenty-five per centum ad valorem.

Cement, Lime, and Plaster.—89. Roman, Portland, and other hydraulic cement, in barrels, sacks, or other packages, eight cents per one hundred pounds, including weight of barrel or package; in bulk, seven cents per one hundred pounds; other cement, twenty per centum ad valorem.

90. Lime, five cents per one hundred pounds, including weight of barrel or package.

91. Plaster rock or gypsum, crude, fifty cents per ton; if ground or calcined, two dollars and twenty-five cents per ton; pearl hardening for papermakers' use, twenty per centum ad valorem.

92. Pumice stone, wholly or partially manufactured, six dollars per ton; unmanufactured, fifteen per centum ad valorem.

Clays or Earths.—93. Clays or earths, unwrought or unmanufactured, not specially provided for in this act, one dollar per ton; wrought or manufactured, not specially provided for in this act, two dollars per ton; china clay or kaolin, two dollars and fifty cents per ton; limestone rock asphalt containing not more than fifteen per centum of bitumen, fifty cents per ton; asphaltum and bitumen, not specially provided for in this act, crude, if not dried, or otherwise advanced in any manner, one dollar and fifty cents per ton; if dried or otherwise advanced in any manner, three dollars per ton; bauxite, or beauxite, crude, not refined or otherwise advanced in condition from its natural state, one dollar per ton; fullers' earth, unwrought and unmanufactured, one dollar and fifty cents per ton; wrought or manufactured, three dollars per ton.

Earthenware and China.—94. Common yellow-brown, or gray earthenware, plain, embossed, or salt-glazed common stoneware, and crucibles, all the foregoing not decorated in any manner, twenty-five per centum ad valorem; Rockingham earthenware not decorated, forty per centum ad valorem.

95. China, porcelain, parian, bisque, earthen, stone, and crockery ware, including clock cases with or without movements, plaques, ornaments, toys, toy tea sets, charms, vases and statuettes, painted, tinted, stained, enameled, printed, gilded, or otherwise decorated or ornamented in any manner, sixty per centum ad valorem; if plain white and without superadded ornamentation of any kind, fifty-five per centum ad valorem.

96. All other china, porcelain, parian, bisque, earthen, stone, and crockery ware, and manufactures thereof, or of which the same is the component material of chief value, by whatever name known, not specially provided for in this act, if painted, tinted, stained, enameled, printed, gilded, or otherwise decorated or ornamented in any manner, sixty per centum ad valorem; if not ornamented or decorated, fifty-five per centum ad valorem.

97. Articles and wares composed wholly or in chief value of earthy or mineral substances, or carbon, not specially provided for in this act, if not decorated in any manner, thirty-five per centum ad valorem; if decorated, forty-five per centum ad valorem.

98. Gas retorts, three dollars each; lava tips for burners, ten cents per gross and fifteen per centum ad valorem; carbons for electric lighting, ninety cents per hundred; filter tubes, forty-five per centum ad valorem; porous carbon pots for electric batteries, without metallic connections, twenty per centum ad valorem.

Glass and Glassware.—99. Plain green or colored, molded or pressed, and flint, lime, or lead glass bottles, vials, jars, and covered or uncovered demijohns and carboys, any of the foregoing, filled or unfilled, not otherwise specially provided for, and whether their contents be dutiable or free (except such as contain merchandise subject to an ad valorem rate of duty, or to a rate of duty based in whole or in part upon the value thereof, which shall be dutiable at the rate applicable to their contents) shall pay duty as follows: If holding more than one pint, one cent per pound; if holding not more than one pint and not less than one fourth of a pint, one and one half cent per pound; if holding less than one fourth of a pint, fifty cents per gross: *Provided*, That none of the above articles shall pay a less rate of duty than forty per centum ad valorem.

100. Glass bottles, decanters, or other vessels or articles of glass, cut, engraved, painted, colored, stained, silvered, gilded, etched, frosted, printed in any manner or otherwise ornamented, decorated, or ground (except such

grinding as is necessary for fitting stoppers), and any articles of which such glass is the component material of chief value, and porcelain, opal and other blown glassware; all the foregoing, filled or unfilled, and whether their contents be dutiable or free, sixty per centum ad valorem.

101. Unpolished, cylinder, crown, and common window glass, not exceeding ten by fifteen inches square, one and three eighths cent per pound; above that, and not exceeding sixteen by twenty-four inches square, one and seven eighths cents per pound; above that, and not exceeding twenty-four by thirty inches square, two and three eighths cent per pound; above that, and not exceeding twenty-four by thirty-six inches square, two and seven eighths cents per pound; above that, and not exceeding thirty by forty inches square, three and three eighths cents per pound; above that, and not exceeding forty by sixty inches square, three and seven eighths cents per pound; above that, four and three eighths cents per pound: *Provided*, That unpolished cylinder, crown, and common window glass, imported in boxes, shall contain fifty square feet, as nearly as sizes will permit, and the duty shall be computed thereon according to the actual weight of glass.

102. Cylinder and crown glass, polished, not exceeding sixteen by twenty-four inches square, four cents per square foot; above that, and not exceeding twenty-four by thirty inches square, six cents per square foot; above that, and not exceeding twenty-four by sixty inches square, fifteen cents per square foot; above that, twenty cents per square foot.

103. Fluted, rolled, ribbed, or rough plate glass, or the same containing a wire netting within itself, not including crown, cylinder, or common window glass, not exceeding sixteen by twenty-four inches square, three-fourths of one cent per square foot; above that, and not exceeding twenty-four by thirty inches square, one and one fourth cent per square foot; all above that, one and three fourths cent per square foot; and all fluted, rolled, ribbed, or rough plate glass, weighing over one hundred pounds per one hundred square feet, shall pay an additional duty on the excess at the same rates herein imposed: *Provided*, That all of the above plate glass, when ground, smoothed, or otherwise obscured, shall be subject to the same rate of duty as cast polished plate glass unsilvered.

104. Cast polished plate glass, finished or unfinished and unsilvered, not exceeding sixteen by twenty-four inches square, eight cents per square foot; above that, and not exceeding twenty-four by thirty inches square, ten cents per square foot; above that, and not exceeding twenty-four by sixty inches square, twenty-two and one half cents per square foot; all above that, thirty-five cents per square foot.

105. Cast polished plate glass, silvered, cylindered and crown glass, silvered, and looking-glass plates, exceeding in size one hundred and forty-four square inches and not exceeding sixteen by twenty-four inches square, eleven cents per square foot; above that, and not exceeding twenty-four by thirty inches square, thirteen cents per square foot; above that, and not exceeding twenty-four by sixty inches square, twenty-five cents per square foot; all above that, thirty-eight cents per square foot.

106. But no looking-glass plates or plate glass, silvered, when framed, shall pay a less rate of duty than that imposed upon similar glass of like description not framed, but shall pay in addition thereto upon such frames the rate of duty applicable thereto when imported separate.

107. Cast polished plate glass, silvered or unsilvered, and cylinder, crown, or common window glass, silvered or unsilvered, when bent, ground, obscured, frosted, sanded, enameled, beveled, etched, embossed, engraved, flashed, stained, colored, painted, or otherwise ornamented or decorated, shall be subject to a duty of five per centum ad valorem in addition to the rates otherwise chargeable thereon.

108. Spectacles, eyeglasses, and goggles, and frames for the same, or parts thereof, finished or unfinished, valued at not over forty cents per dozen, twenty cents per dozen and fifteen per centum ad valorem; valued at over forty cents per dozen and not over one dollar and fifty cents per dozen, forty-five cents per dozen and twenty per centum ad valorem; valued at over one dollar and fifty cents per dozen, fifty per centum ad valorem.

109. Lenses of glass or pebble, ground and polished to a spherical, cylindrical, or prismatic form, and ground and polished plano or coquill glasses, wholly or partly

manufactured, with the edges unground, forty-five per centum ad valorem; if with their edges ground or beveled, ten cents per dozen pairs and forty-five per centum ad valorem.

110. Strips of glass, not more than three inches wide, ground or polished on one or both sides to a cylindrical or prismatic form, and glass slides for magic lanterns, forty-five per centum ad valorem.

111. Opera and field glasses, telescopes, microscopes, photographic and projecting lenses and optical instruments, and frames or mountings for the same; all the foregoing not specially provided for in this act, forty-five per centum ad valorem.

112. Stained or painted glass windows, or parts thereof, and all mirrors, not exceeding in size one hundred and forty-four square inches, with or without frames or cases, and all glass or manufactures of glass or paste, or of which glass or paste is the component material of chief value, not specially provided for in this act, forty-five per centum ad valorem.

113. Fusible enamel, twenty-five per centum ad valorem.

Marble and Stone, and Manufactures of.—114. Marble in block, rough or squared only, sixty-five cents per cubic foot; onyx in block, rough or squared, one dollar and fifty cents per cubic foot; marble or onyx, sawed or dressed, over two inches in thickness, one dollar and ten cents per cubic foot; slabs or paving tiles of marble or onyx, containing not less than four superficial inches, if not more than one inch in thickness, twelve cents per superficial foot; if more than one inch and not more than one and one half inch in thickness, fifteen cents per superficial foot; if more than one and one half inch and not more than two inches in thickness, eighteen cents per superficial foot; if rubbed in whole or in part, three cents per superficial foot in addition; mosaic cubes of marble, onyx, or stone, not exceeding two cubic inches in size, if loose, one cent per pound and twenty per centum ad valorem; if attached to paper or other material, twenty cents per superficial foot and thirty-five per centum ad valorem.

115. Manufactures of agate, alabaster, chalcedony, chrysolite, coral, cornelian, garnet, jasper, jet, malachite, marble, onyx, rock crystal, or spar, including clock cases with or without movements, not specially provided for in this act, fifty per centum ad valorem.

Stone: 116. Burr stones, manufactured or bound up into millstones, fifteen per centum ad valorem.

117. Freestone, granite, sandstone, limestone, and other building or monumental stone, except marble and onyx, unmanufactured or undressed, not specially provided for in this act, twelve cents per cubic foot.

118. Freestone, granite, sandstone, limestone, and other building or monumental stone, except marble and onyx, not specially provided for in this act, hewn, dressed, or polished, fifty per centum ad valorem.

119. Grindstones, finished or unfinished, one dollar and seventy-five cents per ton.

Slate: 120. Slates, slate chimney-pieces, mantels, slabs for tables, roofing slates, and all other manufactures of slate, not specially provided for in this act, twenty per centum ad valorem.

SCHEDULE C.—METALS AND MANUFACTURES OF.

121. Iron ore, including manganiferous iron ore, and the dross or residuum from burnt pyrites, forty cents per ton: *Provided*, That in levying and collecting the duty on iron ore no deduction shall be made from the weight of the ore on account of moisture which may be chemically or physically combined therewith; basic slag, ground or unground, one dollar per ton.

122. Iron in pigs, iron kentledge, spiegeleisen, ferro-manganese, ferro-silicon, wrought and cast scrap iron, and scrap steel, four dollars per ton; but nothing shall be deemed scrap iron or scrap steel except waste or refuse iron or steel fit only to be remanufactured.

123. Bar iron, square iron, rolled or hammered, comprising flats not less than one inch wide nor less than three eighths of one inch thick, round iron not less than seven sixteenths of one inch in diameter, six tenths of one cent per pound.

124. Round iron, in coils or rods, less than seven sixteenths of one inch in diameter, and bars or shapes of rolled or hammered iron, not specially provided for in this act, eight tenths of one cent per pound: *Provided*, That all iron in slabs, blooms, loops, or other forms less finished than iron in bars, and more advanced than pig

iron, except castings, shall be subject to a duty of five tenths of one cent per pound: *Provided further*, That all iron bars, blooms, billets, or sizes or shapes of any kind, in the manufacture of which charcoal is used as fuel, shall be subject to a duty of twelve dollars per ton.

125. Beams, girders, joists, angles, channels, car-truck channels, T T, columns and posts or parts or sections of columns and posts, deck and bulb beams, and building forms, together with all other structural shapes of iron or steel, whether plain or punched, or fitted for use, five tenths of one cent per pound.

126. Boiler or other plate iron or steel, except crucible plate steel and saw plates hereinafter provided for, not thinner than number ten wire gauge, sheared or un-sheared, and skelp iron or steel sheared or rolled in grooves, valued at one cent per pound or less, five tenths of one cent per pound; valued above one cent and not above two cents per pound, six tenths of one cent per pound; valued above two cents and not above four cents per pound, one cent per pound; valued at over four cents per pound, twenty-five per centum ad valorem: *Provided*, That all sheets or plates of iron or steel thinner than number ten wire gauge shall pay duty as iron or steel sheets.

127. Iron or steel anchors or parts thereof, one and one half cent per pound; forgings of iron or steel or of combined iron and steel, of whatever shape or whatever degree or stage of manufacture, not specially provided for in this act, thirty-five per centum ad valorem; antifriction ball forgings of iron or steel, or of combined iron and steel, forty-five per centum ad valorem.

128. Hoop, band, or scroll iron or steel, not otherwise provided for in this act, valued at three cents per pound or less, eight inches or less in width, and less than three eighths of one inch thick and not thinner than number ten wire gauge, five tenths of one cent per pound; thinner than number ten wire gauge and not thinner than number twenty wire gauge, six tenths of one cent per pound; thinner than number twenty wire gauge, eight tenths of one cent per pound: *Provided*, That barrel hoops of iron or steel, and hoop or band iron or hoop or band steel flared, splayed, or punched, with or without buckles or fastenings, shall pay one tenth of one cent per pound more duty than that imposed on the hoop or band iron or steel from which they are made; steel bands or strips, untempered, suitable for making band saws, three cents per pound and twenty per centum ad valorem; if tempered, or tempered and polished, six cents per pound and twenty per centum ad valorem.

129. Hoop or band iron, or hoop or band steel, cut to lengths, or wholly or partly manufactured into hoops or ties, coated or not coated with paint or any other preparation, with or without buckles or fastenings, for baling cotton or any other commodity, five tenths of one cent per pound.

130. Railway bars, made of iron or steel, and railway bars made in part of steel, T rails, and punched iron or steel flat rails, seven twentieths of one cent per pound; railway fish-plates or splice-bars, made of iron or steel, four tenths of one cent per pound.

131. Sheets of iron or steel, common or black, of whatever dimensions, and skelp iron or steel, valued at three cents per pound or less, thinner than number ten and not thinner than number twenty wire gauge, seven tenths of one cent per pound; thinner than number twenty wire gauge and not thinner than number twenty-five wire gauge, eight tenths of one cent per pound; thinner than number twenty-five wire gauge and not thinner than number thirty-two wire gauge, one and one tenth cent per pound; thinner than number thirty-two wire gauge, one and two tenths cent per pound; corrugated or crimped, one and one tenth cent per pound: *Provided*, That all sheets of common or black iron or steel not thinner than number ten wire gauge shall pay duty as plate iron or plate steel.

132. All iron or steel sheets or plates, and all hoop, band, or scroll iron or steel, excepting what are known commercially as tin plates, terne plates, and taggers tin, and hereinafter provided for, when galvanized or coated with zinc, spelter, or other metals, or any alloy of those metals, shall pay two tenths of one cent per pound more duty than if the same was not so galvanized or coated.

133. Sheets of iron or steel, polished, planished, or glanced, by whatever name designated, two cents per pound: *Provided*, That plates or sheets of iron or steel, by whatever name designated, other than the polished,

planished, or glanced herein provided for, which have been pickled or cleaned by acid, or by any other material or process, or which are cold rolled, smoothed only, not polished, shall pay two tenths of one cent per pound more duty than the corresponding gauges of common or black sheet iron or steel.

134. Sheets or plates of iron or steel, or taggers iron or steel, coated with tin or lead, or with a mixture of which these metals, or either of them, is a component part, by the dipping or any other process, and commercially known as tin plates, terne plates, and taggers tin, one and one half cent per pound.

135. Steel ingots, cogged ingots, blooms, and slabs, by whatever process made; die blocks or blanks; billets and bars and tapered or beveled bars; mill shafting; pressed, sheared, or stamped shapes; saw plates, wholly or partially manufactured; hammer molds or swayed steel; gun-barrel molds not in bars; alloys used as substitutes for steel in the manufacture of tools; all descriptions and shapes of dry sand, loam, or iron-molded steel castings; sheets and plates and steel in all forms and shapes not specially provided for in this act, all of the above valued at one cent per pound or less, three tenths of one cent per pound; valued above one cent and not above one and four tenths cent per pound, four tenths of one cent per pound; valued above one and four tenths cent and not above one and eight tenths cent per pound, six tenths of one cent per pound; valued above one and eight tenths cent and not above two and two tenths cents per pound, seven tenths of one cent per pound; valued above two and two tenths cents and not above three cents per pound, nine tenths of one cent per pound; valued above three cents per pound and not above four cents per pound, one and two tenths cent per pound; valued above four cents and not above seven cents per pound, one and three tenths cent per pound; valued above seven cents and not above ten cents per pound, two cents per pound; valued above ten cents and not above thirteen cents per pound, two and four tenths cents per pound; valued above thirteen cents and not above sixteen cents per pound, two and eight tenths cents per pound; valued above sixteen cents per pound, four and seven tenths cents per pound.

Wire.—136. Wire rods: Rivet, screw, fence, and other iron or steel wire rods, whether round, oval, flat, or square, or in any other shape, and nail rods, in coils or otherwise, valued at four cents or less per pound, four tenths of one cent per pound; valued over four cents per pound, three fourths of one cent per pound: *Provided*, That all round iron or steel rods smaller than number six wire gauge shall be classed and dutiable as wire: *Provided further*, That all iron or steel wire rods which have been tempered or treated in any manner or partly manufactured shall pay an additional duty of one half of one cent per pound.

137. Round iron or steel wire, not smaller than number thirteen wire gauge, one and one fourth cent per pound; smaller than number thirteen and not smaller than number sixteen wire gauge, one and one half cent per pound; smaller than number sixteen wire gauge, two cents per pound: *Provided*, That all the foregoing valued at more than four cents per pound shall pay forty per centum ad valorem. Iron or steel or other wire not specially provided for in this act, including such as is commonly known as hat wire, or bonnet wire, crinoline wire, corset wire, needle wire, piano wire, clock wire, and watch wire, whether flat or otherwise, and corset clasps, corset steels and dress steels, and sheet steel in strips, twenty-five one thousandths of an inch thick or thinner, any of the foregoing, whether uncovered or covered with cotton, silk, metal, or other material, valued at more than four cents per pound, forty-five per centum ad valorem: *Provided*, That articles manufactured from iron, steel, brass, or copper wire, shall pay the rate of duty imposed upon the wire used in the manufacture of such articles, and in addition thereto one and one fourth cent per pound, except that wire rope and wire strand shall pay the maximum rate of duty which would be imposed upon any wire used in the manufacture thereof, and in addition thereto one cent per pound; and on iron or steel wire coated with zinc, tin, or any other metal, two tenths of one cent per pound in addition to the rate imposed on the wire from which it is made.

General Provisions.—138. No allowance or reduction of duties for partial loss or damage in consequence of rust or of discoloration shall be made upon any description of iron or steel, or upon any article wholly or partly

manufactured of iron or steel, or upon any manufacture of iron or steel.

139. All metal produced from iron or its ores, which is cast and malleable, of whatever description or form, without regard to the percentage of carbon contained therein, whether produced by cementation, or converted, cast, or made from iron or its ores, by the crucible, Bessemer, Clapp-Griffith, pneumatic, Thomas-Gilchrist, basic, Siemens-Martin, or open-hearth process, or by the equivalent of either, or by a combination of two or more of the processes, or their equivalents, or by any fusion or other process which produces from iron or its ores a metal either granular or fibrous in structure, which is cast and malleable, excepting what is known as malleable-iron castings, shall be classed and denominated as steel.

140. No article not specially provided for in this act, which is wholly or partly manufactured from tin plate, terne plate, or the sheet, plate, hoop, band, or scroll iron or steel herein provided for, or of which such tin plate, terne plate, sheet, plate, hoop, band, or scroll iron or steel shall be the material of chief value, shall pay a lower rate of duty than that imposed on the tin plate, terne plate, or sheet, plate, hoop, band, or scroll iron or steel from which it is made, or of which it shall be the component thereof of chief value.

141. On all iron or steel bars or rods of whatever shape or section which are cold rolled, cold drawn, cold hammered, or polished in any way in addition to the ordinary process of hot rolling or hammering, there shall be paid one fourth of one cent per pound in addition to the rates provided in this act on bars or rods of whatever section or shape which are hot rolled; and on all strips, plates, or sheets of iron or steel of whatever shape, other than the polished, planished, or glanced sheet iron or sheet steel hereinbefore provided for, which are cold rolled, cold hammered, blued, brightened, tempered, or polished by any process to such perfected surface finish or polish better than the grade of cold rolled, smoothed only, hereinbefore provided for, there shall be paid one cent per pound in addition to the rates provided in this act upon plates, strips, or sheets of iron or steel of common or black finish; and on steel circular saw plates there shall be paid one half of one cent per pound in addition to the rate provided in this act for steel saw plates.

Manufactures of Iron and Steel.—142. Anvils of iron or steel, or of iron and steel combined, by whatever process made, or in whatever stage of manufacture, one and seven eighths cent per pound.

143. Axles or parts thereof, axle bars, axle blanks, or forgings for axles, whether of iron or steel, without reference to the stage or state of manufacture, valued at not more than six cents per pound, one cent per pound: *Provided*, That when iron or steel axles are imported fitted in wheels, or parts of wheels, of iron or steel, they shall be dutiable at the same rate as the wheels in which they are fitted.

144. Blacksmiths' hammers and sledges, track tools, wedges, and crowbars, whether of iron or steel, one and one half cent per pound.

145. Bolts, with or without threads or nuts, or bolt-blanks, and finished hinges or hinge-blanks, whether of iron or steel, one and one half cent per pound.

146. Card-clothing manufactured from tempered steel wire, forty-five cents per square foot; all other, twenty cents per square foot.

147. Cast-iron pipe of every description, four tenths of one cent per pound.

148. Cast-iron vessels, plates, stove plates and irons, sad-irons, tailors' irons, hatters' irons, and castings of iron, not specially provided for in this act, eight tenths of one cent per pound.

149. Castings of malleable iron not specially provided for in this act, nine tenths of one cent per pound.

150. Cast hollow-ware, coated, glazed, or tinned, two cents per pound.

151. Chain or chains of all kinds, made of iron or steel, not less than three fourths of one inch in diameter, one and one eighth cent per pound; less than three fourths of one inch and not less than three eighths of one inch in diameter, one and three eighths cent per pound; less than three eighths of one inch in diameter and not less than five sixteenths of one inch in diameter, one and seven eighths cent per pound; less than five sixteenths of one inch in diameter, three cents per pound; but no chain or chains of any description shall

pay a lower rate of duty than forty-five per centum ad valorem.

152. Lap welded, butt welded, seamed, or jointed iron or steel boiler tubes, pipes, flues, or stays, not thinner than number sixteen wire gauge, two cents per pound; welded cylindrical furnaces, made from plate metal, two and one half cents per pound; all other iron or steel tubes, finished, not specially provided for in this act, thirty-five per centum ad valorem.

Cutlery.—153. Penknives or pocketknives, clasp knives, pruning knives, and budding knives of all kinds, or parts thereof, and erasers or manicure knives, or parts thereof, wholly or partly manufactured, valued at not more than forty cents per dozen, forty per centum ad valorem; valued at more than forty cents per dozen and not exceeding fifty cents per dozen, one cent per piece and forty per centum ad valorem; valued at more than fifty cents per dozen and not exceeding one dollar and twenty-five cents per dozen, five cents per piece and forty per centum ad valorem; valued at more than one dollar and twenty-five cents per dozen and not exceeding three dollars per dozen, ten cents per piece and forty per centum ad valorem; valued at more than three dollars per dozen, twenty cents per piece and forty per centum ad valorem: *Provided*, That blades, handles, or other parts of either or any of the foregoing articles, imported in any other manner than assembled in finished knives or erasers, shall be subject to no less rate of duty than herein provided for penknives, pocketknives, clasp knives, pruning knives, manicure knives, and erasers valued at more than fifty and not more than one dollar and fifty cents per dozen. Razors and razor blades, finished or unfinished, valued at less than one dollar and fifty cents per dozen, fifty cents per dozen and fifteen per centum ad valorem; valued at one dollar and fifty cents per dozen and less than three dollar per dozen, one dollar per dozen and fifteen per centum ad valorem; valued at three dollars per dozen or more, one dollar and seventy-five cents per dozen and twenty per centum ad valorem. Scissors and shears, and blades for the same, finished or unfinished, valued at not more than fifty cents per dozen, fifteen cents per dozen and fifteen per centum ad valorem; valued at more than fifty cents and not more than one dollar and seventy-five cents per dozen, fifty cents per dozen and fifteen per centum ad valorem; valued at more than one dollar and seventy-five cents per dozen, seventy-five cents per dozen and twenty-five per centum ad valorem.

154. Swords, sword blades, and side arms, thirty-five per centum ad valorem.

155. Table, butchers', carving, cooks', hunting, kitchen, bread, butter, vegetable, fruit, cheese, plumbers', painters', palette, artists', and shoe knives, forks and steels, finished or unfinished, with handles of mother-of-pearl, shell, or ivory, sixteen cents each; with handles of deer horn, twelve cents each; with handles of hard rubber, solid bone, celluloid, or any pyroxyline material, five cents each; with handles of any other material than those above mentioned, one and one half cent each, and in addition, on all the above articles, fifteen per centum ad valorem: *Provided*, That none of the above-named articles shall pay a less rate of duty than forty-five per centum ad valorem.

156. Files, file blanks, rasps, and floats, of all cuts and kinds, two and one half inches in length and under, thirty cents per dozen; over two and one half inches in length and not over four and one half inches, fifty cents per dozen; over four and one half inches in length and under seven inches, seventy-five cents per dozen; seven inches in length and over, one dollar per dozen.

Firearms.—157. Muskets, muzzle-loading shotguns, rifles, and parts thereof, twenty-five per centum ad valorem.

158. Double-barreled, sporting, breech-loading, shotguns, combination shotguns and rifles, valued at not more than five dollars, one dollar and fifty cents each and in addition thereto fifteen per centum ad valorem; valued at more than five dollars and not more than ten dollars, four dollars each and in addition thereto fifteen per centum ad valorem each; valued at more than ten dollars, six dollars each; double barrels for sporting breech-loading shotguns and rifles further advanced in manufacture than rough bored only, three dollars each; stocks for double-barreled sporting breech-loading shotguns and rifles wholly or partially manufactured, three dollars each; and in addition thereto on all such guns and rifles, valued at more than ten dollars each, and on

such stocks and barrels, thirty-five per centum ad valorem; on all other parts of such guns or rifles, and fittings for such stocks or barrels, finished or unfinished, fifty per centum ad valorem: *Provided*, That all double-barrel sporting breech-loading shotguns and rifles imported without a lock or locks or other fittings shall be subject to a duty of six dollars each and thirty-five per centum ad valorem; single-barreled breech-loading shotguns, or parts thereof, except as otherwise specially provided for in this act, one dollar each and thirty-five per centum ad valorem. Revolving pistols or parts thereof, seventy-five cents each and twenty-five per centum ad valorem.

159. Sheets, plates, wares, or articles of iron, steel, or other metal, enameled or glazed with vitreous glasses, forty per centum ad valorem.

Nails, Spikes, Tacks, and Needles.—160. Cut nails and cut spikes of iron or steel, six tenths of one cent per pound.

161. Horseshoe nails, hob nails, and all other wrought-iron or steel nails not specially provided for in this act, two and one fourth cents per pound.

162. Wire nails made of wrought iron or steel, not less than one inch in length and not lighter than number sixteen wire gauge, one half of one cent per pound; less than one inch in length and lighter than number sixteen wire gauge, one cent per pound.

163. Spikes, nuts, and washers, and horse, mule, or ox shoes, of wrought iron or steel, one cent per pound.

164. Cut tacks, brads, or sprigs, not exceeding sixteen ounces to the thousand, one and one fourth cent per thousand; exceeding sixteen ounces to the thousand, one and one half cent per pound.

165. Needles for knitting or sewing machines, including latch needles, one dollar per thousand and twenty-five per centum ad valorem; crochet needles and tape needles, knitting and all other needles, not specially provided for in this act, and bodkins of metal, twenty-five per centum ad valorem.

Plates.—166. Steel plates engraved, stereotype plates, electrotype plates, and plates of other materials, engraved or lithographed, for printing, twenty-five per centum ad valorem.

167. Rivets of iron or steel, two cents per pound.

Saws.—168. Crosscut saws, six cents per linear foot; mill saws, ten cents per linear foot; pit, and drag saws, eight cents per linear foot; circular saws, twenty-five per centum ad valorem; steel band saws, finished or further advanced than tempered and polished, ten cents per pound and twenty per centum ad valorem; hand, back, and all other saws, not specially provided for in this act, thirty per centum ad valorem.

169. Screws, commonly called wood screws, made of iron or steel, more than two inches in length, four cents per pound; over one inch and not more than two inches in length, six cents per pound; over one half inch and not more than one inch in length, eight and one half cents per pound; one half inch and less in length, twelve cents per pound.

170. Umbrella and parasol ribs and stretchers, composed in chief value of iron, steel, or other metal, in frames or otherwise, fifty per centum ad valorem.

171. Wheels for railway purposes, or parts thereof, made of iron or steel, and steel-tired wheels for railway purposes, whether wholly or partly finished, and iron or steel locomotive, car, or other railway tires or parts thereof, wholly or partly manufactured, one and one half cent per pound; and ingots, cogged ingots, blooms, or blanks for the same, without regard to the degree of manufacture, one and one fourth cent per pound: *Provided*, That when wheels for railway purposes, or parts thereof, of iron or steel, are imported with iron or steel axles fitted in them, the wheels and axles together shall be dutiable at the same rate as is provided for the wheels when imported separately.

Miscellaneous Metals and Manufactures of.—172. Aluminium, and alloys of any kind in which aluminium is the component material of chief value, in crude form, eight cents per pound; in plates, sheets, bars, and rods, thirteen cents per pound.

173. Antimony, as regulus or metal, three fourths of one cent per pound.

174. Argentine, albata, or German silver, unmanufactured, twenty-five per centum ad valorem.

175. Bronze powder, twelve cents per pound; bronze or Dutch-metal or aluminium, in leaf, six cents per package of one hundred leaves.

176. Copper in rolled plates, called braziers' copper, sheets, rods, pipes, and copper bottoms, two and one half cents per pound; sheathing or yellow metal of which copper is the component material of chief value, and not composed wholly or in part of iron ungalvanized, two cents per pound.

Gold and Silver.—177. Gold leaf, one dollar and seventy-five cents per package of five hundred leaves.

178. Silver leaf, seventy-five cents per package of five hundred leaves.

179. Tinsel wire, lame or lahn, made wholly or in chief value of gold, silver, or other metal, five cents per pound; bullions and metal threads, made wholly or in chief value of tinsel wire, lame or lahn, five cents per pound and thirty-five per centum ad valorem; laces, embroideries, braids, galloons, trimmings, or other articles, made wholly or in chief value of tinsel wire, lame or lahn, bullions, or metal threads, sixty per centum ad valorem.

180. Hooks and eyes, metallic, whether loose, carded, or otherwise, including weight of cards, cartons, and immediate wrappings and labels, five and one half cents per pound and fifteen per centum ad valorem.

Lead.—181. Lead-bearing ore of all kinds, one and one half cent per pound on the lead contained therein: *Provided*, That on all importations of lead-bearing ores the duties shall be estimated at the port of entry, and a bond given in double the amount of such estimated duties for the transportation of the ores by common carriers bonded for the transportation of appraised or unappraised merchandise to properly equipped sampling or smelting establishments, whether designated as bonded warehouses or otherwise. On the arrival of the ores at such establishments they shall be sampled according to commercial methods under the supervision of Government officers, who shall be stationed at such establishments, and who shall submit the samples thus obtained to a Government assayer, designated by the Secretary of the Treasury, who shall make a proper assay of the sample, and report the result to the proper customs officers, and the import entries shall be liquidated thereon, except in case of ores that shall be removed to a bonded warehouse to be refined for exportation as provided by law. And the Secretary of the Treasury is authorized to make all necessary regulations to enforce the provisions of this paragraph.

182. Lead dross, lead bullion or base bullion, lead in pigs and bars, lead in any form not specially provided for in this act, old refuse lead run into blocks and bars, and old scrap lead fit only to be remanufactured; all the foregoing, two and one eighth cents per pound; lead in sheets, pipe, shot, glaziers' lead, and lead wire, two and one half cents per pound.

183. Metallic mineral substances in a crude state, and metals unwrought, not specially provided for in this act, twenty per centum ad valorem; monazite sand and thorite, six cents per pound.

184. Mica, unmanufactured, or rough trimmed only, six cents per pound and twenty per centum ad valorem; mica, cut or trimmed, twelve cents per pound and twenty per centum ad valorem.

185. Nickel, nickel oxide, alloy of any kind in which nickel is a component material of chief value, in pigs, ingots, bars, or sheets, six cents per pound.

186. Pens, metallic, except gold pens, twelve cents per gross.

187. Penholder tips, penholders, or parts thereof, and gold pens, twenty-five per centum ad valorem.

188. Pins with solid heads, without ornamentation, including hair, safety, hat, bonnet, and shawl pins; any of the foregoing composed wholly of brass, copper, iron, steel, or other base metal, not plated, and not commonly known as jewelry, thirty-five per centum ad valorem.

189. Quicksilver, seven cents per pound. The flasks, bottles, or other vessels in which quicksilver is imported shall be subject to the same rate of duty as they would be subjected to if imported empty.

190. Type metal, one and one half cent per pound for the lead contained therein; new types, twenty-five per centum ad valorem.

191. Watch movements, whether imported in cases or not, if having not more than seven jewels, thirty-five cents each; if having more than seven jewels and not more than eleven jewels, fifty cents each; if having more than eleven jewels and not more than fifteen jewels, seventy-five cents each; if having more than fifteen jewels and not more than seventeen jewels, one dollar and twenty-five cents each; if having more than seventeen

jewels, three dollars each, and in addition thereto, on all the foregoing, twenty-five per centum ad valorem; watch cases and parts of watches, including watch dials, chronometers, box or ship, and parts thereof, clocks and parts thereof, not otherwise provided for in this act, whether separately packed or otherwise, not composed wholly or in part of china, porcelain, parian, bisque, or earthenware, forty per centum ad valorem; all jewels for use in the manufacture of watches or clocks, ten per centum ad valorem.

192. Zinc in blocks or pigs, one and one half cent per pound; in sheets, two cents per pound; old and worn out, fit only to be remanufactured, one cent per pound.

193. Articles or wares not specially provided for in this act, composed wholly or in part of iron, steel, lead, copper, nickel, pewter, zinc, gold, silver, platinum, aluminum, or other metal, and whether partly or wholly manufactured, forty-five per centum ad valorem.

SCHEDULE D.—WOOD AND MANUFACTURES OF.

194. Timber hewn, sided, or squared (not less than eight inches square), and round timber used for spars or in building wharves, one cent per cubic foot.

195. Sawed boards, planks, deals, and other lumber of whitewood, sycamore, and basswood, one dollar per thousand feet board measure; sawed lumber, not specially provided for in this act, two dollars per thousand feet board measure; but when lumber of any sort is planed or finished, in addition to the rates herein provided, there shall be levied and paid for each side so planed or finished fifty cents per thousand feet board measure; and if planed on one side and tongued and grooved, one dollar per thousand feet board measure; and if planed on two sides and tongued and grooved, one dollar and fifty cents per thousand feet board measure; and in estimating board measure under this schedule no deduction shall be made on board measure on account of planing, tonguing, and grooving: *Provided*, That if any country or dependency shall impose an export duty upon saw logs, round unmanufactured timber, stave bolts, shingle bolts, or heading bolts, exported to the United States, or a discriminating charge upon boom sticks, or chains used by American citizens in towing logs, the amount of such export duty, tax, or other charge, as the case may be, shall be added as an additional duty to the duties imposed upon the articles mentioned in this paragraph when imported from such country or dependency.

196. Paving posts, railroad ties, and telephone, trolley, electric-light and telegraph poles of cedar or other woods, twenty per centum ad valorem.

197. Kindling wood in bundles not exceeding one quarter of a cubic foot each, three tenths of one cent per bundle; if in larger bundles, three tenths of one cent for each additional quarter of a cubic foot or fractional part thereof.

198. Sawed boards, planks, deals, and all forms of sawed cedar, lignum-vitæ, lancewood, ebony, box, granadilla, mahogany, rosewood, satinwood, and all other cabinet woods not further manufactured than sawed, fifteen per centum ad valorem; veneers of wood, and wood, unmanufactured, not specially provided for in this act, twenty per centum ad valorem.

199. Clapboards, one dollar and fifty cents per thousand.

200. Hubs for wheels, posts, heading bolts, stave bolts, last blocks, wagon blocks, oar blocks, heading blocks, and all like blocks or sticks, rough-hewn, sawed or bored, twenty per centum ad valorem; fence posts, ten per centum ad valorem.

201. Laths, twenty-five cents per one thousand pieces.

202. Pickets, palings, and staves of wood of all kinds, ten per centum ad valorem.

203. Shingles, thirty cents per thousand.

204. Casks, barrels, and hogsheads (empty), sugar-box shooks, and packing boxes (empty), and packing-box shooks, of wood, not specially provided for in this act, thirty per centum ad valorem.

205. Boxes, barrels, or other articles containing oranges, lemons, limes, grape fruit, shaddock, or pomelos, thirty per centum ad valorem: *Provided*, That the thin wood, so called, comprising the sides, tops, and bottoms of orange and lemon boxes of the growth and manufacture of the United States, exported as orange and lemon box shooks, may be reimported in completed form, filled with oranges and lemons, by the payment of duty at one half the rate imposed on similar boxes of entirely foreign growth and manufacture.

206. Chair cane or reeds, wrought or manufactured from rattans or reeds, ten per centum ad valorem; osier or willow prepared for basket makers' use, twenty per centum ad valorem; manufactures of osier or willow, forty per centum ad valorem.

207. Toothpicks of wood or other vegetable substance, two cents per one thousand and fifteen per centum ad valorem; butchers' and packers' skewers of wood, forty cents per thousand.

208. House or cabinet furniture, of wood, wholly or partly finished, and manufactures of wood, or of which wood is the component material of chief value, not specially provided for in this act, thirty-five per centum ad valorem.

SCHEDULE E.—SUGAR, MOLASSES, AND MANUFACTURES OF.

209. Sugars not above number sixteen Dutch standard in color, tank bottoms, sirups of cane juice, melada, concentrated melada, concrete and concentrated molasses, testing by the polariscope not above seventy-five degrees, ninety-five one hundredths of one cent per pound, and for every additional degree shown by the polariscope test, thirty-five one thousandths of one cent per pound additional, and fractions of a degree in proportion; and on sugar above number sixteen Dutch standard in color, and on all sugar which has gone through a process of refining, one cent and ninety-five one hundredths of one cent per pound; molasses testing above forty degrees and not above fifty-six degrees, three cents per gallon; testing fifty-six degrees and above, six cents per gallon; sugar drainings and sugar sweepings shall be subject to duty as molasses or sugar, as the case may be, according to polariscope test: *Provided*, That nothing herein contained shall be so construed as to abrogate or in any manner impair or affect the provisions of the treaty of commercial reciprocity concluded between the United States and the King of the Hawaiian Islands on the thirteenth day of January, eighteen hundred and seventy-five, or the provision of any act of Congress heretofore passed for the execution of the same.

210. Maple sugar and maple sirup, four cents per pound; glucose or grape sugar, one and one half cent per pound; sugar cane in its natural state or unmanufactured, twenty per centum ad valorem.

211. Saccharine, one dollar and fifty cents per pound and ten per centum ad valorem.

212. Sugar candy and all confectionery not specially provided for in this act, valued at fifteen cents per pound or less, and on sugars after being refined, when tintured, colored, or in any way adulterated, four cents per pound and fifteen per centum ad valorem; valued at more than fifteen cents per pound, fifty per centum ad valorem. The weight and the value of the immediate coverings, other than the outer packing case or other covering, shall be included in the dutiable weight and the value of the merchandise.

SCHEDULE F.—TOBACCO AND MANUFACTURES OF.

213. Wrapper tobacco, and filler tobacco when mixed or packed with more than fifteen per centum of wrapper tobacco, and all leaf tobacco the product of two or more countries or dependencies when mixed or packed together, if unstemmed, one dollar and eighty-five cents per pound; if stemmed, two dollars and fifty cents per pound; filler tobacco not specially provided for in this act, if unstemmed, thirty-five cents per pound; if stemmed, fifty cents per pound.

214. The term wrapper tobacco as used in this act means that quality of leaf tobacco which is suitable for cigar wrappers, and the term filler tobacco means all other leaf tobacco. Collectors of customs shall not permit entry to be made, except under regulations to be prescribed by the Secretary of the Treasury, of any leaf tobacco, unless the invoices of the same shall specify in detail the character of such tobacco, whether wrapper or filler, its origin and quality. In the examination for classification of any imported leaf tobacco, at least one bale, box, or package in every ten, and at least one in every invoice, shall be examined by the appraiser or person authorized by law to make such examination, and at least ten hands shall be examined in each examined bale, box, or package.

215. All other tobacco, manufactured or unmanufactured, not specially provided for in this act, fifty-five cents per pound.

216. Snuff and snuff flour, manufactured of tobacco, ground dry or damp, and pickled, scented, or otherwise, of all descriptions, fifty-five cents per pound.

217. Cigars, cigarettes, cheroots of all kinds, four dollars and fifty cents per pound and twenty-five per centum ad valorem; and paper cigars and cigarettes, including wrappers, shall be subject to the same duties as are herein imposed upon cigars.

SCHEDULE G.—AGRICULTURAL PRODUCTS AND PROVISIONS.

Animals, Live.—218. Cattle, if less than one year old, two dollars per head; all other cattle, if valued at not more than fourteen dollars per head, three dollars and seventy-five cents per head; if valued at more than fourteen dollars per head, twenty-seven and one half per centum ad valorem.

219. Swine, one dollar and fifty cents per head.

220. Horses and mules, valued at one hundred and fifty dollars or less per head, thirty dollars per head; if valued at over one hundred and fifty dollars, twenty-five per centum ad valorem.

221. Sheep, one year old or over, one dollar and fifty cents per head; less than one year old, seventy-five cents per head.

222. All other live animals, not specially provided for in this act, twenty per centum ad valorem.

Bread Stuffs and Farinaceous Substances.—223. Barley, thirty cents per bushel of forty-eight pounds.

224. Barley malt, forty-five cents per bushel of thirty-four pounds.

225. Barley, pearled, patent, or hulled, two cents per pound.

226. Buckwheat, fifteen cents per bushel of forty-eight pounds.

227. Corn or maize, fifteen cents per bushel of fifty-six pounds.

228. Corn meal, twenty cents per bushel of forty-eight pounds.

229. Macaroni, vermicelli, and all similar preparations, one and one half cent per pound.

230. Oats, fifteen cents per bushel.

231. Oatmeal and rolled oats, one cent per pound; oat hulls, ten cents per hundred pounds.

232. Rice, cleaned, two cents per pound; uncleaned rice, or rice free of the outer hull and still having the inner cuticle on, one and one fourth cent per pound; rice flour, and rice meal, and rice broken which will pass through a sieve, known commercially as number twelve wire sieve, one fourth of one cent per pound; paddy, or rice having the outer hull on, three fourths of one cent per pound.

233. Rye, ten cents per bushel; rye flour, one half of one cent per pound.

234. Wheat, twenty-five cents per bushel.

235. Wheat flour, twenty-five per centum ad valorem.

Dairy Products.—236. Butter, and substitutes therefor, six cents per pound.

237. Cheese, and substitutes therefor, six cents per pound.

238. Milk, fresh, two cents per gallon.

239. Milk, preserved or condensed, or sterilized by heating or other processes, including weight of immediate coverings, two cents per pound; sugar of milk, five cents per pound.

Farm and Field Products.—240. Beans, forty-five cents per bushel of sixty pounds.

241. Beans, peas, and mushrooms, prepared or preserved, in tins, jars, bottles, or similar packages, two and one half cents per pound, including the weight of all tins, jars, and other immediate coverings; all vegetables, prepared or preserved, including pickles and sauces of all kinds, not specially provided for in this act, and fish paste or sauce, forty per centum ad valorem.

242. Cabbages, three cents each.

243. Cider, five cents per gallon.

244. Eggs, not specially provided for in this act, five cents per dozen.

245. Eggs, yolk of, twenty-five per centum ad valorem; albumen, egg or blood, three cents per pound; dried blood, when soluble, one and one half cent per pound.

246. Hay, four dollars per ton.

247. Honey, twenty cents per gallon.

248. Hops, twelve cents per pound; hop extract and lupulin, fifty per centum ad valorem.

249. Onions, forty cents per bushel; garlic, one cent per pound.

250. Peas, green, in bulk or in barrels, sacks, or similar packages, and seed peas, forty cents per bushel of sixty pounds; peas, dried, not specially provided for,

thirty cents per bushel; split peas, forty cents per bushel of sixty pounds; peas in cartons, papers, or other small packages, one cent per pound.

251. Orchids, palms, dracænas, crotons and azaleas, tulips, hyacinths, narcissi, jonquils, lilies, lilies of the valley, and all other bulbs, bulbous roots, or corms, which are cultivated for their flowers, and natural flowers of all kinds, preserved or fresh, suitable for decorative purposes, twenty-five per centum ad valorem.

252. Stocks, cuttings or seedlings of Myrobalan plum, Mahaleb, or Mazzard cherry, three years old or less, fifty cents per thousand plants and fifteen per centum ad valorem; stocks, cuttings or seedlings of pear, apple, quince, and the St. Julien plum, three years old or less, and evergreen seedlings, one dollar per thousand plants and fifteen per centum ad valorem; rose plants, budded, grafted, or grown on their own roots, two and one half cents each; stocks, cuttings and seedlings of all fruit and ornamental trees, deciduous and evergreen, shrubs and vines, manetti, multiflora, and brier rose, and all trees, shrubs, plants, and vines, commonly known as nursery or greenhouse stock, not specially provided for in this act, twenty-five per centum ad valorem.

253. Potatoes, twenty-five cents per bushel of sixty pounds.

254. Seeds: Castor beans or seeds, twenty-five cents per bushel of fifty pounds; flaxseed or linseed and other oil seeds not specially provided for in this act, twenty-five cents per bushel of fifty-six pounds; poppy seed, fifteen cents per bushel; but no drawback shall be allowed upon oil cake made from imported seed, nor shall any allowance be made for dirt or other impurities in any seed; seeds of all kinds not specially provided for in this act, thirty per centum ad valorem.

255. Straw, one dollar and fifty cents per ton.

256. Teazles, thirty per centum ad valorem.

257. Vegetables in their natural state, not specially provided for in this act, twenty-five per centum ad valorem.

Fish.—258. Fish known or labeled as anchovies, sardines, sprats, brislings, sardels, or sardellen, packed in oil or otherwise, in bottles, jars, tin boxes, or cans, shall be dutiable as follows: When in packages containing seven and one half cubic inches or less, one and one half cent per bottle, jar, box, or can; containing more than seven and one half and not more than twenty-one cubic inches, two and one half cents per bottle, jar, box, or can; containing more than twenty-one and not more than thirty-three cubic inches, five cents per bottle, jar, box, or can; containing more than thirty-three and not more than seventy cubic inches, ten cents per bottle, jar, box, or can; if in other packages, forty per centum ad valorem. All other fish (except shellfish), in tin packages, thirty per centum ad valorem; fish in packages containing less than one half barrel, and not specially provided for in this act, thirty per centum ad valorem.

259. Fresh-water fish not specially provided for in this act, one fourth of one cent per pound.

260. Herrings, pickled or salted, one half of one cent per pound; herrings, fresh, one fourth of one cent per pound.

261. Fish, fresh, smoked, dried, salted, pickled, frozen, packed in ice or otherwise prepared for preservation, not specially provided for in this act, three fourths of one cent per pound; fish, skinned or boned, one and one fourth cent per pound; mackerel, halibut, or salmon, fresh, pickled, or salted, one cent per pound.

Fruits and Nuts.—262. Apples, peaches, quinces, cherries, plums, and pears, green or ripe, twenty-five cents per bushel; apples, peaches, pears, and other edible fruits, including berries, when dried, desiccated, evaporated, or prepared in any manner, not specially provided for in this act, two cents per pound; berries, edible, in their natural condition, one cent per quart; cranberries, twenty-five per centum ad valorem.

263. Comfits, sweetmeats, and fruits preserved in sugar, molasses, spirits, or in their own juices, not specially provided for in this act, one cent per pound and thirty-five per centum ad valorem; if containing over ten per centum of alcohol and not specially provided for in this act, thirty-five per centum ad valorem and in addition two dollars and fifty cents per proof gallon on the alcohol contained therein in excess of ten per centum; jellies of all kinds, thirty-five per centum ad valorem; pineapples preserved in their own juice, twenty-five per centum ad valorem.

264. Figs, plums, prunes, and prunelles, two cents per pound; raisins and other dried grapes, two and one half

cents per pound; dates, one half of one cent per pound; currants. Zante or other, two cents per pound; olives, green or prepared, in bottles, jars, or similar packages, twenty-five cents per gallon; in casks or otherwise than in bottles, jars, or similar packages, fifteen cents per gallon.

265. Grapes in barrels or other packages, twenty cents per cubic foot of capacity of barrels or packages.

266. Oranges, lemons, limes, grape fruit, shaddockes, or pomeelos, one cent per pound.

267. Orange peel or lemon peel, preserved, candied, or dried, and cocoanut meat or copra desiccated, shredded, cut, or similarly prepared, two cents per pound; citron or citron peel, preserved, candied, or dried, four cents per pound.

268. Pineapples, in barrels and other packages, seven cents per cubic foot of the capacity of barrels or packages; in bulk, seven dollars per thousand.

Nuts: 269. Almonds, not shelled, four cents per pound; clear almonds, shelled, six cents per pound.

270. Filberts and walnuts of all kinds, not shelled, three cents per pound; shelled, five cents per pound.

271. Peanuts or ground beans, unshelled, one half of one cent per pound; shelled, one cent per pound.

272. Nuts of all kinds, shelled or unshelled, not specially provided for in this act, one cent per pound.

Meat Products.—273. Bacon and hams, five cents per pound.

274. Fresh beef, veal, mutton, and pork, two cents per pound.

275. Meats of all kinds, prepared or preserved, not specially provided for in this act, twenty-five per centum ad valorem.

276. Extract of meat, not specially provided for in this act, thirty-five cents per pound; fluid extract of meat, fifteen cents per pound, but the dutiable weight of the extract of meat and of the fluid extract of meat shall not include the weight of the package in which the same is imported.

277. Lard, two cents per pound.

278. Poultry, live, three cents per pound; dressed, five cents per pound.

279. Tallow, three fourths of one cent per pound; wool grease, including that known commercially as degrass or brown wool grease, one half of one cent per pound.

Miscellaneous Products.—280. Chicory root, raw, dried, or undried, but unground, one cent per pound; chicory root, burnt or roasted, ground or granulated, or in rolls, or otherwise prepared, and not specially provided for in this act, two and one half cents per pound.

281. Chocolate and cocoa, prepared or manufactured, not specially provided for in this act, valued at not over fifteen cents per pound, two and one half cents per pound; valued above fifteen and not above twenty-four cents per pound, two and one half cents per pound and ten per centum ad valorem; valued above twenty-four and not above thirty-five cents per pound, five cents per pound and ten per centum ad valorem; valued above thirty-five cents per pound, fifty per centum ad valorem. The weight and value of all coverings, other than plain wooden, shall be included in the dutiable weight and value of the foregoing merchandise; powdered cocoa, unsweetened, five cents per pound.

282. Cocoa butter or cocoa butterine, three and one half cents per pound.

283. Dandelion root and acorns prepared, and articles used as coffee, or as substitutes for coffee not specially provided for in this act, two and one half cents per pound.

284. Salt in hags, sacks, barrels, or other packages, twelve cents per one hundred pounds; in bulk, eight cents per one hundred pounds: *Provided*, That imported salt in hord may be used in curing fish taken by vessels licensed to engage in the fisheries, and in curing fish on the shores of the navigable waters of the United States, under such regulations as the Secretary of the Treasury shall prescribe; and upon proof that the salt has been used for either of the purposes stated in this proviso, the duties on the same shall be remitted: *Provided further*, That exporters of meats, whether packed or smoked, which have been cured in the United States with imported salt, shall, upon satisfactory proof, under such regulations as the Secretary of the Treasury shall prescribe, that such meats have been cured with imported salt, have refunded to them from the Treasury the duties paid on the salt so used in curing such exported meats, in amounts not less than one hundred dollars.

285. Starch, including all preparations, from whatever substance produced, fit for use as starch, one and one half cent per pound.

286. Dextrine, burnt starch, gum substitute, or British gum, two cents per pound.

287. Spices: Mustard, ground or prepared, in bottles or otherwise, ten cents per pound; capsicum or red pepper, or cayenne pepper, two and one half cents per pound; sage, one cent per pound; spices not specially provided for in this act, three cents per pound.

288. Vinegar, seven and one half cents per proof gallon. The standard proof for vinegar shall be taken to be that strength which requires thirty-five grains of bicarbonate of potash to neutralize one ounce troy of vinegar.

SCHEDULE H.—SPIRITS, WINES, AND OTHER BEVERAGES.

Spirits.—289. Brandy and other spirits manufactured or distilled from grain or other materials, and not specially provided for in this act, two dollars and twenty-five cents per proof gallon.

290. Each and every gauge or wine gallon of measurement shall be counted as at least one proof gallon; and the standard for determining the proof of brandy and other spirits or liquors of any kind imported shall be the same as that which is defined in the laws relating to internal revenue: *Provided*, That it shall be lawful for the Secretary of the Treasury, in his discretion, to authorize the ascertainment of the proof of wines, cordials, or other liquors, by distillation or otherwise, in cases where it is impracticable to ascertain such proof by the means prescribed by existing law or regulations: *And provided further*, That any brandy or other spirituous or distilled liquors imported in any sized cask, bottle, jug, or other package, of or from any country, dependency, or province under whose laws similar sized casks, bottles, jugs, or other packages of distilled spirits, wine, or other beverage put up or filled in the United States are denied entrance into such country, dependency, or province, shall be forfeited to the United States; and any brandy or other spirituous or distilled liquor imported in a cask of less capacity than ten gallons from any country shall be forfeited to the United States.

291. On all compounds or preparations of which distilled spirits are a component part of chief value, there shall be levied a duty not less than that imposed upon distilled spirits.

292. Cordials, liqueurs, arrack, absinthe, kirschwasser, ratafia, and other spirituous beverages or bitters of all kinds, containing spirits, and not specially provided for in this act, two dollars and twenty-five cents per proof gallon.

293. No lower rate or amount of duty shall be levied, collected, and paid on brandy, spirits, and other spirituous beverages than that fixed by law for the description of first proof; but it shall be increased in proportion for any greater strength than the strength of first proof, and all imitations of brandy or spirits or wines imported by any names whatever shall be subject to the highest rate of duty provided for the genuine articles respectively intended to be represented, and in no case less than one dollar and fifty cents per gallon.

294. Bay rum or bay water, whether distilled or compounded, of first proof, and in proportion for any greater strength than first proof, one dollar and fifty cents per gallon.

Wines.—295. Champagne and all other sparkling wines, in bottles containing each not more than one quart and more than one pint, eight dollars per dozen; containing not more than one pint each and more than one half pint, four dollars per dozen; containing one half pint each or less, two dollars per dozen; in bottles or other vessels containing more than one quart each, in addition to eight dollars per dozen bottles, on the quantity in excess of one quart, at the rate of two dollars and fifty cents per gallon; but no separate or additional duty shall be levied on the bottles.

296. Still wines, including ginger wine or ginger cordial and vermouth, in casks or packages other than bottles or jugs, if containing fourteen per centum or less of absolute alcohol, forty cents per gallon; if containing more than fourteen per centum of absolute alcohol, fifty cents per gallon. In bottles or jugs, per case of one dozen bottles or jugs, containing each not more than one quart and more than one pint, or twenty-four bottles or jugs containing each not more than one pint, one dollar and sixty cents per case; and any excess beyond these quantities found in such bottles or jugs shall be subject to a

duty of five cents per pint or fractional part thereof, but no separate or additional duty shall be assessed on the bottles or jugs: *Provided*, That any wines, ginger cordial, or vermouth imported containing more than twenty-four per centum of alcohol shall be classed as spirits and pay duty accordingly: *And provided further*, That there shall be no constructive or other allowance for breakage, leakage, or damage on wines, liquors, cordials, or distilled spirits. Wines, cordials, brandy, and other spirituous liquors, including bitters of all kinds, and bay rum or bay water, imported in bottles or jugs, shall be packed in packages containing not less than one dozen bottles or jugs in each package, or duty shall be paid as if such package contained at least one dozen bottles or jugs, and in addition thereto, duty shall be collected on the bottles or jugs at the rates which would be chargeable thereon if imported empty. The percentage of alcohol in wines and fruit juices shall be determined in such manner as the Secretary of the Treasury shall by regulation prescribe.

297. Ale, porter, and beer, in bottles or jugs, forty cents per gallon, but no separate or additional duty shall be assessed on the bottles or jugs; otherwise than in bottles or jugs, twenty cents per gallon.

298. Malt extract, fluid, in casks, twenty cents per gallon; in bottles or jugs, forty cents per gallon; solid or condensed, forty per centum ad valorem.

299. Cherry juice and prune juice, or prune wine, and other fruit juices not specially provided for in this act, containing no alcohol or not more than eighteen per centum of alcohol, sixty cents per gallon; if containing more than eighteen per centum of alcohol, sixty cents per gallon, and in addition thereto two dollars and seven cents per proof gallon on the alcohol contained therein.

300. Ginger ale, ginger beer, lemonade, soda water, and other similar beverages containing no alcohol in plain green or colored, molded or pressed, glass bottles, containing each not more than three fourths of a pint, eighteen cents per dozen; containing more than three fourths of a pint each and not more than one and one half pints, twenty-eight cents per dozen; but no separate or additional duty shall be assessed on the bottles; if imported otherwise than in plain green or colored, molded or pressed, glass bottles, or in such bottles containing more than one and one half pints each, fifty cents per gallon and in addition thereto duty shall be collected on the bottles, or other coverings, at the rates which would be chargeable thereon if imported empty.

301. All mineral waters and all imitations of natural mineral waters, and all artificial mineral waters not specially provided for in this act, in green or colored glass bottles, containing not more than one pint, twenty cents per dozen bottles. If containing more than one pint and not more than one quart, thirty cents per dozen bottles. But no separate duty shall be assessed upon the bottles. If imported otherwise than in plain green or colored glass bottles, or if imported in such bottles containing more than one quart, twenty-four cents per gallon, and in addition thereto duty shall be collected upon the bottles or other covering at the same rates that would be charged thereon if imported empty or separately.

SCHEDULE I.—COTTON MANUFACTURES.

302. Cotton thread and carded yarn, warps or warp yarn, in singles, whether on beams or in bundles, skeins or cops, or in any other form, except spool thread of cotton hereinafter provided for, not colored, bleached, dyed, or advanced beyond the condition of singles by grouping or twisting two or more single yarns together, three cents per pound on all numbers up to and including number fifteen, one fifth of a cent per number per pound on all numbers exceeding number fifteen and up to and including number thirty, and one fourth of a cent per number per pound on all numbers exceeding number thirty; colored, bleached, dyed, combed, or advanced beyond the condition of singles by grouping or twisting two or more single yarns together, whether on beams, or in bundles, skeins or cops, or in any other form, except spool thread of cotton hereinafter provided for, six cents per pound on all numbers up to and including number twenty, and on all numbers exceeding number twenty and up to number eighty, one fourth of one cent per number per pound; on number eighty and above, three tenths of one cent per number per pound; cotton card laps, roping, sliver, or roving, forty-five per centum ad valorem.

303. Spool thread of cotton, including crochet, darning, and embroidery cottons on spools or reels, containing on

each spool or reel not exceeding one hundred yards of thread, six cents per dozen; exceeding one hundred yards on each spool or reel, for every additional hundred yards or fractional part thereof in excess of one hundred, six cents per dozen spools or reels; if otherwise than on spools or reels, one half of one cent for each one hundred yards or fractional part thereof: *Provided*, That in no case shall the duty be assessed upon a less number of yards than is marked on the spools or reels.

304. Cotton cloth not bleached, dyed, colored, stained, painted, or printed, and not exceeding fifty threads to the square inch, counting the warp and filling, one cent per square yard; if bleached, one and one fourth cent per square yard; if dyed, colored, stained, painted, or printed, two cents per square yard.

305. Cotton cloth, not bleached, dyed, colored, stained, painted, or printed, exceeding fifty and not exceeding one hundred threads to the square inch, counting the warp and filling, and not exceeding six square yards to the pound, one and one fourth cent per square yard; exceeding six and not exceeding nine square yards to the pound, one and one half cent per square yard; exceeding nine square yards to the pound, one and three fourths cent per square yard; if bleached, and not exceeding six square yards to the pound, one and one half cent per square yard; exceeding six and not exceeding nine square yards to the pound, one and three fourths cent per square yard; exceeding nine square yards to the pound, two and one fourth cents per square yard; if dyed, colored, stained, painted, or printed, and not exceeding six square yards to the pound, two and three fourths cents per square yard; exceeding six and not exceeding nine square yards to the pound, three and one fourth cents per square yard; exceeding nine square yards to the pound, three and one half cents per square yard: *Provided*, That on all cotton cloth not exceeding one hundred threads to the square inch, counting the warp and filling, not bleached, dyed, colored, stained, painted, or printed, valued at over seven cents per square yard, twenty-five per centum ad valorem; bleached, valued at over nine cents per square yard, twenty-five per centum ad valorem; and dyed, colored, stained, painted, or printed, valued at over twelve cents per square yard, there shall be levied, collected, and paid a duty of thirty per centum ad valorem.

306. Cotton cloth, not bleached, dyed, colored, stained, painted, or printed, exceeding one hundred and not exceeding one hundred and fifty threads to the square inch, counting the warp and filling, and not exceeding four square yards to the pound, one and one half cent per square yard; exceeding four and not exceeding six square yards to the pound, two cents per square yard; exceeding six and not exceeding eight square yards to the pound, two and one half cents per square yard; exceeding eight square yards to the pound, two and three fourths cents per square yard; if bleached, and not exceeding four square yards to the pound, two and one half cents per square yard; exceeding four and not exceeding six square yards to the pound, three cents per square yard; exceeding six and not exceeding eight square yards to the pound, three and one half cents per square yard; exceeding eight square yards to the pound, three and three fourths cents per square yard; if dyed, colored, stained, painted, or printed, and not exceeding four square yards to the pound, three and one half cents per square yard; exceeding four and not exceeding six square yards to the pound, three and three fourths cents per square yard; exceeding six and not exceeding eight square yards to the pound, four and one fourth cents per square yard; exceeding eight square yards to the pound, four and one half cents per square yard: *Provided*, That, on all cotton cloth exceeding one hundred and not exceeding one hundred and fifty threads to the square inch, counting the warp and filling, not bleached, dyed, colored, stained, painted, or printed, valued at over nine cents per square yard, thirty per centum ad valorem; bleached, valued at over eleven cents per square yard, thirty-five per centum ad valorem; dyed, colored, stained, painted, or printed, valued at over twelve and one half cents per square yard, there shall be levied, collected, and paid a duty of thirty-five per centum ad valorem.

307. Cotton cloth not bleached, dyed, colored, stained, painted, or printed, exceeding one hundred and fifty and not exceeding two hundred threads to the square inch, counting the warp and filling, and not exceeding three and one half square yards to the pound, two cents per square yard; exceeding three and one half and not ex-

ceeding four and one half square yards to the pound, two and three fourths cents per square yard; exceeding four and one half and not exceeding six square yards to the pound, three cents per square yard; exceeding six square yards to the pound, three and one half cents per square yard; if bleached, and not exceeding three and one half square yards to the pound, two and three fourths cents per square yard; exceeding three and one half and not exceeding four and one half square yards to the pound, three and one half cents per square yard; exceeding four and one half and not exceeding six square yards to the pound, four cents per square yard; exceeding six square yards to the pound, four and one fourth cents per square yard; if dyed, colored, stained, painted, or printed, and not exceeding three and one half square yards to the pound, four and one fourth cents per square yard; exceeding three and one half and not exceeding four and one half square yards to the pound, four and one half cents per square yard; exceeding four and one half and not exceeding six square yards to the pound, four and three fourths cents per square yard; exceeding six square yards to the pound, five cents per square yard: *Provided*, That on all cotton cloth exceeding one hundred and fifty and not exceeding two hundred threads to the square inch, counting the warp and filling, not bleached, dyed, colored, stained, painted, or printed, valued at over ten cents per square yard, thirty-five per centum ad valorem; bleached, valued at over twelve cents per square yard, thirty-five per centum ad valorem; dyed, colored, stained, painted, or printed, valued at over twelve and one half cents per square yard, there shall be levied, collected, and paid a duty of forty per centum ad valorem.

308. Cotton cloth not bleached, dyed, colored, stained, painted, or printed, exceeding two hundred and not exceeding three hundred threads to the square inch, counting the warp and filling, and not exceeding two and one half square yards to the pound, three and one half cents per square yard; exceeding two and one half and not exceeding three and one half square yards to the pound, four cents per square yard; exceeding three and one half and not exceeding five square yards to the pound, four and one half cents per square yard; exceeding five square yards to the pound, five cents per square yard; if bleached, and not exceeding two and one half square yards to the pound, four and one half cents per square yard; exceeding two and one half and not exceeding three and one half square yards to the pound, five cents per square yard; exceeding three and one half and not exceeding five square yards to the pound, five and one half cents per square yard; exceeding five square yards to the pound, six cents per square yard; if dyed, colored, stained, painted, or printed, and not exceeding three and one half square yards to the pound, six and one fourth cents per square yard; exceeding three and one half square yards to the pound, seven cents per square yard: *Provided*, That on all such cotton cloths not bleached, dyed, colored, stained, painted, or printed, valued at over twelve and one half cents per square yard; bleached, valued at over fifteen cents per square yard; and dyed, colored, stained, painted, or printed, valued at over seventeen and one half cents per square yard, there shall be levied, collected, and paid a duty of forty per centum ad valorem.

309. Cotton cloth not bleached, dyed, colored, stained, painted, or printed, exceeding three hundred threads to the square inch, counting the warp and filling, and not exceeding two square yards to the pound, four cents per square yard; exceeding two and not exceeding three square yards to the pound, four and one half cents per square yard; exceeding three and not exceeding four square yards to the pound, five cents per square yard; exceeding four square yards to the pound, five and one half cents per square yard; if bleached and not exceeding two square yards to the pound, five cents per square yard; exceeding two and not exceeding three square yards to the pound, five and one half cents per square yard; exceeding three and not exceeding four square yards to the pound, six cents per square yard; exceeding four square yards to the pound, six and one half cents per square yard; if dyed, colored, stained, painted, or printed, and not exceeding three square yards to the pound, six and one half cents per square yard; exceeding three square yards to the pound, eight cents per square yard: *Provided*, That on all such cotton cloths not bleached, dyed, colored, stained, painted, or printed, valued at over fourteen cents per square yard; bleached,

valued at over sixteen cents per square yard; and dyed, colored, stained, painted, or printed, valued at over twenty cents per square yard, there shall be levied, collected, and paid a duty of forty per centum ad valorem.

310. The term cotton cloth, or cloth, wherever used in the paragraphs of this schedule, unless otherwise specially provided for, shall be held to include all woven fabrics of cotton in the piece or otherwise, whether figured, fancy, or plain, the warp and filling threads of which can be counted by unraveling or other practicable means.

311. Cloth, composed of cotton or other vegetable fiber and silk, whether known as silk-striped sleeve linings, silk stripes, or otherwise, of which cotton is the component material of chief value, eight cents per square yard and thirty per centum ad valorem: *Provided*, That no such cloth shall pay a less rate of duty than fifty per centum ad valorem. Cotton cloth, filled or coated, three cents per square yard and twenty per centum ad valorem.

312. Handkerchiefs or mufflers composed of cotton, whether in the piece or otherwise and whether finished or unfinished, if not hemmed, or hemmed only, shall pay the same rate of duty on the cloth contained therein as is imposed on cotton cloth of the same description, weight, and count of threads to the square inch; but such handkerchiefs or mufflers shall not pay a less rate of duty than forty-five per centum ad valorem. If such handkerchiefs or mufflers are hemstitched, or imitation hemstitched, or revered, or have drawn threads, they shall pay a duty of ten per centum ad valorem in addition to the duty hereinbefore prescribed, and in no case less than fifty-five per centum ad valorem; if such handkerchiefs or mufflers are embroidered in any manner, whether with an initial letter, monogram, or otherwise, by hand or machinery, or are tambooured, appliquéed, or trimmed wholly or in part with lace or with tucking or insertion, they shall not pay a less rate of duty than sixty per centum ad valorem.

313. Cotton cloth in which other than the ordinary warp and filling threads have been introduced into the process of weaving to form a figure, whether known as lappets or otherwise, and whether unbleached, bleached, dyed, colored, stained, painted, or printed, shall pay, in addition to the duty herein provided for other cotton cloth of the same description, or condition, weight, and count of threads to the square inch, one cent per square yard if valued at not more than seven cents per square yard, and two cents per square yard if valued at more than seven cents per square yard.

314. Clothing, ready-made, and articles of wearing apparel of every description, including neckties or neckwear composed of cotton or other vegetable fiber, or of which cotton or other vegetable fiber is the component material of chief value, made up or manufactured, wholly or in part, by the tailor, seamstress, or manufacturer, and not otherwise provided for in this act, fifty per centum ad valorem: *Provided*, That any outside garment provided for in this paragraph having India rubber as a component material shall pay a duty of fifteen cents per pound and fifty per centum ad valorem.

315. Plushes, velvets, velveteens, eorduroys, and all pile fabrics, cut or uncut; any of the foregoing composed of cotton or other vegetable fiber, not bleached, dyed, colored, stained, painted, or printed, nine cents per square yard and twenty-five per centum ad valorem; if bleached, dyed, colored, stained, painted, or printed, twelve cents per square yard and twenty-five per centum ad valorem: *Provided*, That eorduroys composed of cotton or other vegetable fiber, weighing seven ounces or over per square yard, shall pay a duty of eighteen cents per square yard and twenty-five per centum ad valorem: *Provided further*, That manufactures or articles in any form including such as are commonly known as bias dress facings or skirt bindings, made or cut from plushes, velvets, velveteens, eorduroys, or other pile fabrics composed of cotton or other vegetable fiber, shall be subject to the foregoing rates of duty and in addition thereto ten per centum ad valorem: *Provided further*, That none of the articles or fabrics provided for in this paragraph shall pay a less rate of duty than forty-seven and one half per centum ad valorem.

316. Curtains, table covers, and all articles manufactured of cotton chenille or of which cotton chenille is the component material of chief value, fifty per centum ad valorem.

317. Stockings, hose, and half-hose, made on knitting machines or frames, composed of cotton or other vegeta-

ble fiber, and not otherwise specially provided for in this act, thirty per centum ad valorem.

318. Stockings, hose, and half-hose, selvaged, fashioned, narrowed, or shaped wholly or in part by knitting machines or frames, or knit by hand, including such as are commercially known as seamless stockings, hose, and half-hose, and elocked stockings, hose, or half-hose, all of the above composed of cotton or other vegetable fiber, finished or unfinished, valued at not more than one dollar per dozen pairs, fifty cents per dozen pairs; valued at more than one dollar per dozen pairs, and not more than one dollar and fifty cents per dozen pairs, sixty cents per dozen pairs; valued at more than one dollar and fifty cents per dozen pairs, and not more than two dollars per dozen pairs, seventy cents per dozen pairs; valued at more than two dollars per dozen pairs, and not more than three dollars per dozen pairs, one dollar and twenty cents per dozen pairs; valued at more than three dollars per dozen pairs and not more than five dollars per dozen pairs, two dollars per dozen pairs; and in addition thereto, upon all the foregoing, fifteen per centum ad valorem; valued at more than five dollars per dozen pairs, fifty-five per centum ad valorem.

319. Shirts and drawers, pants, vests, union suits, combination suits, tights, sweaters, corset covers, and all underwear of every description made wholly or in part on knitting machines or frames, or knit by hand, finished or unfinished, not including stockings, hose, and half-hose, composed of cotton or other vegetable fiber, valued at not more than one dollar and fifty cents per dozen, sixty cents per dozen and fifteen per centum ad valorem; valued at more than one dollar and fifty cents per dozen and not more than three dollars per dozen, one dollar and ten cents per dozen, and in addition thereto fifteen per centum ad valorem; valued at more than three dollars per dozen and not more than five dollars per dozen, one dollar and fifty cents per dozen, and in addition thereto twenty-five per centum ad valorem; valued at more than five dollars per dozen and not more than seven dollars per dozen, one dollar and seventy-five cents per dozen, and in addition thereto thirty-five per centum ad valorem; valued at more than seven dollars per dozen and not more than fifteen dollars per dozen, two dollars and twenty-five cents per dozen, and in addition thereto thirty-five per centum ad valorem; valued above fifteen dollars per dozen, fifty per centum ad valorem.

320. Bandings, beltings, bindings, bone easings, cords, garters, lining for bicycle tires, ribbons, suspenders and braces, tapes, tubing, and webs or webbing, any of the foregoing articles made of cotton or other vegetable fiber, whether composed in part of India rubber or otherwise, and not embroidered by hand or machinery, forty-five per centum ad valorem; spindle banding, woven, braided, or twisted lamp, stove, or candle wicking made of cotton or other vegetable fiber, ten cents per pound and fifteen per centum ad valorem; loom harness or healds made of cotton or other vegetable fiber, or of which cotton or other vegetable fiber is the component material of chief value, fifty cents per pound and twenty-five per centum ad valorem; boot, shoe, and corset lacings made of cotton or other vegetable fiber, twenty-five cents per pound and fifteen per centum ad valorem; labels, for garments or other articles, composed of cotton or other vegetable fiber, fifty cents per pound and thirty per centum ad valorem.

321. Cotton table damask, forty per centum ad valorem; cotton duck, thirty-five per centum ad valorem.

322. All manufactures of cotton not specially provided for in this act, forty-five per centum ad valorem.

SCHEDULE J.—FLAX, HEMP, AND JUTE, AND MANUFACTURES OF.

323. Flax straw, five dollars per ton.

324. Flax, not hackled or dressed, one cent per pound.

325. Flax, hackled, known as "dressed line," three cents per pound.

326. Tow of flax, twenty dollars per ton.

327. Hemp, and tow of hemp, twenty dollars per ton; hemp, hackled, known as "line of hemp," forty dollars per ton.

328. Single yarns made of jute, not finer than five lea or number, one cent per pound and ten per centum ad valorem; if finer than five lea or number, thirty-five per centum ad valorem.

329. Cables and cordage, composed of istle, Tampico fiber, manila, sisal grass or sunn, or a mixture of these or any of them, one cent per pound; cables and cordage made of hemp, tarred or untarred, two cents per pound.

330. Threads, twines, or cords, made from yarn not finer than five lea or number, composed of flax, hemp, or ramie, or of which these substances or either of them is the component material of chief value, thirteen cents per pound; if made from yarn finer than five lea or number, three fourths of one cent per pound additional for each lea or number, or part of a lea or number, in excess of five.

331. Single yarns in the gray, made of flax, hemp, or ramie, or a mixture of any of them, not finer than eight lea or number, seven cents per pound; finer than eight lea or number and not finer than eighty lea or number, forty per centum ad valorem; single yarns, made of flax, hemp, or ramie, or a mixture of any of them, finer than eighty lea or number, fifteen per centum ad valorem.

332. Flax gill netting, nets, webs, and seines shall pay the same duty per pound as is imposed in this schedule upon the thread, twine, or cord of which they are made, and in addition thereto twenty-five per centum ad valorem.

333. Floor mattings, plain, fancy, or figured, manufactured from straw, round or split, or other vegetable substances not otherwise provided for, including what are commonly known as Chinese, Japanese, and India straw mattings, valued at not exceeding ten cents per square yard, three cents per square yard; valued at exceeding ten cents per square yard, seven cents per square yard and twenty-five per centum ad valorem.

334. Carpets, carpeting, mats, and rugs made of flax, hemp, jute, or other vegetable fiber (except cotton), valued at not exceeding fifteen cents per square yard, five cents per square yard and thirty-five per centum ad valorem; valued above fifteen cents per square yard, ten cents per square yard and thirty-five per centum ad valorem.

335. Hydraulic hose, made in whole or in part of flax, hemp, ramie, or jute, twenty cents per pound.

336. Tapes composed wholly or in part of flax, woven with or without metal threads, on reels, spools, or otherwise, and designed expressly for use in the manufacture of measuring tapes, forty per centum ad valorem.

337. Oilcloth for floors, stamped, painted, or printed, including linoleums or corticene, figured or plain, and all other oilcloth (except silk oilcloth) under twelve feet in width not specially provided for herein, eight cents per square yard and fifteen per centum ad valorem; oilcloth for floors and linoleum or corticene, twelve feet and over in width, inlaid linoleum or corticene, and cork carpets, twenty cents per square yard and twenty per centum ad valorem; waterproof cloth, composed of cotton or other vegetable fiber, whether composed in part of India rubber or otherwise, ten cents per square yard and twenty per centum ad valorem.

338. Shirt collars and cuffs, composed of cotton, forty-five cents per dozen pieces and fifteen per centum ad valorem; composed in whole or in part of linen, forty cents per dozen pieces and twenty per centum ad valorem.

339. Laces, lace window curtains, tidies, pillow shams, bed sets, insertings, flouncings, and other lace articles; handkerchiefs, napkins, wearing apparel, and other articles, made wholly or in part of lace, or in imitation of lace; nets or nettings, veils and veilings, etamines, vitrages, neck ruffings, ruchings, tuckings, flutings, and quillings; embroideries and all trimmings, including braids, edgings, insertings, flouncings, galloons, gorings, and bands; wearing apparel, handkerchiefs, and other articles or fabrics embroidered in any manner by hand or machinery, whether with a letter, monogram, or otherwise; tamboured or appliquéd articles, fabrics, or wearing apparel; hemstitched or tucked flouncings or skirtings, and articles made wholly or in part of ruffings, tuckings, or ruchings; all of the foregoing, composed wholly or in chief value of flax, cotton, or other vegetable fiber, and not elsewhere specially provided for in this act, whether composed in part of India rubber or otherwise, sixty per centum ad valorem: *Provided*, That no wearing apparel or other article or textile fabric, when embroidered by hand or machinery, shall pay duty at a less rate than that imposed in any schedule of this act upon any embroideries of the materials of which such embroidery is composed.

340. Lace window curtains, pillow shams, and bed sets, finished or unfinished, made on the Nottingham lace-curtain machine or on the Nottingham warp machine, and composed of cotton or other vegetable fiber, when counting five points or spaces between the warp threads to the inch, one cent per square yard; when counting

more than five such points or spaces to the inch, one half of one cent per square yard in addition for each such point or space to the inch in excess of five; and in addition thereto, on all the foregoing articles in this paragraph, twenty per centum ad valorem: *Provided*, That none of the above-named articles shall pay a less rate of duty than fifty per centum ad valorem.

341. Plain woven fabrics of single jute yarns, by whatever name known, not exceeding sixty inches in width, weighing not less than six ounces per square yard and not exceeding thirty threads to the square inch, counting the warp and filling, five eighths of one cent per pound and fifteen per centum ad valorem; if exceeding thirty and not exceeding fifty-five threads to the square inch, counting the warp and filling, seven eighths of one cent per pound and fifteen per centum ad valorem.

342. All pile fabrics of which flax is the component material of chief value, sixty per centum ad valorem.

343. Bags or sacks made from plain woven fabrics, of single jute yarns, not dyed, colored, stained, painted, printed, or bleached, and not exceeding thirty threads to the square inch, counting the warp and filling, seven eighths of one cent per pound and fifteen per centum ad valorem.

344. Bagging for cotton, gunny cloth, and similar fabrics, suitable for covering cotton, composed of single yarns made of jute, jute butts, or hemp, not bleached, dyed, colored, stained, painted, or printed, not exceeding sixteen threads to the square inch, counting the warp and filling, and weighing not less than fifteen ounces per square yard, six tenths of one cent per square yard.

345. Handkerchiefs composed of flax, hemp, or ramie, or of which these substances, or either of them, is the component material of chief value, whether in the piece or otherwise, and whether finished or unfinished, not hemmed or hemmed only, fifty per centum ad valorem; if hemstitched, or imitation hemstitched, or reversed, or with drawn threads, but not embroidered or initialed, fifty-five per centum ad valorem.

346. Woven fabrics or articles not specially provided for in this act, composed of flax, hemp, or ramie, or of which these substances or either of them is the component material of chief value, weighing four and one half ounces or more per square yard, when containing not more than sixty threads to the square inch, counting the warp and filling, one and three fourths cent per square yard; containing more than sixty and not more than one hundred and twenty threads to the square inch, two and three fourths cents per square yard; containing more than one hundred and twenty and not more than one hundred and eighty threads to the square inch, six cents per square yard; containing more than one hundred and eighty threads to the square inch, nine cents per square yard, and in addition thereto, on all the foregoing, thirty per centum ad valorem: *Provided*, That none of the foregoing articles in this paragraph shall pay a less rate of duty than fifty per centum ad valorem. Woven fabrics of flax, hemp, or ramie, or of which these substances or either of them is the component material of chief value, including such as is known as shirting cloth, weighing less than four and one half ounces per square yard and containing more than one hundred threads to the square inch, counting the warp and filling, thirty-five per centum ad valorem.

347. All manufactures of flax, hemp, ramie, or other vegetable fiber, or of which these substances, or either of them, is the component material of chief value, not specially provided for in this act, forty-five per centum ad valorem.

SCHEDULE K.—WOOL AND MANUFACTURES OF WOOL.

348. All wools, hair of the camel, goat, alpaca, and other like animals, shall be divided, for the purpose of fixing the duties to be charged thereon, into the three following classes:

349. Class one, that is to say, merino, mestiza, metz, or metis wools, or other wools of Merino blood, immediate or remote, Down clothing wools, and wools of like character with any of the preceding, including Bagdad wool, China lamb's wool, Castel Branco, Adrianople skin wool or butcher's wool, and such as have been heretofore usually imported into the United States from Buenos Ayres, New Zealand, Australia, Cape of Good Hope, Russia, Great Britain, Canada, Egypt, Morocco, and elsewhere, and all wools not hereinafter included in classes two and three.

350. Class two, that is to say, Leicester, Cotswold, Lin-

colnshire, Down combing wools, Canada long wools, or other like combing wools of English blood, and usually known by the terms herein used, and also hair of the camel, Angora goat, alpaca, and other like animals.

351. Class three, that is to say, Donskoi, native South American, Cordova, Valparaiso, native Smyrna, Russian camel's hair, and all such wools of like character as have been heretofore usually imported into the United States from Turkey, Greece, Syria, and elsewhere, excepting improved wools hereinafter provided for.

352. The standard samples of all wools which are now or may be hereafter deposited in the principal customhouses of the United States, under the authority of the Secretary of the Treasury, shall be the standards for the classification of wools under this act, and the Secretary of the Treasury is authorized to renew these standards and to make such additions to them from time to time as may be required, and he shall cause to be deposited like standards in other customhouses of the United States when they may be needed.

353. Whenever wools of class three shall have been improved by the admixture of Merino or English blood, from their present character as represented by the standard samples now or hereafter to be deposited in the principal customhouses of the United States, such improved wools shall be classified for duty either as class one or as class two, as the case may be.

354. The duty on wools of the first class which shall be imported washed shall be twice the amount of the duty to which they would be subjected if imported unwashed; and the duty on wools of the first and second classes which shall be imported scoured shall be three times the duty to which they would be subjected if imported unwashed. The duty on wools of the third class, if imported in condition for use in carding or spinning into yarns, or which shall not contain more than eight per cent of dirt or other foreign substance, shall be three times the duty to which they would otherwise be subjected.

355. Unwashed wools shall be considered such as shall have been shorn from the sheep without any cleansing; that is, in their natural condition. Washed wools shall be considered such as have been washed with water only on the sheep's back, or on the skin. Wools of the first and second classes washed in any other manner than on the sheep's back or on the skin shall be considered as scoured wool.

356. The duty upon wool of the sheep or hair of the camel, Angora goat, alpaca, and other like animals, of class one and class two, which shall be imported in any other than ordinary condition, or which has been sorted or increased in value by the rejection of any part of the original fleece, shall be twice the duty to which it would be otherwise subject: *Provided*, That skirted wools as imported in eighteen hundred and ninety and prior thereto are hereby excepted. The duty upon wool of the sheep or hair of the camel, Angora goat, alpaca, and other like animals of any class which shall be changed in its character or condition for the purpose of evading the duty, or which shall be reduced in value by the admixture of dirt or any other foreign substance, shall be twice the duty to which it would be otherwise subject. When the duty assessed upon any wool equals three times or more that which would be assessed if said wool was imported unwashed, the duty shall not be doubled on account of the wool being sorted. If any bale or package of wool or hair specified in this act invoiced or entered as of any specified class, or claimed by the importer to be dutiable as of any specified class, shall contain any wool or hair subject to a higher rate of duty than the class so specified, the whole bale or package shall be subject to the highest rate of duty chargeable on wool of the class subject to such higher rate of duty, and if any bale or package be claimed by the importer to be shoddy, mungo, flocks, wool, hair, or other material of any class specified in this act, and such bale contain any admixture of any one or more of said materials, or of any other material, the whole bale or package shall be subject to duty at the highest rate imposed upon any article in said bale or package.

357. The duty upon all wools and hair of the first class shall be eleven cents per pound, and upon all wools or hair of the second class twelve cents per pound.

358. On wools of the third class and on camel's hair of the third class the value whereof shall be twelve cents or less per pound, the duty shall be four cents per pound.

359. On wools of the third class, and on camel's hair of

the third class, the value whereof shall exceed twelve cents per pound, the duty shall be seven cents per pound.

360. The duty on wools on the skin shall be one cent less per pound than is imposed in this schedule on other wools of the same class and condition, the quantity and value to be ascertained under such rules as the Secretary of the Treasury may prescribe.

361. Top waste, slubbing waste, roving waste, ring waste, and garnetted waste, thirty cents per pound.

362. Shoddy, twenty-five cents per pound: noils, wool extract, yarn waste, thread waste, and all other wastes composed wholly or in part of wool, and not specially provided for in this act, twenty cents per pound.

363. Woolen rags, mungo, and flocks, ten cents per pound.

364. Wool and hair which have been advanced in any manner or by any process of manufacture beyond the washed or scoured condition, not specially provided for in this act, shall be subject to the same duties as are imposed upon manufactures of wool not specially provided for in this act.

365. On yarns made wholly or in part of wool, valued at not more than thirty cents per pound, the duty per pound shall be two and one half times the duty imposed by this act on one pound of unwashed wool of the first class; valued at more than thirty cents per pound, the duty per pound shall be three and one half times the duty imposed by this act on one pound of unwashed wool of the first class, and in addition thereto, upon all the foregoing, forty per centum ad valorem.

366. On cloths, knit fabrics, and all manufactures of every description made wholly or in part of wool, not specially provided for in this act, valued at not more than forty cents per pound, the duty per pound shall be three times the duty imposed by this act on a pound of unwashed wool of the first class; valued at above forty cents per pound and not above seventy cents per pound, the duty per pound shall be four times the duty imposed by this act on one pound of unwashed wool of the first class, and in addition thereto, upon all the foregoing, fifty per centum ad valorem; valued at over seventy cents per pound, the duty per pound shall be four times the duty imposed by this act on one pound of unwashed wool of the first class and fifty-five per centum ad valorem.

367. On blankets, and flannels for underwear composed wholly or in part of wool, valued at not more than forty cents per pound, the duty per pound shall be the same as the duty imposed by this act on two pounds of unwashed wool of the first class, and in addition thereto thirty per centum ad valorem; valued at more than forty cents and not more than fifty cents per pound, the duty per pound shall be three times the duty imposed by this act on one pound of unwashed wool of the first class, and in addition thereto thirty-five per centum ad valorem. On blankets composed wholly or in part of wool, valued at more than fifty cents per pound, the duty per pound shall be three times the duty imposed by this act on one pound of unwashed wool of the first class, and in addition thereto forty per centum ad valorem. Flannels composed wholly or in part of wool, valued at above fifty cents per pound, shall be classified and pay the same duty as women's and children's dress goods, coat linings, Italian cloths, and goods of similar character and description provided by this act: *Provided*, That on blankets over three yards in length the same duties shall be paid as on cloths.

368. On women's and children's dress goods, coat linings, Italian cloths, and goods of similar description and character of which the warp consists wholly of cotton or other vegetable material with the remainder of the fabric composed wholly or in part of wool, valued at not exceeding fifteen cents per square yard, the duty shall be seven cents per square yard; valued at more than fifteen cents per square yard, the duty shall be eight cents per square yard; and in addition thereto on all the foregoing valued at not above seventy cents per pound, fifty per centum ad valorem; valued above seventy cents per pound, fifty-five per centum ad valorem: *Provided*, That on all the foregoing, weighing over four ounces per square yard, the duty shall be the same as imposed by this schedule on cloths.

369. On women's and children's dress goods, coat linings, Italian cloths, bunting, and goods of similar description or character composed wholly or in part of wool, and not specially provided for in this act, the duty

shall be eleven cents per square yard; and in addition thereto on all the foregoing valued at not above seventy cents per pound, fifty per centum ad valorem; valued above seventy cents per pound, fifty-five per centum ad valorem: *Provided*, That on all the foregoing, weighing over four ounces per square yard, the duty shall be the same as imposed by this schedule on cloths.

370. On clothing, ready-made, and articles of wearing apparel of every description, including shawls whether knitted or woven, and knitted articles of every description, made up or manufactured wholly or in part, felts not woven and not specially provided for in this act, composed wholly or in part of wool, the duty per pound shall be four times the duty imposed by this act on one pound of unwashed wool of the first class, and in addition thereto sixty per centum ad valorem.

371. Webbing, gorings, suspenders, braces, bandings, beltings, bindings, braids, galloons, edgings, insertings, flouncings, fringes, gimps, cords, and tassels, laces and other trimmings and articles made wholly or in part of lace embroideries and articles embroidered by hand or machinery, head nets, netting, buttons or barrel buttons or buttons of other forms for tassels or ornaments, and manufactures of wool ornamented with beads or spangles of whatever material composed, any of the foregoing made of wool or of which wool is a component material, whether composed in part of India rubber or otherwise, fifty cents per pound and sixty per centum ad valorem.

372. Aubusson, Axminster, moquette, and chenille carpets, figured or plain, and all carpets or carpeting of like character or description, sixty cents per square yard, and in addition thereto forty per centum ad valorem.

373. Saxony, Wilton, and Tournay velvet carpets, figured or plain, and all carpets or carpeting of like character or description, sixty cents per square yard, and in addition thereto forty per centum ad valorem.

374. Brussels carpets, figured or plain, and all carpets or carpeting of like character or description, forty-four cents per square yard, and in addition thereto forty per centum ad valorem.

375. Velvet and tapestry velvet carpets, figured or plain, printed on the warp or otherwise, and all carpets or carpeting of like character or description, forty cents per square yard, and in addition thereto forty per centum ad valorem.

376. Tapestry Brussels carpets, figured or plain, and all carpets or carpeting of like character or description, printed on the warp or otherwise, twenty-eight cents per square yard, and in addition thereto forty per centum ad valorem.

377. Treble ingrain, three-ply, and all chain Venetian carpets, twenty-two cents per square yard, and in addition thereto forty per centum ad valorem.

378. Wool Dutch, and two-ply ingrain carpets, eighteen cents per square yard, and in addition thereto forty per centum ad valorem.

379. Carpets of every description woven whole for rooms, and Oriental, Berlin, Aubusson, Axminster, and similar rugs, ten cents per square foot, and in addition thereto forty per centum ad valorem.

380. Druggets and bookings, printed, colored, or otherwise, twenty-two cents per square yard, and in addition thereto forty per centum ad valorem.

381. Carpets and carpeting of wool, flax, or cotton, or composed in part of either, not specially provided for in this act, fifty per centum ad valorem.

382. Mats, rugs for floors, screens, covers, hassocks, bed sides, art squares, and other portions of carpets or carpeting made wholly or in part of wool, and not specially provided for in this act, shall be subjected to the rate of duty herein imposed on carpets or carpetings of like character or description.

383. Whenever, in any schedule of this act, the word "wool" is used in connection with a manufactured article of which it is a component material, it shall be held to include wool or hair of the sheep, camel, goat, alpaca, or other animal, whether manufactured by the woolen, worsted, felt, or any other process.

SCHEDULE L.—SILKS AND SILK GOODS.

384. Silk partially manufactured from cocoons or from waste silk, and not further advanced or manufactured than carded or combed silk, forty cents per pound.

385. Thrown silk, not more advanced than singles, tram, organzine, sewing silk, twist, floss, and silk threads or yarns of every description, except spun silk, thirty per centum ad valorem; spun silk in skeins, cops, warps, or

on beams, valued at not exceeding one dollar per pound, twenty cents per pound and fifteen per centum ad valorem; valued at over one dollar per pound and not exceeding one dollar and fifty cents per pound, thirty cents per pound and fifteen per centum ad valorem; valued at over one dollar and fifty cents per pound and not exceeding two dollars per pound, forty cents per pound and fifteen per centum ad valorem; valued at over two dollars per pound and not exceeding two dollars and fifty cents per pound, fifty cents per pound and fifteen per centum ad valorem; valued at over two dollars and fifty cents per pound, sixty cents per pound and fifteen per centum ad valorem; but in no case shall the foregoing articles pay a less rate of duty than thirty-five per centum ad valorem.

386. Velvets, velvet or plush ribbons, chenilles, or other pile fabrics, cut or uncut, composed of silk, or of which silk is the component material of chief value, not specially provided for in this act, one dollar and fifty cents per pound and fifteen per centum ad valorem; plushes, composed of silk, or of which silk is the component material of chief value, one dollar per pound and fifteen per centum ad valorem; but in no case shall the foregoing articles pay a less rate of duty than fifty per centum ad valorem.

387. Woven fabrics in the piece, not specially provided for in this act, weighing not less than one and one third ounce per square yard and not more than eight ounces per square yard, and containing not more than twenty per centum in weight of silk, if in the gum, fifty cents per pound, and if dyed in the piece, sixty cents per pound; if containing more than twenty per centum and not more than thirty per centum in weight of silk, if in the gum, sixty-five cents per pound, and if dyed in the piece, eighty cents per pound; if containing more than thirty per centum and not more than forty-five per centum in weight of silk, if in the gum, ninety cents per pound, and if dyed in the piece, one dollar and ten cents per pound; if dyed in the thread or yarn and containing not more than thirty per centum in weight of silk, if black (except selvages), seventy-five cents per pound, and if other than black, ninety cents per pound; if containing more than thirty and not more than forty-five per centum in weight of silk, if black (except selvages), one dollar and ten cents per pound, and if other than black, one dollar and thirty cents per pound; if containing more than forty-five per centum in weight of silk, or if composed wholly of silk, if dyed in the thread or yarn and weighted in the dyeing so as to exceed the original weight of the raw silk, if black (except selvages), one dollar and fifty cents per pound, and if other than black, two dollars and twenty-five cents per pound; if dyed in the thread or yarn, and the weight is not increased by dyeing beyond the original weight of the raw silk, three dollars per pound; if in the gum, two dollars and fifty cents per pound; if boiled off, or dyed in the piece, or printed, three dollars per pound; if weighing less than one and one third ounce and more than one third of an ounce per square yard, if in the gum, or if dyed in the thread or yarn, two and one half dollars per pound; if weighing less than one and one third ounce and more than one third of an ounce per square yard, if boiled off, three dollars per pound; if dyed or printed in the piece, three dollars and twenty-five cents per pound; if weighing not more than one third of an ounce per square yard, four dollars and fifty cents per pound; but in no case shall any of the foregoing fabrics in this paragraph pay a less rate of duty than fifty per centum ad valorem.

388. Handkerchiefs or mufflers composed wholly or in part of silk, whether in the piece or otherwise, finished or unfinished, if not hemmed or hemmed only, shall pay the same rate of duty as is imposed on goods in the piece of the same description, weight, and condition as provided for in this schedule; but such handkerchiefs or mufflers shall not pay a less rate of duty than fifty per centum ad valorem; if such handkerchiefs or mufflers are hemstitched or imitation hemstitched, or revered or have drawn threads, or are embroidered in any manner, whether with an initial letter, monogram, or otherwise, by hand or machinery, or are tamboured, appliquéd, or are made or trimmed wholly or in part with lace, or with tucking or insertion, they shall pay a duty of ten per centum ad valorem in addition to the duty hereinbefore prescribed, and in no case less than sixty per centum ad valorem.

389. Bandings, including hat bands, beltings, bindings, bone casings, braces, cords, and tassels, garters,

gorings, suspenders, tubings, and webs and webbings, composed wholly or in part of silk, and whether composed in part of India rubber or otherwise, if not embroidered in any manner by hand or machinery, fifty per centum ad valorem.

390. Laces, and articles made wholly or in part of lace, edgings, insertings, galloons, cliffon or other flouncings, nets or nettings and veilings, neck ruffings, ruchings, braids, fringes, trimmings, embroideries and articles embroidered by hand or machinery, or tanned or appliquéd, clothing ready-made, and articles of wearing apparel of every description, including knit goods, made up or manufactured in whole or in part by the tailor, seamstress, or manufacturer; all of the above-named articles made of silk, or of which silk is the component material of chief value, not specially provided for in this act, and silk goods ornamented with beads or spangles, of whatever material composed, sixty per centum ad valorem: *Provided*, That any wearing apparel or other articles provided for in this paragraph (except gloves) when composed in part of India rubber, shall be subject to a duty of sixty per centum ad valorem.

391. All manufactures of silk, or of which silk is the component material of chief value, including such as have India rubber as a component material, not specially provided for in this act, and all Jacquard figured goods in the piece, made on looms, of which silk is the component material of chief value, dyed in the yarn, and containing two or more colors in the filling, fifty per centum ad valorem: *Provided*, That all manufactures, of which wool is a component material, shall be classified and assessed for duty as manufactures of wool.

392. In ascertaining the weight of silk under the provisions of this schedule, the weight shall be taken in the condition in which found in the goods, without deduction therefrom for any dye, coloring matter, or other foreign substance or material.

SCHEDULE M.—PULP, PAPERS, AND BOOKS.

Pulp and Paper.—393. Mechanically ground wood pulp, one twelfth of one cent per pound, dry weight; chemical wood pulp, unbleached, one sixth of one cent per pound, dry weight; bleached, one fourth of one cent per pound, dry weight: *Provided*, That if any country or dependency shall impose an export duty on pulp wood exported to the United States, the amount of such export duty shall be added, as an additional duty, to the duties herein imposed upon wood pulp, when imported from such country or dependency.

394. Sheathing paper and roofing felt, ten per centum ad valorem.

395. Filter masse or filter stock, composed wholly or in part of wood pulp, wood flour, cotton or other vegetable fiber, one and one half cent per pound and fifteen per centum ad valorem.

396. Printing paper, unsized, sized, or glued, suitable for books and newspapers, valued at not above two cents per pound, three tenths of one cent per pound; valued above two cents and not above two and one half cents per pound, four tenths of one cent per pound; valued above two and one half cents per pound and not above three cents per pound, five tenths of one cent per pound; valued above three cents and not above four cents per pound, six tenths of one cent per pound; valued above four cents and not above five cents per pound, eight tenths of one cent per pound; valued above five cents per pound, fifteen per centum ad valorem: *Provided*, That if any country or dependency shall impose an export duty upon pulp wood exported to the United States, there shall be imposed upon printing paper when imported from such country or dependency an additional duty of one tenth of one cent per pound for each dollar of export duty per cord so imposed, and proportionately for fractions of a dollar of such export duty.

397. Papers commonly known as copying paper, stereotype paper, paper known as bibulous paper, tissue paper, pottery paper, and all similar papers, white, colored, or printed, weighing not over six pounds to the ream of four hundred and eighty sheets, on a basis of twenty by thirty inches, and whether in reams or any other form, six cents per pound and fifteen per centum ad valorem; if weighing over six pounds and not over ten pounds to the ream, and letter copying books, whether wholly or partly manufactured, five cents per pound and fifteen per centum ad valorem; crepe paper and filtering paper, five cents per pound and fifteen per centum ad valorem.

398. Surface-coated papers not specially provided for

in this act, two and one half cents per pound and fifteen per centum ad valorem; if printed, or wholly or partly covered with metal or its solutions, or with gelatin or flock, three cents per pound and twenty per centum ad valorem; parchment papers, two cents per pound and ten per centum ad valorem; plain basic photographic papers for albumenizing, sensitizing, or baryta coating, three cents per pound and ten per centum ad valorem; albumenized or sensitized paper or paper otherwise surface-coated for photographic purposes, thirty per centum ad valorem.

Manufactures of Paper.—399. Paper envelopes, plain, twenty per centum ad valorem; if bordered, embossed, printed, tinted, or decorated, thirty-five per centum ad valorem.

400. Lithographic prints from stone, zinc, aluminium, or other material, bound or unbound (except cigar labels, flaps, and bands, lettered, or otherwise, music and illustrations when forming a part of a periodical or newspaper and accompanying the same, or if bound in or forming a part of printed books, not specially provided for in this act), on paper or other material not exceeding eight one thousandths of one inch in thickness, twenty cents per pound; on paper or other material exceeding eight one thousandths of one inch and not exceeding twenty one thousandths of one inch in thickness, and exceeding thirty-five square inches, but not exceeding four hundred square inches cutting size in dimensions, eight cents per pound; exceeding four hundred square inches cutting size in dimensions, thirty-five per centum ad valorem; prints exceeding eight one thousandths of one inch and not exceeding twenty one thousandths of one inch in thickness, and not exceeding thirty-five square inches cutting size in dimensions, five cents per pound; lithographic prints from stone, zinc, aluminium, or other material, on cardboard or other material, exceeding twenty one thousandths of one inch in thickness, six cents per pound; lithographic cigar labels, flaps, and bands, lettered or blank, printed from stone, zinc, aluminium, or other material, if printed in less than eight colors (bronze printing to be counted as two colors), but not including labels, flaps, and bands printed in whole or in part in metal leaf, twenty cents per pound. Labels, flaps, and bands, if printed entirely in bronze printing, fifteen cents per pound; labels, flaps, and bands printed in eight or more colors, but not including labels, flaps, and bands printed in whole or in part in metal leaf, thirty cents per pound; labels, flaps, and bands printed in whole or in part in metal leaf, fifty cents per pound. Books of paper or other material for children's use, containing illuminated lithographic prints, not exceeding in weight twenty-four ounces each, and all booklets and fashion magazines or periodicals printed in whole or in part by lithographic process or decorated by hand, eight cents per pound.

401. Writing, letter, note, hand-made, drawing, ledger, bond, record, tablet, and typewriter paper, weighing not less than ten pounds and not more than fifteen pounds to the ream, two cents per pound and ten per centum ad valorem; weighing more than fifteen pounds to the ream, three and one half cents per pound and fifteen per centum ad valorem; but if any such paper is ruled, bordered, embossed, printed, or decorated in any manner, it shall pay ten per centum ad valorem in addition to the foregoing rates: *Provided*, That in computing the duty on such paper every one hundred and eighty thousand square inches shall be taken to be a ream.

402. Paper hangings and paper for screens or fireboards, and all other paper not specially provided for in this act, twenty-five per centum ad valorem; all Jacquard designs of one line paper, or parts of such designs, finished or unfinished, thirty-five per centum ad valorem; all Jacquard designs cut on Jacquard cards, or parts of such designs, finished or unfinished, thirty-five per centum ad valorem.

Manufactures of Paper.—403. Books of all kinds, including blank books and pamphlets, and engravings bound or unbound, photographs, etchings, maps, charts, music in books or sheets, and printed matter, all the foregoing not specially provided for in this act, twenty-five per centum ad valorem.

404. Photograph, autograph, and scrap albums, wholly or partly manufactured, thirty-five per centum ad valorem.

405. All fancy boxes made of paper, or of which paper is the component material of chief value, or if covered with surface-coated paper, forty-five per centum ad valorem.

406. Playing cards, in packs not exceeding fifty-four cards and at a like rate for any number in excess, ten cents per pack and twenty per centum ad valorem.

407. Manufactures of paper, or of which paper is the component material of chief value, not specially provided for in this act, thirty-five per centum ad valorem.

SCHEDULE N.—SUNDRIES.

408. Beads of all kinds, not threaded or strung, thirty-five per centum ad valorem; fabrics, nets or nettings, laces, embroideries, galloons, wearing apparel, ornaments, trimmings, and other articles not specially provided for in this act, composed wholly or in part of beads or span-gles made of glass or paste, gelatin, metal, or other material, but not composed in part of wool, sixty per centum ad valorem.

409. Braids, plaits, laces, and willow sheets or squares, composed wholly of straw, chip, grass, palm leaf, willow, osier, or rattan, suitable for making or ornamenting hats, bonnets, or hoods, not bleached, dyed, colored, or stained, fifteen per centum ad valorem; if bleached, dyed, colored, or stained, twenty per centum ad valorem; hats, bonnets, and hoods, composed of straw, chip, grass, palm leaf, willow, osier, or rattan, whether wholly or partly manufactured, but not trimmed, thirty-five per centum ad valorem; if trimmed, fifty per centum ad valorem; but the terms "grass" and "straw" shall be understood to mean these substances in their natural form and structure, and not the separated fiber thereof.

410. Brushes, brooms, and feather dusters of all kinds, and hair pencils in quills or otherwise, forty per centum ad valorem.

411. Bristles, sorted, bunched, or prepared, seven and one half cents per pound.

Buttons and Button Forms.—412. Trousers buckles made wholly or partly of iron or steel, or parts thereof, valued at not more than fifteen cents per hundred, five cents per hundred; valued at more than fifteen cents per hundred and not more than fifty cents per hundred, ten cents per hundred; valued at more than fifty cents per hundred, fifteen cents per hundred; and in addition thereto on each and all of the above buckles or parts of buckles, fifteen per centum ad valorem.

413. Button forms: Lastings, mohair, cloth, silk, or other manufactures of cloth, woven or made in patterns of such size, shape, or form, or cut in such manner as to be fit for buttons exclusively, ten per centum ad valorem.

414. Buttons or parts of buttons and button molds or blanks, finished or unfinished, shall pay duty at the following rates, the line button measure being one fortieth of one inch, namely: Buttons known commercially as agate buttons, metal trousers buttons (except steel), and nickel bar buttons, one twelfth of one cent per line per gross; buttons of bone, and steel trousers buttons, one fourth of one cent per line per gross; buttons of pearl or shell, one and one half cent per line per gross; buttons of horn, vegetable, ivory, glass, or metal, not specially provided for in this act, three fourths of one cent per line per gross, and in addition thereto, on all the foregoing articles in this paragraph, fifteen per centum ad valorem; shoe buttons made of paper, board, *papier-maché*, pulp, or other similar material, not specially provided for in this act, valued at not exceeding three cents per gross, one cent per gross; buttons not specially provided for in this act, and all collar or cuff buttons and studs, fifty per centum ad valorem.

415. Coal, bituminous, and all coals containing less than ninety-two per centum of fixed carbon and shale, sixty-seven cents per ton of twenty-eight bushels, eighty pounds to the bushel; coal slack or culm, such as will pass through a half-inch screen, fifteen cents per ton of twenty-eight bushels, eighty pounds to the bushel: *Provided*, That on all coal imported into the United States, which is afterward used for fuel on board vessels propelled by steam and engaged in trade with foreign countries, or in trade between the Atlantic and Pacific ports of the United States, and which are registered under the laws of the United States, a drawback shall be allowed equal to the duty imposed by law upon such coal, and shall be paid under such regulations as the Secretary of the Treasury shall prescribe; coke, twenty per centum ad valorem.

416. Cork bark, cut into squares or cubes, eight cents per pound; manufactured corks over three fourths of an inch in diameter measured at larger end, fifteen cents per pound; three fourths of an inch and less in diameter,

measured at larger end, twenty-five cents per pound; cork, artificial, or cork substitutes, manufactured from cork waste and not otherwise provided for, eight cents per pound.

417. Dice, draughts, chessmen, chess balls, and billiard, pool, and bagatelle balls, of ivory, bone, or other materials, fifty per centum ad valorem.

418. Dolls, doll heads, toy marbles of whatever materials composed, and all other toys not composed of rubber, china, porcelain, parian, bisque, earthen, or stone ware, and not specially provided for in this act, thirty-five per centum ad valorem.

419. Emery grains, and emery manufactured, ground, pulverized, or refined, one cent per pound; emery wheels, emery files, and manufactures of which emery is the component material of chief value, twenty-five per centum ad valorem.

Explosive Substances.—420. Firecrackers of all kinds, eight cents per pound, the weight to include all coverings, wrappings, and packing material.

421. Fulminates, fulminating powders, and like articles, not specially provided for in this act, thirty per centum ad valorem.

422. Gunpowder, and all explosive substances used for mining, blasting, artillery, or sporting purposes, when valued at twenty cents or less per pound, four cents per pound; valued above twenty cents per pound, six cents per pound.

423. Matches, friction or lucifer, of all descriptions, per gross of one hundred and forty-four boxes, containing not more than one hundred matches per box, eight cents per gross; when imported otherwise than in boxes containing not more than one hundred matches each, one cent per one thousand matches.

424. Percussion caps, thirty per centum ad valorem; cartridges, thirty-five per centum ad valorem; blasting caps, two dollars and thirty-six cents per one thousand caps.

425. Feathers and downs of all kinds, including bird skins or parts thereof with the feathers on, crude or not dressed, colored, or otherwise advanced or manufactured in any manner, not specially provided for in this act, fifteen per centum ad valorem; when dressed, colored, or otherwise advanced or manufactured in any manner, including quilts of down and other manufactures of down, and also dressed and finished birds suitable for millinery ornaments, and artificial or ornamental feathers, fruits, grains, leaves, flowers, and stems or parts thereof, of whatever material composed, not specially provided for in this act, fifty per centum ad valorem.

426. Furs, dressed on the skin but not made up into articles, and furs not on the skin, prepared for hatters' use, including fur skins carroted, twenty per centum ad valorem.

427. Fans of all kinds, except common palm-leaf fans, fifty per centum ad valorem.

428. Gun wads of all descriptions, twenty per centum ad valorem.

429. Hair, human, if clean or drawn but not manufactured, twenty per centum ad valorem.

430. Hair, curled, suitable for beds or mattresses, ten per centum ad valorem.

431. Haireloth, known as "crinoline" cloth, ten cents per square yard; haireloth, known as "hair seating," and hair press cloth, twenty cents per square yard.

432. Hats, bonnets, or hoods, for men's, women's, boys', or children's wear, trimmed or untrimmed, including bodies, hoods, plateaux, forms, or shapes, for hats or bonnets, composed wholly or in chief value of fur of the rabbit, beaver, or other animals, valued at not more than five dollars per dozen, two dollars per dozen; valued at more than five dollars per dozen, and not more than ten dollars per dozen, three dollars per dozen; valued at more than ten dollars per dozen and not more than twenty dollars per dozen, five dollars per dozen; valued at more than twenty dollars per dozen, seven dollars per dozen; and in addition thereto on all the foregoing, twenty per centum ad valorem.

433. Indurated fiber ware and manufactures of wood or other pulp, and not otherwise specially provided for, thirty-five per centum ad valorem.

Jewelry and Precious Stones.—434. Articles commonly known as jewelry, and parts thereof, finished or unfinished, not specially provided for in this act, including precious stones set, pearls set or strung, and cameos in frames, sixty per centum ad valorem.

435. Diamonds and other precious stones advanced in

condition or value from their natural state by cleaving, splitting, cutting, or other process, and not set, ten per centum ad valorem; imitations of diamonds or other precious stones, composed of glass or paste, not exceeding an inch in dimensions, not engraved, painted, or otherwise ornamented or decorated, and not mounted or set, twenty per centum ad valorem.

436. Pearls in their natural state, not strung or set, ten per centum ad valorem.

Leather and Manufactures of.—437. Hides of cattle, raw or uncured, whether dry, salted, or pickled, fifteen per centum ad valorem: *Provided*, That upon all leather exported, made from imported hides, there shall be allowed a drawback equal to the amount of duty paid on such hides, to be paid under such regulations as the Secretary of the Treasury may prescribe.

438. Band or belting leather, sole leather, dressed upper and all other leather, calfskins tanned or tanned and dressed, kangaroo, sheep, and goat skins (including lamb and kid skins) dressed and finished, chamois and other skins, and bookbinders' calfskins, all the foregoing not specially provided for in this act, twenty per centum ad valorem; skins for morocco, tanned but unfinished, ten per centum ad valorem; patent, japanned, varnished, or enameled leather, weighing not over ten pounds per dozen hides or skins, thirty cents per pound and twenty per centum ad valorem; if weighing over ten pounds and not over twenty-five pounds per dozen, thirty cents per pound and ten per centum ad valorem; if weighing over twenty-five pounds per dozen, twenty cents per pound and ten per centum ad valorem; pianoforte leather and pianoforte action leather, thirty-five per centum ad valorem; leather shoe laces, finished or unfinished, fifty cents per gross pairs and twenty per centum ad valorem; boots and shoes made of leather, twenty-five per centum ad valorem: *Provided*, That leather cut into shoe uppers or vamps or other forms, suitable for conversion into manufactured articles, shall be classified as manufactures of leather and pay duty accordingly.

Gloves: 439. Gloves made wholly or in part of leather, whether wholly or partly manufactured, shall pay duty at the following rates, the lengths stated in each case being the extreme length when stretched to their full extent, namely:

440. Women's or children's "glace" finish, Schmaschen (of sheep origin), not over fourteen inches in length, one dollar and seventy-five cents per dozen pairs; over fourteen inches and not over seventeen inches in length, two dollars and twenty-five cents per dozen pairs; over seventeen inches in length, two dollars and seventy-five cents per dozen pairs; men's "glace" finish, Schmaschen (sheep), three dollars per dozen pairs.

441. Women's or children's "glace" finish, lamb or sheep, not over fourteen inches in length, two dollars and fifty cents per dozen pairs; over fourteen and not over seventeen inches in length, three dollars and fifty cents per dozen pairs; over seventeen inches in length, four dollars and fifty cents per dozen pairs; men's "glace" finish, lamb or sheep, four dollars per dozen pairs.

442. Women's or children's "glace" finish, goat, kid, or other leather than of sheep origin, not over fourteen inches in length, three dollars per dozen pairs; over fourteen and not over seventeen inches in length, three dollars and seventy-five cents per dozen pairs; over seventeen inches in length, four dollars and seventy-five cents per dozen pairs; men's "glace" finish, kid, goat, or other leather than of sheep origin, four dollars per dozen pairs.

443. Women's or children's, of sheep origin, with exterior grain surface removed, by whatever name known, not over seventeen inches in length, two dollars and fifty cents per dozen pairs; over seventeen inches in length, three dollars and fifty cents per dozen pairs; men's, of sheep origin, with exterior surface removed, by whatever name known, four dollars per dozen pairs.

444. Women's or children's kid, goat, or other leather than of sheep origin, with exterior grain surface removed, by whatever name known, not over fourteen inches in length, three dollars per dozen pairs; over fourteen inches and not over seventeen inches in length, three dollars and seventy-five cents per dozen pairs; over seventeen inches in length, four dollars and seventy-five cents per dozen pairs; men's, goat, kid, or other leather than of sheep origin, with exterior grain surface removed, by whatever name known, four dollars per dozen pairs.

445. In addition to the foregoing rates there shall be paid the following cumulative duties: On all leather gloves, when lined, one dollar per dozen pairs; on all piqué or prix seam gloves, forty cents per dozen pairs; on all gloves stitched or embroidered, with more than three single strands or cords, forty cents per dozen pairs.

446. Glove trunks, with or without the usual accompanying pieces, shall pay seventy-five per centum of the duty provided for the gloves in the fabrication of which they are suitable.

447. Harness, saddles, and saddlery, or parts of either, in sets or in parts, finished or unfinished, forty-five per centum ad valorem.

Miscellaneous Manufactures.—448. Manufactures of amber, asbestos, bladders, cork, catgut, or whip gut, or worm gut, or wax, or of which these substances or either of them is the component material of chief value, not specially provided for in this act, twenty-five per centum ad valorem.

449. Manufactures of bone, chip, grass, horn, India rubber, palm leaf, straw, weeds, or whalebone, or of which these substances or either of them is the component material of chief value, not specially provided for in this act, thirty per centum ad valorem; but the terms "grass" and "straw" shall be understood to mean these substances in their natural form and structure, and not the separated fiber thereof.

450. Manufactures of leather, finished or unfinished, manufactures of fur, gelatin, gutta-percha, human hair, ivory, vegetable ivory, mother-of-pearl and shell, plaster of Paris, *papier-maché*, and vulcanized India rubber known as "hard rubber," or of which these substances or either of them is the component material of chief value, not specially provided for in this act, and shells engraved, cut, ornamented, or otherwise manufactured, thirty-five per centum ad valorem.

451. Masks, composed of paper or pulp, thirty-five per centum ad valorem.

452. Matting made of cocoa fiber or rattan, six cents per square yard; mats made of cocoa fiber or rattan, four cents per square foot.

453. Musical instruments or parts thereof, pianoforte actions and parts thereof, strings for musical instruments not otherwise enumerated, cases for musical instruments, pitch pipes, tuning forks, tuning hammers, and metronomes; strings for musical instruments, composed wholly or in part of steel or other metal, all the foregoing, forty-five per centum ad valorem.

454. Paintings in oil or water colors, pastels, pen-and-ink drawings, and statuary, not specially provided for in this act, twenty per centum ad valorem; but the term "statuary" as used in this act shall be understood to include only such statuary as is cut, carved, or otherwise wrought by hand from a solid block or mass of marble, stone, or alabaster, or from metal, and as is the professional production of a statuary or sculptor only.

455. Peat moss, one dollar per ton.

456. Pencils of paper or wood filled with lead or other material, and pencils of lead, forty-five cents per gross and twenty-five per centum ad valorem; slate pencils, covered with wood, thirty-five per centum ad valorem; all other slate pencils, three cents per one hundred.

457. Pencil leads not in wood, ten per centum ad valorem.

458. Photographic dry plates or films, twenty-five per centum ad valorem.

459. Pipes and smokers' articles: Common tobacco pipes and pipe bowls made wholly of clay, valued at not more than forty cents per gross, fifteen cents per gross; other tobacco pipes and pipe bowls of clay, fifty cents per gross and twenty-five per centum ad valorem; other pipes and pipe bowls of whatever material composed, and all smokers' articles whatsoever, not specially provided for in this act, including cigarette books, cigarette-book covers, pouches for smoking or chewing tobacco, and cigarette paper in all forms, sixty per centum ad valorem.

460. Plows, tooth and disk harrows, harvesters, reapers, agricultural drills, and planters, mowers, horse-rakes, cultivators, thrashing machines, and cotton gins, twenty per centum ad valorem.

461. Plush, black, known commercially as hatters' plush, composed of silk, or of silk and cotton, such as is used exclusively for making men's hats, ten per centum ad valorem.

462. Umbrellas, parasols, and sun shades covered with material other than paper, fifty per centum ad valorem.

Sticks for umbrellas, parasols, or sun shades, and walking canes, finished or unfinished, forty per centum ad valorem.

463. Waste, not specially provided for in this act, ten per centum ad valorem.

FREE LIST.

SEC. 2. That on and after the passage of this act, unless otherwise specially provided for in this act, the following articles when imported shall be exempt from duty:

464. Acids: Arsenic or arsenious, benzoic, carbolic, fluoric, hydrochloric or muriatic, nitric, oxalic, phosphoric, phthalic, picric or nitropicric, prussic, silicic, and valericianic.

465. Aconite.

466. Acorns, raw, dried or undried, but unground.

467. Agates, unmanufactured.

468. Albumen, not specially provided for.

469. Alizarin, natural or artificial, and dyes derived from alizarin or from anthracin.

470. Amber, and amberoid unmanufactured, or crude gum.

471. Ambergris.

472. Aniline salts.

473. Any animal imported specially for breeding purposes shall be admitted free: *Provided*, That no such animal shall be admitted free unless pure bred of a recognized breed, and duly registered in the book of record established for that breed: *And provided further*, That certificate of such record and of the pedigree of such animal shall be produced and submitted to the customs officer, duly authenticated by the proper custodian of such book of record, together with the affidavit of the owner, agent, or importer that such animal is the identical animal described in said certificate of record and pedigree: *And provided further*, That the Secretary of Agriculture shall determine and certify to the Secretary of the Treasury what are recognized breeds and purebred animals under the provisions of this paragraph. The Secretary of the Treasury may prescribe such additional regulations as may be required for the strict enforcement of this provision. Cattle, horses, sheep, or other domestic animals straying across the boundary line into any foreign country, or driven across such boundary line by the owner for temporary pasturage purposes only, together with their offspring, may be brought back to the United States within six months free of duty, under regulations to be prescribed by the Secretary of the Treasury.

474. Animals brought into the United States temporarily for a period not exceeding six months, for the purpose of exhibition or competition for prizes offered by any agricultural or racing association; but a bond shall be given in accordance with regulations prescribed by the Secretary of the Treasury; also teams of animals, including their harness and tackle and the wagons or other vehicles actually owned by persons emigrating from foreign countries to the United States with their families, and in actual use for the purpose of such emigration under such regulations as the Secretary of the Treasury may prescribe; and wild animals intended for exhibition in zoölogical collections for scientific and educational purposes, and not for sale or profit.

475. Annatto, roucou, rocoa, or orleans, and all extracts of.

476. Antimony ore, crude sulphite of.

477. Apatite.

478. Arrowroot in its natural state and not manufactured.

479. Arsenic and sulphide of, or orpiment.

480. Arseniate of aniline.

481. Art educational stops, composed of glass and metal and valued at not more than six cents per gross.

482. Articles in a crude state used in dyeing or tanning not specially provided for in this act.

483. Articles the growth, produce, and manufacture of the United States, when returned after having been exported, without having been advanced in value or improved in condition by any process of manufacture or other means; casks, barrels, carboys, bags, and other vessels of American manufacture exported filled with American products, or exported empty and returned filled with foreign products, including shooks and staves when returned as barrels or boxes; also quicksilver flasks or bottles, of either domestic or foreign manufacture, which shall have been actually exported from the United States; but proof of the identity of such articles shall be

made, under general regulations to be prescribed by the Secretary of the Treasury, but the exemption of bags from duty shall apply only to such domestic bags as may be imported by the exporter thereof, and if any such articles are subject to internal tax at the time of exportation, such tax shall be proved to have been paid before exportation and not refunded: *Provided*, That this paragraph shall not apply to any article upon which an allowance of drawback has been made, the reimportation of which is hereby prohibited except upon payment of duties equal to the drawbacks allowed; or to any article manufactured in bonded warehouse and exported under any provision of law: *And provided further*, That when manufactured tobacco which has been exported without payment of internal-revenue tax shall be reimported it shall be retained in the custody of the collector of customs until internal-revenue stamps in payment of the legal duties shall be placed thereon.

484. Asbestos, unmanufactured.

485. Ashes, wood and lye of, and beet-root ashes.

486. Asafetida.

487. Balm of Gilead.

488. Barks, cinchona or other from which quinine may be extracted.

489. Baryta, carbonate of, or witherite.

490. Beeswax.

491. Binding twine: All binding twine manufactured from New Zealand hemp, istle or Tampico fiber, sisal grass, or sunn, or a mixture of any two or more of them, of single ply and measuring not exceeding six hundred feet to the pound: *Provided*, That articles mentioned in this paragraph if imported from a country which lays an import duty on like articles imported from the United States, shall be subject to a duty of one half of one cent per pound.

492. Bells, broken, and bell metal broken and fit only to be remanufactured.

493. Birds, stuffed, not suitable for millinery ornaments.

494. Birds and land and water fowls.

495. Bismuth.

496. Bladders, and all integuments and intestines of animals and fish sounds, crude, dried or salted for preservation only, and unmanufactured, not specially provided for in this act.

497. Blood, dried, not specially provided for.

498. Bolting cloths composed of silk, imported expressly for milling purposes, and so permanently marked as not to be available for any other use.

499. Bones, crude, or not burned, calcined, ground, steamed, or otherwise manufactured, and bone dust or animal carbon, and bone ash, fit only for fertilizing purposes.

500. Books, engravings, photographs, etchings, bound or unbound, maps and charts imported by authority or for the use of the United States or for the use of the Library of Congress.

501. Books, maps, music, engravings, photographs, etchings, bound or unbound, and charts which shall have been printed more than twenty years at the date of importation, and all hydrographic charts, and publications issued for their subscribers or exchanges by scientific and literary associations or academies, or publications of individuals for gratuitous private circulation, and public documents issued by foreign governments.

502. Books and pamphlets printed exclusively in languages other than English; also books and music, in raised print, used exclusively by the blind.

503. Books, maps, music, photographs, etchings, lithographic prints, and charts, specially imported, not more than two copies in any one invoice, in good faith, for the use or by order of any society or institution incorporated or established solely for religious, philosophical, educational, scientific, or literary purposes, or for the encouragement of the fine arts, or for the use or by order of any college, academy, school, or seminary of learning in the United States, or any State or public library, and not for sale, subject to such regulations as the Secretary of the Treasury shall prescribe.

504. Books, libraries, usual and reasonable furniture, and similar household effects of persons or families from foreign countries, all the foregoing if actually used abroad by them not less than one year, and not intended for any other person or persons, nor for sale.

505. Brass, old brass, clippings from brass or Dutch metal, all the foregoing, fit only for remanufacture.

506. Brazil paste.

507. Brazilian pebble, unwrought or unmanufactured.
508. Breccia, in block or slabs.
509. Bristles, crude, not sorted, bunched, or prepared.
510. Broom corn.
511. Bullion, gold or silver.
512. Burgundy pitch.
513. Cadmium.
514. Calamine.
515. Camphor, crude.
516. Castor or castoreum.
517. Catgut, whip gut, or worm gut, unmanufactured.
518. Cerium.
519. Chalk, crude, not ground, precipitated, or otherwise manufactured.
520. Chromate of iron or chromic ore.
521. Civet, crude.
522. Clay: Common blue clay in easks suitable for the manufacture of crucibles.
523. Coal, anthracite, not specially provided for in this act, and coal stores of American vessels, but none shall be unloaded.
524. Coal tar, crude, pitch of coal tar, and products of coal tar known as dead or creosote oil, benzol, toluol, naphthalin, xylol, phenol, cresol, toluidine, xyloidin, cumidin, binitrotoluol, binitrobenzol, benzidin, tolidin, dianisidin, naphthol, naphtylamin, diphenylamin, benzaldehyde, benzyl chloride, resorcin, nitro-benzol, and nitrotoluol; all the foregoing not medicinal and not colors or dyes.
525. Cobalt and cobalt ore.
526. Coccus indicus.
527. Cochineal.
528. Cocoa, or cacao, crude, and fiber, leaves, and shells of.
529. Coffee.
530. Coins, gold, silver, and copper.
531. Coir and coir yarn.
532. Copper in plates, bars, ingots, or pigs, and other forms, not manufactured or specially provided for in this act.
533. Old copper, fit only for manufacture, clipping from new copper, and all composition metal of which copper is a component material of chief value not specially provided for in this act.
534. Copper, regulus of, and black or coarse copper, and copper cement.
535. Coral, marine, uncut, and unmanufactured.
536. Cork wood, or cork bark, unmanufactured.
537. Cotton, and cotton waste or flocks.
538. Cryolite or kryolith.
539. Cudbear.
540. Curling stones, or quoits, and curling-stone handles.
541. Curry and curry powder.
542. Cutch.
543. Cuttlefish bone.
544. Dandelion roots, raw, dried, or undried, but unground.
545. Diamonds and other precious stones, rough or uncut, and not advanced in condition or value from their natural state by cleaving, splitting, cutting, or other process, including miners', glaziers', and engravers' diamonds not set, and diamond dust or bort.
546. Divi-divi.
547. Dragon's blood.
548. Drugs, such as barks, beans, berries, balsams, buds, bulbs, and bulbous roots, excrescences, fruits, flowers, dried fibers, and dried insects, grains, gums, and gum resin, herbs, leaves, lichens, mosses, nuts, nutgalls, roots, and stems, spices, vegetables, seeds aromatic, and seeds of morbid growth, weeds, and woods used expressly for dyeing; any of the foregoing which are drugs and not edible and are in a crude state and not advanced in value or condition by refining or grinding, or by other process, and not specially provided for in this act.
549. Eggs of birds, fish, and insects: *Provided, however*, That this shall not be held to include the eggs of game birds or eggs of birds not used for food, the importation of which is prohibited except specimens for scientific collections, nor fish roe preserved for food purposes.
550. Emery ore.
551. Ergot.
552. Ficus, common palm-leaf, plain and not ornamented or decorated in any manner, and palm leaf in its natural state, not colored, dyed, or otherwise advanced or manufactured.
553. Felt, adhesive, for sheathing vessels.
554. Fibrin, in all forms.
555. Fish, fresh, frozen, or packed in ice, caught in the Great Lakes or other fresh waters by citizens of the United States.
556. Fish skins.
557. Flint, flints, and flint stones, unground.
558. Fossils.
559. Fruits or berries, green, ripe, or dried, and fruits in brine, not specially provided for in this act.
560. Fruit plants, tropical and semitropical, for the purpose of propagation and cultivation.
561. Furs, undressed.
562. Fur skins of all kinds not dressed in any manner and not specially provided for in this act.
563. Gambier.
564. Glass enamel, white, for watch and clock dials.
565. Glass plates or disks, rough-cut or unwrought, for use in the manufacture of optical instruments, spectacles, and eye glasses, and suitable for such use: *Provided, however*, That such disks exceeding eight inches in diameter may be polished sufficiently to enable the character of the glass to be determined.
566. Grasses and fibers: Istle or Tampico fiber, jute, jute butts, manila, sisal grass, sunn, and all other textile grasses or fibrous vegetable substances, not dressed or manufactured in any manner, and not specially provided for in this act.
567. Gold-beaters' molds and gold-beaters' skins.
568. Grease, and oils (excepting fish oils), such as are commonly used in soap making or in wire drawing, or for stuffing or dressing leather, and which are fit only for such uses, and not specially provided for in this act.
569. Guano, manures, and all substances used only for manure.
570. Gutta-percha, crude.
571. Hair of horse, cattle, and other animals, cleaned or uncleaned, drawn or undrawn, but unmanufactured; not specially provided for in this act; and human hair, raw, uncleaned, and not drawn.
572. Hide cuttings, raw, with or without hair, and all other glue stock.
573. Hide rope.
574. Hones and whetstones.
575. Hoofs, unmanufactured.
576. Hop roots for cultivation.
577. Horns and parts of, unmanufactured, including horn strips and tips.
578. Ice.
579. India rubber, crude, and milk of, and old scrap or refuse India rubber which has been worn out by use and is fit only for remanufacture.
580. Indigo.
581. Iodine, crude.
582. Ipecac.
583. Iridium.
584. Ivory tusks in their natural state or cut vertically across the grain only, with the bark left intact, and vegetable ivory in its natural state.
585. Jalap.
586. Jet, unmanufactured.
587. Joss stick or Joss light.
588. Junk, old.
589. Kelp.
590. Kieserite.
591. Kyanite, or eyanite, and kainite.
592. Lac dye, crude, seed, button, stick, and shell.
593. Lac spirits.
594. Lactarene.
595. Lava, unmanufactured.
596. Leeches.
597. Lemon juice, lime juice, and sour orange juice.
598. Licorice root, unground.
599. Lifeboats and life-saving apparatus specially imported by societies incorporated or established to encourage the saving of human life.
600. Lime, citrate of.
601. Lithographic stones, not engraved.
602. Litmus, prepared or not prepared.
603. Loadstones.
604. Madder and munjeet, or Indian madder, ground or prepared, and all extracts of.
605. Magnesite, crude or calcined, not purified.
606. Magnesium, not made up into articles.
607. Manganese, oxide and ore of.
608. Manna.
609. Manuscripts.
610. Marrow, crude.

611. Marshmallow or althea root, leaves or flowers, natural or unmanufactured.

612. Medals of gold, silver, or copper, and other metallic articles actually bestowed as trophies or prizes, and received and accepted as honorary distinctions.

613. Meerschaum, crude or unmanufactured.

614. Minerals, crude, or not advanced in value or condition by refining or grinding, or by other process of manufacture, not specially provided for in this act.

615. Mineral salts obtained by evaporation from mineral waters, when accompanied by a duly authenticated certificate and satisfactory proof, showing that they are in no way artificially prepared, and are only the product of a designated mineral spring.

616. Models of inventions and of other improvements in the arts, including patterns for machinery, but no article shall be deemed a model or pattern which can be fitted for use otherwise.

617. Moss, seaweeds, and vegetable substances, crude or unmanufactured, not otherwise specially provided for in this act.

618. Musk, crude, in natural pods.

619. Myrobolans.

620. Needles, hand sewing and darning.

621. Newspapers and periodicals; but the term "periodicals" as herein used shall be understood to embrace only unbound or paper-covered publications, issued within six months of the time of entry, containing current literature of the day and issued regularly at stated periods, as weekly, monthly, or quarterly.

622. Nuts: Brazil nuts, cream nuts, palm nuts and palm-nut kernels; cocoanuts in the shell and broken cocoanut meat or copra, not shredded, desiccated, or prepared in any manner.

623. Nux vomica.

624. Oakum.

625. Oil cake.

626. Oils: Almond, amber, crude and rectified ambergris, anise or anise seed, aniline, aspic or spike lavender, bergamot, cajeput, caraway, cassia, cinnamon, cedrat, camomile, citronella or lemon grass, civet, cocoanut, fennel, ichthyol, jasmine or jasmine, juglandium, juniper, lavender, lemon, limes, mace, neroli or orange flower, enfleurage grease, nut oil or oil of nuts not otherwise specially provided for in this act, orange oil, olive oil for manufacturing or mechanical purposes, fit only for such use and valued at not more than 60 cents per gallon, ottar of roses, palm, rosemary or anthoss, sesame or sesamum seed or bean, thyme, origanum red or white, valerian; and also spermaceti, whale, and other fish oils of American fisheries, and all fish and other products of such fisheries; petroleum, crude or refined: *Provided*, That if there be imported into the United States crude petroleum, or the products of crude petroleum produced in any country which imposes a duty on petroleum or its products exported from the United States, there shall in such cases be levied, paid, and collected a duty upon said crude petroleum or its products so imported equal to the duty imposed by such country.

627. Orange and lemon peel, not preserved, candied, or dried.

628. Orchil or orchil liquid.

629. Ores of gold, silver, copper, or nickel, and nickel matte; sweepings of gold and silver.

630. Osmium.

631. Palladium.

632. Paper stock, crude, of every description, including all grasses, fibers, rags (other than wool), waste, including jute waste, shavings, clippings, old paper, rope ends, waste rope, and waste bagging, including old gunny cloth and old gunny bags, fit only to be converted into paper.

633. Paraffin.

634. Parchment and vellum.

635. Pearl, mother of, and shells, not sawed, cut, polished, or otherwise manufactured, or advanced in value from the natural state.

636. Personal effects, not merchandise, of citizens of the United States dying in foreign countries.

637. Pewter and britannia metal, old, and fit only to be remanufactured.

638. Philosophical and scientific apparatus, utensils, instruments, and preparations, including bottles and boxes containing the same, specially imported in good faith for the use and by order of any society or institution incorporated or established solely for religious, philosophical, educational, scientific, or literary purposes, or for the encouragement of the fine arts, or for the use or

by order of any college, academy, school, or seminary of learning in the United States, or any State or public library, and not for sale, subject to such regulations as the Secretary of the Treasury shall prescribe.

639. Phosphates, crude.

640. Plants, trees, shrubs, roots, seed cane, and seeds, imported by the Department of Agriculture or the United States Botanic Garden.

641. Platina, in ingots, bars, sheets, and wire.

642. Platinum, unmanufactured, and vases, retorts, and other apparatus, vessels, and parts thereof composed of platinum, for chemical uses.

643. Plumbago.

644. Potash, crude, or "black salts"; carbonate of potash, crude or refined; hydrate of, or caustic potash, not including refined in sticks or rolls; nitrate of potash or saltpeter, crude; sulphate of potash, crude or refined, and muriate of potash.

645. Professional books, implements, instruments, and tools of trade, occupation, or employment, in the actual possession at the time, of persons emigrating to the United States; but this exemption shall not be construed to include machinery or other articles imported for use in any manufacturing establishment, or for any other person or persons, or for sale, nor shall it be construed to include theatrical scenery, properties, and apparel; but such articles brought by proprietors or managers of theatrical exhibitions arriving from abroad, for temporary use by them in such exhibitions, and not for any other person, and not for sale, and which have been used by them abroad, shall be admitted free of duty, under such regulations as the Secretary of the Treasury may prescribe; but bonds shall be given for the payment to the United States of such duties as may be imposed by law upon any and all such articles as shall not be exported within six months after such importation: *Provided*, That the Secretary of the Treasury may in his discretion extend such period for a further term of six months in case application shall be made therefor.

646. Pulu.

647. Quinia, sulphate of, and all alkaloids or salts of cinchona bark.

648. Rags, not otherwise specially provided for in this act.

649. Regalia and gems, statuary, and specimens or casts of sculpture, where specially imported in good faith for the use and by order of any society incorporated or established solely for religious, philosophical, educational, scientific, or literary purposes, or for the encouragement of the fine arts, or for the use and by order of any college, academy, school, or seminary of learning in the United States, or any State or public library, and not for sale; but the term "regalia" as herein used shall be held to embrace only such insignia of rank or office or emblems as may be worn upon the person or borne in the hand during public exercises of the society or institution, and shall not include articles of furniture or fixtures, or of regular wearing apparel, nor personal property of individuals.

650. Rennets, raw or prepared.

651. Saffron and safflower, and extract of, and saffron cake.

652. Sago, crude.

653. Salacin.

654. Salep, or salop.

655. Sausages, bologna.

656. Seeds: Anise, caraway, cardamon, cauliflower, coriander, cotton, cummin, fennel, fenugreek, hemp, hoarhound, mangel-wurzel, mustard, rape, Saint John's bread or bean, sugar beet, sorghum or sugar cane for seed; bulbs and bulbous roots, not edible and not otherwise provided for; all flower and grass seeds; all the foregoing not specially provided for in this act.

657. Sheep dip, not including compounds or preparations that can be used for other purposes.

658. Shotgun barrels, in single tubes, forged, rough bored.

659. Shrimps and other shellfish.

660. Silk, raw, or as reeled from the cocoon, but not doubled, twisted, or advanced in manufacture in any way.

661. Silk cocoons and silk waste.

662. Silkworms' eggs.

663. Skeletons and other preparations of anatomy.

664. Skins of all kinds, raw (except sheepskins with the wool on), and hides not specially provided for in this act.

665. Soda, nitrate of, or cubic nitrate.
666. Specimens of natural history, botany, and mineralogy, when imported for scientific public collections, and not for sale.
667. Spices : Cassia, cassia vera, and cassia buds ; cinnamon and chips of ; cloves and clove stems ; mace ; nutmegs ; pepper, black or white, and pimento ; all the foregoing when unground ; ginger root, unground and not preserved or candied.
668. Spunk.
669. Spurs and stilts used in the manufacture of earthen, porcelain, and stoneware.
670. Stamps ; foreign postage or revenue stamps, canceled or uncanceled.
671. Stone and sand : Burrstone in blocks, rough or unmanufactured ; cliff stone, unmanufactured ; rotten stone, tripoli, and sand, crude or manufactured, not otherwise provided for in this act.
672. Storax, or styrax.
673. Strontia, oxide of, and protoxide of strontian, and strontianite, or mineral carbonate of strontia.
674. Sulphur, lac or precipitated, and sulphur or brimstone, crude, in bulk, sulphur ore as pyrites, or sulphuret of iron in its natural state, containing in excess of twenty-five per centum of sulphur, and sulphur not otherwise provided for.
675. Sulphuric acid which at the temperature of sixty degrees Fahrenheit does not exceed the specific gravity of one and three hundred and eighty thousandths, for use in manufacturing superphosphate of lime or artificial manures of any kind, or for any agricultural purposes : *Provided*, That upon all sulphuric acid imported from any country, whether independent or a dependency, which imposes a duty upon sulphuric acid imported into such country from the United States, there shall be levied and collected a duty of one fourth of one cent per pound.
676. Tamarinds.
677. Tapioca, cassava or cassady.
678. Tar and pitch of wood.
679. Tea and tea plants.
680. Teeth, natural, or unmanufactured.
681. Terra alba, not made from gypsum or plaster rock.
682. Terra japonica.
683. Tin ore, cassiterite or black oxide of tin, and tin in bars, blocks, pigs, or grain or granulated.
684. Tobacco stems.
685. Tonquin, tonqua, or tonka beans.
686. Turmeric.
687. Turpentine, Venice.
688. Turpentine, spirits of.
689. Turtles.
690. Types, old, and fit only to be remanufactured.
691. Uranium, oxide and salts of.
692. Vaccine virus.
693. Valonia.
694. Verdigris, or subacetate of copper.
695. Wax, vegetable or mineral.
696. Wafers, unleavened or not edible.
697. Wearing apparel, articles of personal adornment, toilet articles, and similar personal effects of persons arriving in the United States ; but this exemption shall only include such articles as actually accompany and are in the use of, and as are necessary and appropriate for the wear and use of such persons, for the immediate purposes of the journey and present comfort and convenience, and shall not be held to apply to merchandise or articles intended for other persons or for sale : *Provided*, That in case of residents of the United States returning from abroad, all wearing apparel and other personal effects taken by them out of the United States to foreign countries shall be admitted free of duty, without regard to their value, upon their identity being established, under appropriate rules and regulations to be prescribed by the Secretary of the Treasury, but no more than one hundred dollars in value of articles purchased abroad by such residents of the United States shall be admitted free of duty upon their return.
698. Whalebone, unmanufactured.
699. Wood : Logs and round unmanufactured timber, including pulp-woods, firewood, handle-bolts, shingle-bolts, gun-blocks for gun-stocks rough-hewn or sawed or planed on one side, hop-poles, ship-timber and ship-planking ; all the foregoing not specially provided for in this act.
700. Woods : Cedar, lignum-vitæ, laucewood, ebony,

box, granadilla, mahogany, rosewood, satinwood, and all forms of cabinet woods, in the log, rough, or hewn only ; brier root or brier wood and similar wood unmanufactured, or not further advanced than cut into blocks suitable for the articles into which they are intended to be converted ; bamboo, rattan, reeds unmanufactured, India malacca joints, and sticks of partridge, hair wood, pimento, orange, myrtle, and other woods not specially provided for in this act, in the rough, or not further advanced than cut into lengths suitable for sticks for umbrellas, parasols, sunshades, whips, fishing rods, or walking-canes.

701. Works of art, drawings, engravings, photographic pictures, and philosophical and scientific apparatus brought by professional artists, lecturers, or scientists arriving from abroad for use by them temporarily for exhibition and in illustration, promotion, and encouragement of art, science, or industry in the United States, and not for sale, shall be admitted free of duty, under such regulations as the Secretary of the Treasury shall prescribe ; but bonds shall be given for the payment to the United States of such duties as may be imposed by law upon any and all such articles as shall not be exported within six months after such importation : *Provided*, That the Secretary of the Treasury may, in his discretion, extend such period for a further term of six months in cases where applications therefor shall be made.

702. Works of art, collections in illustration of the progress of the arts, sciences, or manufactures, photographs, works in terra cotta, parian, pottery, or porcelain, antiquities and artistic copies thereof in metal or other material, imported in good faith for exhibition at a fixed place by any State or by any society or institution established for the encouragement of the arts, science, or education, or for a municipal corporation, and all like articles imported in good faith by any society or association, or for a municipal corporation for the purpose of erecting a public monument, and not intended for sale, nor for any other purpose than herein expressed ; but bonds shall be given under such rules and regulations as the Secretary of the Treasury may prescribe, for the payment of lawful duties which may accrue should any of the articles aforesaid be sold, transferred, or used contrary to this provision, and such articles shall be subject, at any time, to examination and inspection by the proper officers of the customs : *Provided*, That the privileges of this and the preceding section shall not be allowed to associations or corporations engaged in or connected with business of a private or commercial character.

703. Works of art, the production of American artists residing temporarily abroad, or other works of art, including pictorial paintings on glass, imported expressly for presentation to a national institution, or to any State or municipal corporation, or incorporated religious society, college, or other public institution, except stained or painted window glass or stained or painted glass windows ; but such exemption shall be subject to such regulations as the Secretary of the Treasury may prescribe.

704. Yams.

705. Zaffer.

SEC. 3. That for the purpose of equalizing the trade of the United States with foreign countries, and their colonies, producing and exporting to this country the following articles : Argols, or crude tartar, or wine lees, crude ; brandies, or other spirits manufactured or distilled from grain or other materials ; champagne and all other sparkling wines ; still wines, and vermouth ; paintings and statuary ; or any of them, the President be, and he is hereby, authorized, as soon as may be after the passage of this act, and from time to time thereafter, to enter into negotiations with the governments of those countries exporting to the United States the above-mentioned articles, or any of them, with a view to the arrangement of commercial agreements in which reciprocal and equivalent concessions may be secured in favor of the products and manufactures of the United States ; and whenever the Government of any country, or colony, producing and exporting to the United States the above-mentioned articles, or any of them, shall enter into a commercial agreement with the United States, or make concessions in favor of the products, or manufactures thereof, which, in the judgment of the President, shall be reciprocal and equivalent, he shall be, and he is hereby, authorized and empowered to suspend, during the time of such agreement or concession, by proclamation to that effect, the imposition and collection of the duties mentioned in this act, on such article or articles so exported to the United

States from such country or colony, and thereupon and thereafter the duties levied, collected, and paid upon such article or articles shall be as follows, namely:

Argols, or crude tartar, or wine lees, crude, five per centum ad valorem.

Brandies, or other spirits manufactured or distilled from grain or other materials, one dollar and seventy-five cents per proof gallon.

Champagne and all other sparkling wines, in bottles containing not more than one quart and more than one pint, six dollars per dozen; containing not more than one pint each and more than one half pint, three dollars per dozen; containing one half pint each or less, one dollar and fifty cents per dozen; in bottles or other vessels containing more than one quart each, in addition to six dollars per dozen bottles on the quantities in excess of one quart, at the rate of one dollar and ninety cents per gallon.

Still wines, and vermouth, in casks, thirty-five cents per gallon; in bottles or jugs, per case of one dozen bottles or jugs containing each not more than one quart and more than one pint, or twenty-four bottles or jugs containing each not more than one pint, one dollar and twenty-five cents per case, and any excess beyond these quantities found in such bottles or jugs shall be subject to a duty of four cents per pint or fractional part thereof, but no separate or additional duty shall be assessed upon the bottles or jugs.

Paintings in oil or water colors, pastels, pen-and-ink drawings, and statuary, fifteen per centum ad valorem.

The President shall have power, and it shall be his duty, whenever he shall be satisfied that any such agreement in this section mentioned is not being fully executed by the Government with which it shall have been made, to revoke such suspension and notify such Government thereof.

And it is further provided that with a view to secure reciprocal trade with countries producing the following articles, whenever and so often as the President shall be satisfied that the Government of any country, or colony of such Government, producing and exporting directly or indirectly to the United States coffee, tea, and tonquin, tonqua, or tonka beans, and vanilla beans, or any of such articles, imposes duties or other exactions upon the agricultural, manufactured, or other products of the United States, which, in view of the introduction of such coffee, tea, and tonquin, tonqua, or tonka beans, and vanilla beans, into the United States, as in this act hereinbefore provided for, he may deem to be reciprocally unequal and unreasonable, he shall have the power and it shall be his duty to suspend, by proclamation to that effect, the provisions of this act relating to the free introduction of such coffee, tea, and tonquin, tonqua, or tonka beans, and vanilla beans, of the products of such country or colony, for such time as he shall deem just; and in such case and during such suspension duties shall be levied, collected, and paid upon coffee, tea, and tonquin, tonqua, or tonka beans, and vanilla beans, the products or exports, direct or indirect, from such designated country, as follows:

On coffee, three cents per pound.

On tea, ten cents per pound.

On tonquin, tonqua, or tonka beans, fifty cents per pound; vanilla beans, two dollars per pound; vanilla beans, commercially known as cuts, one dollar per pound.

SEC. 4. That whenever the President of the United States, by and with the advice and consent of the Senate, with a view to secure reciprocal trade with foreign countries, shall, within the period of two years from and after the passage of this act, enter into commercial treaty or treaties with any other country or countries concerning the admission into any such country or countries of the goods, wares, and merchandise of the United States and their use and disposition therein, deemed to be for the interests of the United States, and in such treaty or treaties, in consideration of the advantages accruing to the United States therefrom, shall provide for the reduction during a specified period, not exceeding five years, of the duties imposed by this act, to the extent of not more than twenty per centum thereof, upon such goods, wares, or merchandise as may be designated therein of the country or countries with which such treaty or treaties shall be made as in this section provided for; or shall provide for the transfer during such period from the dutiable list of this act to the free list thereof of such goods, wares, and merchandise, being the natural

products of such foreign country or countries and not of the United States; or shall provide for the retention upon the free list of this act during a specified period, not exceeding five years, of such goods, wares, and merchandise now included in said free list as may be designated therein; and when any such treaty shall have been duly ratified by the Senate and approved by Congress, and public proclamation made accordingly, then and thereafter the duties which shall be collected by the United States upon any of the designated goods, wares, and merchandise from the foreign country with which such treaty has been made shall, during the period provided for, be the duties specified and provided for in such treaty, and none other.

SEC. 5. That whenever any country, dependency, or colony shall pay or bestow, directly or indirectly, any bounty or grant upon the exportation of any article or merchandise from such country, dependency, or colony, and such article or merchandise is dutiable under the provisions of this act, then upon the importation of any such article or merchandise into the United States, whether the same shall be imported directly from the country of production or otherwise, and whether such article or merchandise is imported in the same condition as when exported from the country of production or has been changed in condition by remanufacture or otherwise, there shall be levied and paid, in all such cases, in addition to the duties otherwise imposed by this act, an additional duty equal to the net amount of such bounty or grant, however the same be paid or bestowed. The net amount of all such bounties or grants shall be from time to time ascertained, determined, and declared by the Secretary of the Treasury, who shall make all needful regulations for the identification of such articles and merchandise and for the assessment and collection of such additional duties.

SEC. 6. That there shall be levied, collected, and paid on the importation of all raw or unmanufactured articles, not enumerated or provided for in this act, a duty of ten per centum ad valorem, and on all articles manufactured, in whole or in part, not provided for in this act, a duty of twenty per centum ad valorem.

SEC. 7. That each and every imported article, not enumerated in this act, which is similar, either in material, quality, texture, or the use to which it may be applied, to any article enumerated in this act as chargeable with duty, shall pay the same rate of duty which is levied on the enumerated article which it most resembles in any of the particulars before mentioned; and if any nonenumerated article equally resembles two or more enumerated articles on which different rates of duty are chargeable, there shall be levied on such nonenumerated article the same rate of duty as is chargeable on the article which it resembles paying the highest rate of duty; and on articles not enumerated, manufactured of two or more materials, the duty shall be assessed at the highest rate at which the same would be chargeable if composed wholly of the component material thereof of chief value; and the words "component material of chief value," wherever used in this act, shall be held to mean that component material which shall exceed in value any other single component material of the article; and the value of each component material shall be determined by the ascertained value of such material in its condition as found in the article. If two or more rates of duty shall be applicable to any imported article, it shall pay duty at the highest of such rates.

SEC. 8. That all articles of foreign manufacture, such as are usually or ordinarily marked, stamped, branded, or labeled, and all packages containing such or other imported articles, shall, respectively, be plainly marked, stamped, branded, or labeled in legible English words in a conspicuous place, so as to indicate the country of their origin and the quantity of their contents; and until so marked, stamped, branded or labeled they shall not be delivered to the importer. Should any article of imported merchandise be marked, stamped, branded, or labeled so as to indicate a quantity, number, or measurement in excess of the quantity, number, or measurement actually contained in such article, no delivery of the same shall be made to the importer until the mark, stamp, brand, or label, as the case may be, shall be changed so as to conform to the facts of the case.

SEC. 9. That section thirty-three hundred and forty-one of the Revised Statutes of the United States be, and hereby is, amended to read as follows:

"Sec. 3341. The Commissioner of Internal Revenue

shall cause to be prepared, for the payment of such tax, suitable stamps denoting the amount of tax required to be paid on the hogsheads, barrels, and halves, thirds, quarters, sixths, and eighths of a barrel of such fermented liquors (and shall also cause to be prepared suitable permits for the purpose hereinafter mentioned), and shall furnish the same to the collectors of internal revenue, who shall each be required to keep on hand at all times a sufficient supply of permits and a supply of stamps equal in amount to two months' sales thereof, if there be any brewery or brewery warehouse in his district; and such stamps shall be sold, and permits granted and delivered by such collectors, only to the brewers of their district, respectively.

"Such collectors shall keep an account of the number of permits delivered and of the number and value of the stamps sold by them to each brewer."

SEC. 10. That section thirty-three hundred and ninety-four of the Revised Statutes, of the United States, as amended, be, and the same is hereby, further amended, so as to read as follows:

"Upon cigars which shall be manufactured and sold, or removed for consumption or sale, there shall be assessed and collected the following taxes, to be paid by the manufacturer thereof: On cigars of all descriptions made of tobacco, or any substitute therefor, and weighing more than three pounds per thousand, three dollars per thousand; on cigars, made of tobacco, or any substitute therefor, and weighing not more than three pounds per thousand, one dollar per thousand; on cigarettes, made of tobacco, or any substitute therefor, and weighing more than three pounds per thousand, three dollars per thousand; on cigarettes, made of tobacco, or any substitute therefor, and weighing not more than three pounds per thousand, one dollar per thousand: *Provided*, That all rolls of tobacco, or any substitute therefor, wrapped with tobacco, shall be classed as cigars, and all rolls of tobacco, or any substitute therefor, wrapped in paper or any substance other than tobacco, shall be classed as cigarettes.

"And the Commissioner of Internal Revenue, with the approval of the Secretary of the Treasury, shall provide dies and adhesive stamps for cigars weighing not more than three pounds per thousand: *Provided*, That such stamps shall be in denominations of ten, twenty, fifty, and one hundred, and the laws and regulations governing the packing and removal for sale of cigarettes, and the affixing and canceling of the stamps on the packages thereof, shall apply to cigars weighing not more than three pounds per thousand.

"None of the packages of smoking tobacco and fine-cut chewing tobacco and cigarettes prescribed by law shall be permitted to have packed in, or attached to, or connected with, them, any article or thing whatsoever, other than the manufacturers' wrappers and labels, the internal revenue stamp and the tobacco or cigarettes, respectively, put up therein, on which tax is required to be paid under the internal revenue laws; nor shall there be affixed to, or branded, stamped, marked, written, or printed upon, said packages, or their contents, any promise or offer of, or any order or certificate for, any gift, prize, premium, payment, or reward."

SEC. 11. That no article of imported merchandise which shall copy or simulate the name or trade-mark of any domestic manufacture or manufacturer, or which shall bear a name or mark which is calculated to induce the public to believe that the article is manufactured in the United States, shall be admitted to entry at any customhouse of the United States. And in order to aid the officers of the customs in enforcing this prohibition, any domestic manufacturer who has adopted trade-marks may require his name and residence and a description of his trade-marks to be recorded in books which shall be kept for that purpose in the Department of the Treasury, under such regulations as the Secretary of the Treasury shall prescribe, and may furnish to the department facsimiles of such trade-marks; and thereupon the Secretary of the Treasury shall cause one or more copies of the same to be transmitted to each collector or other proper officer of the customs.

SEC. 12. That all materials of foreign production which may be necessary for the construction of vessels built in the United States for foreign account and ownership, or for the purpose of being employed in the foreign trade, including the trade between the Atlantic and Pacific ports of the United States, and all such materials necessary for the building of their machinery, and all articles

necessary for their outfit and equipment, may be imported in bond under such regulations as the Secretary of the Treasury may prescribe; and upon proof that such materials have been used for such purposes, no duties shall be paid thereon. But vessels receiving the benefit of this section shall not be allowed to engage in the coastwise trade of the United States more than two months in any one year except upon the payment to the United States of the duties of which a rebate is herein allowed: *Provided*, That vessels built in the United States for foreign account and ownership shall not be allowed to engage in the coastwise trade of the United States.

SEC. 13. That all articles of foreign production needed for the repair of American vessels engaged in foreign trade, including the trade between the Atlantic and Pacific ports of the United States, may be withdrawn from bonded warehouses free of duty, under such regulations as the Secretary of the Treasury may prescribe.

SEC. 14. That the sixteenth section of an act entitled "An Act to remove certain burdens on the American merchant marine and encourage the American foreign carrying trade, and for other purposes," approved June twenty-sixth, eighteen hundred and eighty-four, be amended so as to read as follows:

"SEC. 16. That all articles of foreign or domestic production needed and actually withdrawn from bonded warehouses and bonded manufacturing warehouses for supplies (not including equipment) of vessels of the United States engaged in foreign trade, or in trade between the Atlantic and Pacific ports of the United States, may be so withdrawn from said bonded warehouses, free of duty or of internal-revenue tax, as the case may be, under such regulations as the Secretary of the Treasury may prescribe; but no such articles shall be landed at any port of the United States."

SEC. 15. That all articles manufactured in whole or in part of imported materials, or of materials subject to internal-revenue tax, and intended for exportation without being charged with duty, and without having an internal-revenue stamp affixed thereto, shall, under such regulations as the Secretary of the Treasury may prescribe, in order to be so manufactured and exported, be made and manufactured in bonded warehouses similar to those known and designated in Treasury regulations as bonded warehouses, class six: *Provided*, That the manufacturer of such articles shall first give satisfactory bonds for the faithful observance of all the provisions of law and of such regulations as shall be prescribed by the Secretary of the Treasury: *Provided further*, That the manufacture of distilled spirits from grain, starch, molasses, or sugar, including all dilutions or mixtures of them or either of them, shall not be permitted in such manufacturing warehouses.

Whenever goods manufactured in any bonded warehouse established under the provisions of the preceding paragraph shall be exported directly therefrom or shall be duly laden for transportation and immediate exportation under the supervision of the proper officer who shall be duly designated for that purpose, such goods shall be exempt from duty and from the requirements relating to revenue stamps.

Any materials used in the manufacture of such goods, and any packages, coverings, vessels, brands, and labels used in putting up the same may, under the regulations of the Secretary of the Treasury, be conveyed without the payment of revenue tax or duty into any bonded manufacturing warehouse, and imported goods may, under the aforesaid regulations, be transferred without the exaction of duty from any bonded warehouse into any bonded manufacturing warehouse; but this privilege shall not be held to apply to implements, machinery, or apparatus to be used in the construction or repair of any bonded manufacturing warehouse or for the prosecution of the business carried on therein.

No articles or materials received into such bonded manufacturing warehouse shall be withdrawn or removed therefrom except for direct shipment and exportation or for transportation and immediate exportation in bond under the supervision of the officer duly designated therefor by the collector of the port, who shall certify to such shipment and exportation, or lading for transportation, as the case may be, describing the articles by their mark or otherwise, the quantity, the date of exportation, and the name of the vessel. All labor performed and services rendered under these provisions shall be under the supervision of a duly designated officer of the customs and at the expense of the manufacturer.

A careful account shall be kept by the collector of all merchandise delivered by him to any bonded manufacturing warehouse, and a sworn monthly return, verified by the customs officers in charge, shall be made by the manufacturers containing a detailed statement of all imported merchandise used by him in the manufacture of exported articles.

Before commencing business the proprietor of any manufacturing warehouse shall file with the Secretary of the Treasury a list of all the articles intended to be manufactured in such warehouse, and state the formula of manufacture and the names and quantities of the ingredients to be used therein.

Articles manufactured under these provisions may be withdrawn under such regulations as the Secretary of the Treasury may prescribe for transportation and delivery into any bonded warehouse at an exterior port for the sole purpose of immediate export therefrom.

The provisions of Revised Statutes thirty-four hundred and thirty-three shall, so far as may be practicable, apply to any bonded manufacturing warehouse established under this act and to the merchandise conveyed therein.

SEC. 16. That all persons are prohibited from importing into the United States from any foreign country any obscene book, pamphlet, paper, writing, advertisement, circular, print, picture, drawing, or other representation, figure, or image on or of paper or other material, or any cast, instrument, or other article of an immoral nature, or any drug or medicine, or any article whatever for the prevention of conception or for causing unlawful abortion, or any lottery ticket or any advertisement of any lottery. No such articles, whether imported separately or contained in packages with other goods entitled to entry, shall be admitted to entry; and all such articles shall be proceeded against, seized, and forfeited by due course of law. All such prohibited articles and the package in which they are contained in the course of importation shall be detained by the officer of customs, and proceedings taken against the same as hereinafter prescribed, unless it appears to the satisfaction of the collector of customs that the obscene articles contained in the package were inclosed therein without the knowledge or consent of the importer, owner, agent, or consignee: *Provided*, That the drugs hereinbefore mentioned, when imported in bulk and not put up for any of the purposes hereinbefore specified, are excepted from the operation of this section.

SEC. 17. That whoever, being an officer, agent, or employee of the Government of the United States, shall knowingly aid or abet any person engaged in any violation of any of the provisions of law prohibiting importing, advertising, dealing in, exhibiting, or sending or receiving by mail obscene or indecent publications or representations, or means for preventing conception or procuring abortion, or other articles of indecent or immoral use or tendency, shall be deemed guilty of a misdemeanor, and shall for every offense be punishable by a fine of not more than five thousand dollars, or by imprisonment at hard labor for not more than ten years, or both.

SEC. 18. That any judge of any district or circuit court of the United States, within the proper district, before whom complaint in writing of any violation of the two preceding sections is made, to the satisfaction of such judge, and founded on knowledge or belief, and if upon belief, setting forth the grounds of such belief, and supported by oath or affirmation of the complainant, may issue, conformably to the Constitution, a warrant directed to the marshal or any deputy marshal in the proper district, directing him to search for, seize, and take possession of any such article or thing mentioned in the two preceding sections, and to make due and immediate return thereof to the end that the same may be condemned and destroyed by proceedings, which shall be conducted in the same manner as other proceedings in the case of municipal seizure, and with the same right of appeal or writ of error.

SEC. 19. That machinery for repair may be imported into the United States without payment of duty, under bond, to be given in double the appraised value thereof, to be withdrawn and exported after said machinery shall have been repaired; and the Secretary of the Treasury is authorized and directed to prescribe such rules and regulations as may be necessary to protect the revenue against fraud and secure the identity and character of all such importations when again withdrawn and exported, re-

stricting and limiting the export and withdrawal to the same port of entry where imported, and also limiting all bonds to a period of time of not more than six months from the date of the importation.

SEC. 20. That the produce of the forests of the State of Maine upon the Saint John river and its tributaries, owned by American citizens, and sawed or hewed in the Province of New Brunswick by American citizens, the same being otherwise unmanufactured in whole or in part, which is now admitted into the ports of the United States free of duty, shall continue to be so admitted, under such regulations as the Secretary of the Treasury shall from time to time prescribe.

SEC. 21. That the produce of the forests of the State of Maine upon the Saint Croix river and its tributaries owned by American citizens, and sawed and hewed in the Province of New Brunswick by American citizens, the same being otherwise unmanufactured in whole or in part, shall be admitted into the ports of the United States free of duty, under such regulations as the Secretary of the Treasury shall from time to time prescribe.

SEC. 22. That a discriminating duty of ten per centum *ad valorem*, in addition to the duties imposed by law, shall be levied, collected, and paid on all goods, wares, or merchandise which shall be imported in vessels not of the United States, or which being the production or manufacture of any foreign country not contiguous to the United States, shall come into the United States from such contiguous country; but this discriminating duty shall not apply to goods, wares, or merchandise which shall be imported in vessels not of the United States, entitled at the time of such importation by treaty or convention to be entered in the ports of the United States on payment of the same duties as shall then be payable on goods, wares, and merchandise imported in vessels of the United States, nor to such foreign products or manufactures as shall be imported from such contiguous countries in the usual course of strictly retail trade.

SEC. 23. That no goods, wares, or merchandise, unless in cases provided for by treaty, shall be imported into the United States from any foreign port or place, except in vessels of the United States, or in such foreign vessels as truly and wholly belong to the citizens or subjects of that country of which the goods are the growth, production, or manufacture, or from which such goods, wares, or merchandise can only be, or most usually are, first shipped for transportation. All goods, wares, or merchandise imported contrary to this section, and the vessel wherein the same shall be imported, together with her cargo, tackle, apparel, and furniture, shall be forfeited to the United States; and such goods, wares, or merchandise, ship, or vessel, and cargo shall be liable to be seized, prosecuted, and condemned in like manner, and under the same regulations, restrictions, and provisions as have been heretofore established for the recovery, collection, distribution, and remission of forfeitures to the United States by the several revenue laws.

SEC. 24. That the preceding section shall not apply to vessels or goods, wares, or merchandise imported in vessels of a foreign nation which does not maintain a similar regulation against vessels of the United States.

SEC. 25. That the importation of neat cattle and the hides of neat cattle from any foreign country into the United States is prohibited: *Provided*, That the operation of this section shall be suspended as to any foreign country or countries, or any parts of such country or countries, whenever the Secretary of the Treasury shall officially determine, and give public notice thereof that such importation will not tend to the introduction or spread of contagious or infectious diseases among the cattle of the United States; and the Secretary of the Treasury is hereby authorized and empowered, and it shall be his duty, to make all necessary orders and regulations to carry this section into effect, or to suspend the same as herein provided, and to send copies thereof to the proper officers in the United States, and to such officers or agents of the United States in foreign countries as he shall judge necessary.

SEC. 26. That any person convicted of a willful violation of any of the provisions of the preceding section shall be fined not exceeding five hundred dollars, or imprisoned not exceeding one year, or both, in the discretion of the court.

SEC. 27. That upon the reimportation of articles once exported, of the growth, product, or manufacture of the United States, upon which no internal tax has been assessed or paid, or upon which such tax has been paid

and refunded by allowance or drawback, there shall be levied, collected, and paid a duty equal to the tax imposed by the internal-revenue laws upon such articles, except articles manufactured in bonded warehouses and exported pursuant to law, which shall be subject to the same rate of duty as if originally imported.

SEC. 28. That whenever any vessel laden with merchandise, in whole or in part subject to duty, has been sunk in any river, harbor, bay, or waters subject to the jurisdiction of the United States, and within its limits, for the period of two years, and is abandoned by the owner thereof, any person who may raise such vessel shall be permitted to bring any merchandise recovered therefrom into the port nearest to the place where such vessel was so raised free from the payment of any duty thereupon, but under such regulations as the Secretary of the Treasury may prescribe.

SEC. 29. That the works of manufacturers engaged in smelting or refining metals, or both smelting and refining, in the United States may be designated as bonded warehouses under such regulations as the Secretary of the Treasury may prescribe: *Provided*, That such manufacturers shall first give satisfactory bonds to the Secretary of the Treasury. Ores or metals in any crude form requiring smelting or refining to make them readily available in the arts, imported into the United States to be smelted or refined and intended to be exported in a refined but unmanufactured state, shall, under such rules as the Secretary of the Treasury may prescribe, and under the direction of the proper officer, be removed in original packages or in bulk from the vessel or other vehicle on which they have been imported, or from the bonded warehouse in which the same may be, into the bonded warehouse in which such smelting or refining, or both, may be carried on, for the purpose of being smelted or refined, or both, without payment of duties thereon, and may there be smelted or refined, together with other metals of home or foreign production. *Provided*, That each day a quantity of refined metal equal to ninety per centum of the amount of imported metal smelted or refined that day shall be set aside, and such metal so set aside shall not be taken from said works except for transportation to another bonded warehouse or for exportation, under the direction of the proper officer having charge thereof as aforesaid, whose certificate, describing the articles by their marks or otherwise, the quantity, the date of importation, and the name of vessel or other vehicle by which it was imported, with such additional particulars as may from time to time be required, shall be received by the collector of customs as sufficient evidence of the exportation of the metal, or it may be removed under such regulations as the Secretary of the Treasury may prescribe, upon entry and payment of duties, for domestic consumption, and the exportation of the ninety per centum of metals hereinbefore provided for shall entitle the ores and metals imported under the provisions of this section to admission without payment of the duties thereon. *Provided further*, That in respect to lead ores imported under the provisions of this section the refined metal set aside shall either be re-exported or the regular duties paid thereon within six months from the date of the receipt of the ore. All labor performed and services rendered under these regulations shall be under the supervision of an officer of the customs, to be appointed by the Secretary of the Treasury, and at the expense of the manufacturer.

SEC. 30. That where imported materials on which duties have been paid are used in the manufacture of articles manufactured or produced in the United States, there shall be allowed on the exportation of such articles a drawback equal in amount to the duties paid on the materials used, less one per centum of such duties: *Provided*, That when the articles exported are made in part from domestic materials the imported materials, or the parts of the articles made from such materials, shall so appear in the completed articles that the quantity or measure thereof may be ascertained: *And provided further*, That the drawback on any article allowed under existing law shall be continued at the rate herein provided. That the imported materials used in the manufacture or production of articles entitled to drawback of customs duties when exported shall, in all cases where drawback of duties paid on such materials is claimed, be identified, the quantity of such materials used and the amount of duties paid thereon shall be ascertained, the facts of the manufacture or production of such articles in the United States and their exportation there-

from shall be determined, and the drawback due thereon shall be paid to the manufacturer, producer, or exporter, to the agent of either or to the person to whom such manufacturer, producer, exporter, or agent shall in writing order such drawback paid, under such regulations as the Secretary of the Treasury shall prescribe.

SEC. 31. That all goods, wares, articles, and merchandise manufactured wholly or in part in any foreign country by convict labor shall not be entitled to entry at any of the ports of the United States, and the importation thereof is hereby prohibited, and the Secretary of the Treasury is authorized and directed to prescribe such regulations as may be necessary for the enforcement of this provision.

SEC. 32. That sections seven and eleven of the act entitled "An Act to simplify the laws in relation to the collection of the revenues," approved June tenth, eighteen hundred and ninety, be, and the same are hereby, amended so as to read as follows:

"SEC. 7. That the owner, consignee, or agent of any imported merchandise which has been actually purchased may, at the time when he shall make and verify his written entry of such merchandise, but not afterward, make such addition in the entry to the cost or value given in the invoice or pro forma invoice or statement in form of an invoice, which he shall produce with his entry, as in his opinion may raise the same to the actual market value or wholesale price of such merchandise at the time of exportation to the United States, in the principal markets of the country from which the same has been imported; but no such addition shall be made upon entry to the invoice value of any imported merchandise obtained otherwise than by actual purchase; and the collector within whose district any merchandise may be imported or entered, whether the same has been actually purchased or procured otherwise than by purchase, shall cause the actual market value or wholesale price of such merchandise to be appraised; and if the appraised value of any article of imported merchandise subject to an ad valorem duty or to a duty based upon or regulated in any manner by the value thereof shall exceed the value declared in the entry, there shall be levied, collected, and paid, in addition to the duties imposed by law on such merchandise, an additional duty of one per centum of the total appraised value thereof for each one per centum that such appraised value exceeds the value declared in the entry, but the additional duties shall only apply to the particular article or articles in each invoice that are so undervalued, and shall be limited to fifty per centum of the appraised value of such article or articles. Such additional duties shall not be construed to be penal, and shall not be remitted, nor payment thereof in any way avoided, except in cases arising from a manifest clerical error, nor shall they be refunded in case of exportation of the merchandise, or on any other account, nor shall they be subject to the benefit of drawback: *Provided*, That if the appraised value of any merchandise shall exceed the value declared in the entry by more than fifty per centum, except when arising from a manifest clerical error, such entry shall be held to be presumptively fraudulent, and the collector of customs shall seize such merchandise and proceed as in case of forfeiture for violation of the customs laws, and in any legal proceeding that may result from such seizure, the undervaluation as shown by the appraisal shall be presumptive evidence of fraud, and the burden of proof shall be on the claimant to rebut the same and forfeiture shall be adjudged unless he shall rebut such presumption of fraudulent intent by sufficient evidence. The forfeiture provided for in this section shall apply to the whole of the merchandise or the value thereof in the case or package containing the particular article or articles in each invoice which are undervalued: *Provided further*, That all additional duties, penalties, or forfeitures applicable to merchandise entered by a duly certified invoice, shall be alike applicable to merchandise entered by a pro forma invoice or statement in the form of an invoice, and no forfeiture or disability of any kind incurred under the provisions of this section shall be remitted or mitigated by the Secretary of the Treasury. The duty shall not, however, be assessed in any case upon an amount less than the invoice or entered value."

"SEC. 11. That, when the actual market value as defined by law, of any article of imported merchandise, wholly or partly manufactured and subject to an ad valorem duty, or to a duty based in whole or in part on value, can not be otherwise ascertained to the satisfac-

tion of the appraising officer, such officer shall use all available means in his power to ascertain the cost of production of such merchandise at the time of exportation to the United States, and at the place of manufacture: such cost of production to include the cost of materials and of fabrication, all general expenses covering each and every outlay of whatsoever nature incident to such production, together with the expense of preparing and putting up such merchandise ready for shipment, and an addition of not less than eight nor more than fifty per centum upon the total cost as thus ascertained; and in no case shall such merchandise be appraised upon original appraisal or reappraisal at less than the total cost of production as thus ascertained. It shall be lawful for appraising officers, in determining the dutiable value of such merchandise, to take into consideration the wholesale price at which such or similar merchandise is sold or offered for sale in the United States, due allowance being made for estimated duties thereon, the cost of transportation, insurance, and other necessary expenses from the place of shipment to the United States, and a reasonable commission, if any has been paid, not exceeding six per centum."

SEC. 33. That on and after the day when this act shall go into effect all goods, wares, and merchandise previously imported, for which no entry has been made, and all goods, wares, and merchandise previously entered without payment of duty and under bond for warehousing, transportation, or any other purpose, for which no permit of delivery to the importer or his agent has been issued, shall be subjected to the duties imposed by this act and to no other duty, upon the entry or the withdrawal thereof: *Provided*, That when duties are based upon the weight of merchandise deposited in any public or private bonded warehouse, said duties shall be levied and collected upon the weight of such merchandise at the time of its entry.

SEC. 34. That sections one to twenty-four, both inclusive, of an act entitled "An Act to reduce taxation, to provide revenue for the Government, and for other purposes," which became a law on the twenty-eighth day of August, eighteen hundred and ninety-four, and all acts and parts of acts inconsistent with the provisions of this act are hereby repealed, said repeal to take effect on and after the passage of this act, but the repeal of existing laws or modifications thereof embraced in this act shall not affect any act done, or any right accruing or accrued, or any suit or proceeding had or commenced in any civil cause before the said repeal or modifications; but all rights and liabilities under said laws shall continue and may be enforced in the same manner as if said repeal or modifications had not been made. Any offenses committed and all penalties or forfeitures or liabilities incurred prior to the passage of this act under any statute embraced in or changed, modified, or repealed by this act may be prosecuted or punished in the same manner and with the same effect as if this act had not been passed. All acts of limitation, whether applicable to civil causes and proceedings or to the prosecution of offenses, or for the recovery of penalties or forfeitures embraced in or modified, changed, or repealed by this act shall not be affected thereby; and all suits, proceedings, or prosecutions, whether civil or criminal, for causes arising or acts done or committed prior to the passage of this act may be commenced and prosecuted within the same time and with the same effect as if this act had not been passed: *And provided further*, That nothing in this act shall be construed to repeal the provisions of section three thousand and fifty-eight of the Revised Statutes as amended by the act approved February twenty-third, eighteen hundred and eighty-seven, in respect to the abandonment of merchandise to underwriters or the salvors of property, and the ascertainment of duties thereon: *And provided further*, That nothing in this act shall be construed to repeal or in any manner affect the sections numbered seventy-three, seventy-four, seventy-five, seventy-six, and seventy-seven of an act entitled "An Act to reduce taxation, to provide revenue for the Government, and for other purposes," which became a law on the twenty-eighth day of August, eighteen hundred and ninety-four.

Approved, July 24, 1897.

Appropriation Bills.—The Congress was obliged to take up and pass four appropriation bills—that making appropriations to supply deficiencies; that for the Agricultural Department;

that for the Indian Department; and that for sundry civil expenses.

In the deficiency bill there was inserted a clause accepting the invitation to take part in the Paris Exposition of 1900, and appropriating \$25,000 for preliminary expenses and the salary of a commissioner. There was also a provision for fireproof buildings and a pavilion at Ellis island, and for the enlargement of the island by a system of bulkheads, the whole improvement of the immigrant station to cost \$600,000, of which \$150,000 were appropriated. There was moreover a condition incorporated in the measure to the effect that no contract for armor plate should be at a rate exceeding \$300 for a ton of 2,240 pounds, and authorizing the Secretary of the Navy to secure such terms, or, if need be, to prepare for Government manufacture of armor plates.

In the Indian bill there was a contest over the question of sectarian schools, and the policy of the Government was declared as follows: "That the Secretary of the Interior may make contracts with contract schools, apportioning, as near as may be, the amount so contracted among schools of various denominations for the education of Indian pupils during the fiscal year 1898, but shall only make such contracts at places where nonsectarian schools can not be provided for such Indian children, and to an amount not exceeding 40 per cent. of the amount so used for the fiscal year 1895." The question of opening to entry the rich gilsonite deposits in the Uncompahgre reservation was met by declaring open such agricultural lands as have not been allotted to the Uncompahgre Indians on April 1, 1898, to entry, but reserving to the United States title in all lands containing gilsonite, asphalt, or other like substances.

In the sundry civil bill there was new legislation as to the forest reserves of the country. The sum of \$150,000 was appropriated for a survey of all such reservations; but while the full authority of the President under the act of March 3, 1891, to revoke, modify, or suspend executive proclamations as to such reservations was affirmed, it was provided that the proclamation of President Cleveland, Feb. 22, 1897, reserving lands in Wyoming, Utah, Montana, Washington, Idaho, and South Dakota shall be suspended until March 1, 1898, at which date such lands shall become once more subject to presidential action. The following general provisions were added:

"All public lands heretofore designated and reserved by the President of the United States under the provisions of the act approved March 3, 1891, the orders for which shall be and remain in full force and effect, unsuspended and unrevoked, and all public lands that may hereafter be set aside and reserved as public forest reserves under said act, shall be as far as practicable controlled and administered in accordance with the following provisions:

"No public forest reservation shall be established, except to improve and protect the forest within the reservation or for the purpose of securing favorable conditions of water flows and to furnish a continuous supply of timber for the use and necessities of citizens of the United States; but it is not the purpose or intent of these provisions or of the act providing for such reservations to authorize the inclusion therein of lands more valuable for the mineral therein or for agricultural purposes than for forest purposes.

"The Secretary of the Interior shall make provisions for the protection against destruction by fire and depredations upon the public forests and forest reservations which may have been set aside or which may be hereafter set aside under the said act of March 3, 1891, and which may be continued;

and he may make such rules and regulations and establish such service as will insure the objects of such reservations, namely, to regulate their occupancy and use and to preserve the forests thereon from destruction; and any violation of the provisions of this act or such rules and regulations shall be punished as is provided for in the act of June 4, 1888, amending section 5388 of the Revised Statutes of the United States.

"For the purpose of preserving the living and growing timber and promoting the younger growth on forest reservations, the Secretary of the Interior, under such rules and regulations as he shall prescribe, may cause to be designated and appraised so much of the dead, matured, or large growth of trees found upon such forest reservations as may be compatible with the utilization of the forests thereon, and may sell the same for not less than the appraised value in such quantities to each purchaser as he shall prescribe, to be used in the State or Territory in which such timber reservation may be situated, respectively, but not for export therefrom. Before such sale shall take place notice thereof shall be given by the Commissioner of the General Land Office for not less than sixty days, by publication in a newspaper of general circulation, published in the county in which the timber is situated, if any is therein published, and if not, then in a newspaper of general circulation published nearest to the reservation, and also in a newspaper of general circulation published at the capital of the State or Territory where such reservation exists; payments for such timber to be made to the receiver of the local land office of the district wherein said timber may be sold, under such rules and regulations as the Secretary of the Interior may prescribe; and the moneys arising therefrom shall be accounted for by the receiver of such land office to the Commissioner of the General Land Office in a separate account, and shall be covered into the Treasury. Such timber, before being sold, shall be marked and designated, and shall be cut and removed under the supervision of some person appointed for that purpose by the Secretary of the Interior, not interested in the purchase or removal of such timber nor in the employment of the purchaser thereof. Such supervisor shall make report in writing to the Commissioner of the General Land Office and to the receiver in the land office in which such reservation shall be located of his doings in the premises.

"The Secretary of the Interior may permit, under regulations to be prescribed by him, the use of timber and stone found upon such reservations, free of charge, by *bona fide* settlers, miners, residents, and prospectors for minerals, for firewood, fencing, buildings, mining, prospecting, and other domestic purposes, as may be needed by such persons for such purposes, such timber to be used within the State or Territory, respectively, where such reservations may be located.

"Nothing herein shall be construed as prohibiting the egress or ingress of actual settlers residing within the boundaries of such reservations, or from crossing the same to and from their property or homes; and such wagon roads and other improvements may be constructed thereon as may be necessary to reach their homes and to utilize their property under such rules and regulations as may be prescribed by the Secretary of the Interior. Nor shall anything herein prohibit any person from entering upon such forest reservations for all proper and lawful purposes, including that of prospecting, locating, and developing the mineral resources thereof: *Provided*, That such persons comply with the rules and regulations covering such forest reservations.

"That in cases in which a tract covered by an unperfected *bona fide* claim or by a patent is included within the limits of a public forest reservation the settler or owner thereof may, if he desires to do so, relinquish the tract to the Government, and may select in lieu thereof a tract of vacant land open to settlement not exceeding in area the tract covered by his claim or patent; and no charge shall be made in such cases for making the entry of record or issuing the patent to cover the tract selected: *Provided further*, That in cases of unperfected claims the requirements of the laws respecting settlement, residence, improvements, etc., are complied with on the new claims, credit being allowed for the time spent on the relinquished claims.

"The settlers residing within the exterior boundaries of such forest reservations, or in the vicinity thereof, may maintain schools and churches within such reservation, and for that purpose may occupy any part of the said forest reservation, not exceeding two acres for each schoolhouse and one acre for a church.

"The jurisdiction, both civil and criminal, over persons within such reservations shall not be affected or changed by reason of the existence of such reservations, except so far as the punishment of offenses against the United States therein is concerned, the intent and meaning of this provision being that the State wherein any such reservation is situated shall not, by reason of the establishment thereof, lose its jurisdiction, nor the inhabitants thereof their rights and privileges as citizens, or be absolved from their duties as citizens of the State.

"All waters on such reservations may be used for domestic, mining, milling, or irrigation purposes, under the laws of the State wherein such forest reservations are situated, or under the laws of the United States and the rules and regulations established thereunder.

"Upon the recommendation of the Secretary of the Interior, with the approval of the President, after sixty days' notice thereof, published in two papers of general circulation in the State or Territory wherein any forest reservation is situated, and near the said reservation, any public lands embraced within the limits of any forest reservation, which, after due examination by personal inspection of a competent person appointed for that purpose by the Secretary of the Interior, shall be found better adapted for mining or for agricultural purposes than for forest usage may be restored to the public domain. And any mineral lands in any forest reservation which have been or which may be shown to be such, and subject to entry under the existing mining laws of the United States and the rules and regulations applying thereto, shall continue to be subject to such location and entry, notwithstanding any provisions herein contained."

Miscellaneous.—The following general acts in addition to those already mentioned were passed at the special session:

To adopt regulations for preventing collisions upon certain harbors, rivers, and inland waters of the United States—a full code for inland navigation.

To authorize the President to suspend discriminating duties imposed on foreign vessels and commerce.

To give the consent of Congress to a compact entered into between the States of South Dakota and Nebraska respecting the boundary between said States.

Making an appropriation of \$250,000, to be immediately available, for the improvement of the Mississippi river from the head of the passes to the mouth of the Ohio river, and to deduct said sum

from the appropriation for the Mississippi river from the head of the passes to the mouth of the Ohio river, contained in the act "making appropriation for the construction, repair, and preservation of certain public works, and other purposes," which became a law on June 3, 1896.

To amend an act entitled "An Act to provide for the entry of lands in Greer County, Oklahoma, to give preference rights to settlers, and for other purposes," approved Jan. 18, 1897.

Appropriating \$50,000 for the relief of suffering American citizens in the island of Cuba.

Directing the Secretary of the Treasury to give an American register to the foreign-built steamships "Massapequa" and "Menantic," to enable them to carry grain under the American flag to the sufferers by famine in India.

Authorizing the Secretary of War to use rations for the relief of destitute persons in the district overflowed by the Rio Grande river at and near El Paso, Texas.

To amend section 8 of the act entitled "An Act providing a civil government for Alaska," approved May 17, 1884, to create the office of surveyor general for Alaska, and for other purposes.

Authorizing the Secretary of War to use rations for the relief of destitute persons in the district overflowed by the Mississippi river and its tributaries and by the Red River of the North, and making an appropriation to relieve the sufferers by said overflow.

Authorizing foreign exhibitors at the Transmississippi and International Exposition, to be held in the city of Omaha, in the State of Nebraska, during the year 1898, to bring to the United States foreign laborers from their countries, respectively, for the purpose of preparing for and making exhibits.

Appropriating \$50,000 for the expenses of the International Postal Congress.

Authorizing the construction of bridges over Pearl river in Mississippi, the St. Louis river between Minnesota and Wisconsin, and the Church river in Tennessee.

CONNECTICUT, a New England State, one of the original thirteen; ratified the national Constitution Jan. 9, 1788; area, 4,900 square miles. The population, according to each decennial census, was 237,946 in 1790; 251,002 in 1800; 261,942 in 1810; 275,148 in 1820; 297,675 in 1830; 309,978 in 1840; 370,792 in 1850; 460,147 in 1860; 537,454 in 1870; 622,700 in 1880; and 746,258 in 1890. Capital, Hartford.

Government.—The following were the State officers during the year: Governor, Lorrin A. Cooke; Lieutenant Governor, James D. Dewell; Secretary of State, Charles Phelps; Treasurer, Charles W. Grosvenor; Comptroller, Benjamin P. Mead—all Republicans; Supreme Court of Errors—Chief Justice, Charles B. Andrews, Republican; Associate Justices, David Torrance, Republican; Augustus H. Fenn, Democrat; Simeon E. Baldwin, Democrat; and William Hamersley, Democrat; Clerk, C. W. Johnson.

Finances.—The funded debt of the State was reported as \$1,500,000 3½-per-cent. bonds falling due Jan. 1, 1902, and \$1,740,000 3-per-cent. bonds due Oct. 1, 1910; total, \$3,240,000. The condition of the treasury was reported as follows at the beginning of the year: Cash on hand Sept. 30, 1894, \$738,418.07; received during year ending Sept. 30, 1895, \$1,997,016.35; received during year ending Sept. 30, 1896, \$2,117,819.27; total, \$4,853,253.69. Expenditures: For year ending Sept. 30, 1895, \$2,216,679.93; for 1896, \$2,345,839.91; total, \$4,562,519.84; leaving cash balance Oct. 1, 1896, \$290,733.85. Expenditures exceeded receipts in 1895, \$219,663.58; in 1896, \$228,020.64; showing a de-

crease of cash balance for two years, \$447,684.22. The judicial expenses for 1895 were \$369,362.51; for 1896, \$366,765.65. The Comptroller reported that during the past ten or twelve years the expenses of the State have increased very rapidly, and much more in proportion than the grand list and popula-



LORRIN A. COOKE, GOVERNOR OF CONNECTICUT.

tion. The average annual expenses for the four years ending 1882 were \$1,280,117.19; for the four years ending 1896 they were \$2,124,591.22, an increase of nearly 60 per cent.

Near the close of the year the Treasurer reported that the civil list showed a total of \$2,673,107.52, of which \$290,733.85 was the balance from Oct. 1, 1896. Of the receipts constituting the remainder the largest were: Interest of school fund (transferred to civil list fund March 1, 1897), \$112,523.08; military commutation tax, \$147,885.80; nonresidents' stock tax, \$104,149.49; tax on steam railroads, \$874,436.95; tax on street railroads, \$120,765.25; tax on savings banks, \$353,382.81; tax on mutual life insurance companies, \$267,670.71. Payments were made partly as follows: Civil-list orders, \$1,981,814.19; registered orders, \$460,734.06; interest on State bonds, \$104,700; the total of payments was \$2,550,080, leaving a balance to credit of the civil list, Oct. 1, 1897, of \$123,027—smaller by \$167,706 than that of a year previous. There was a decrease in revenue from the collateral-inheritance tax. In 1896 the income from this source was \$135,836, while in 1897 it was \$77,492—a decrease of \$58,344.

Banks.—The savings banks of the State were reported as nearly all in a healthy condition. The number is 89; number of depositors, 356,445; amount of deposits, including surplus, \$149,032,123; State tax, \$340,405. In his legislative message the Governor said: "The ever-increasing difficulties that savings-bank officers encounter in procuring investments that are sound and pay income indicate a possible, not distant, future when the rate per cent. declared as dividends to depositors will of necessity be reduced." The number of State banks is 8; total assets, \$8,356,515; total assets decreased

during the year, \$315,563.43. There was a gain in amount of surplus of \$85,209, and a decrease of \$54,793 in undivided profits, leaving the net gain \$30,416.

Number of trust companies, 12; total assets, \$7,522,380. Assets had decreased \$553,746, surplus had increased \$60,727, undivided profits decreased \$109,268, leaving net decrease \$48,540.

Insurance.—The condition of the insurance companies of the State for 1896 was reported as showing "no great changes, other than the healthy growth which good foundations, good management, conservative handling of investments, and the absence of any unusual losses always brings." The fire insurance stock companies had a paid-up capital, \$10,175,000; gross assets, \$36,003,325; increase in ten years, \$11,963,000; surplus over all liabilities, \$8,173,155. The mutual life insurance companies had: Assets, \$1,734,841; increase in ten years, \$539,544; surplus over all liabilities, \$1,345,393. The life insurance companies operating on fixed-premium plan had assets, \$136,329,480; increase in ten years, \$25,490,154; total liabilities, except capital, \$120,016,875; paid death and endowment claims during the year, \$9,381,719. Companies doing life insurance business on the assessment plan had total assets, \$9,289,812; paid claims during year, \$1,749,433. The estimated loss by fire in the State for the preceding year was \$1,840,000. Concerning assessment associations, Commissioner Betts said in his report: "The logic of events is gradually bringing this large and important system of insurance to a more definite and satisfactory recognition of its imperfections and their remedies. The old expedient of graded rates fixed at entry, to be called for as many times during each year as mortuary necessities required, adopted by the fraternal societies, is now admitted, almost unanimously, to be inadequate to stay the tide of a practically unlimited increase in the number of assessments as age advances."

Railroads.—The Railroad Commissioners reported for 1896: Capital stock of all steam railroads operating in the State, \$100,726,263; funded debt, \$43,660,000; total current liabilities, \$12,600,637; gross earnings, \$36,746,531; operating expenses, \$25,754,818; net earnings, \$10,993,778; dividends paid, \$4,561,966; taxes paid the State, \$756,066; number of passengers carried, 51,977,648; number of employees, 27,484; total amount of freight carried, 15,142,806 tons, an increase of 673,194 tons over previous year. The property accounts of the companies amounted to \$170,275,063.18, an increase during the year of \$3,195,605.13, and was apportioned as follows: Cost of roads, \$124,730,364.78; cost of equipment, \$10,632,020.59; bonds and stocks, \$17,314,037.67; other permanent investments, \$10,635,372.63; cash and cash assets, \$4,469,599.32; other assets, \$2,493,668.19. The total length of roads was given at 1,521.60 miles, or 1,980.23 miles of single track and 639.47 of sidings, making the total length of single tracks 2,619.70 miles.

Street Railways.—Twenty-seven street-railway companies reported, but 2 of them had not yet begun business. The reports gave figures as follows: Capital stock, \$9,221,740; funded debt, \$8,690,100; floating debt, \$849,255—total liabilities, \$18,761,095; cost of roads, \$16,538,223; cost of equipment, \$2,047,037; gross earnings, \$2,589,619; net earnings, \$884,894; number of passengers carried, 62,789,791.

Education.—There were reported 1,563 public schools and 3,436 departments, under 3,708 teachers, with accommodation for 148,000 scholars. The number of scholars on the registers was 141,485, and the average number in attendance was 96,925. The schools were open an average of one hundred and eighty-seven days in the year. The cost of the

schools was \$2,796,831. The towns and districts were taxed to the amount of \$1,968,170. The average cost for each child in average attendance was \$24.90. There was reported an increase under every head of expense. The school fund, which entered upon its second century, was reported to have paid to the public schools a total of \$9,349,309.39, and the capital had risen from \$1,200,000 in 1795 to \$2,008,048 in 1896. From July 1, 1895, to Sept. 30, 1896, there were 334 applications for loans, of which 287 were granted, aggregating \$368,100. The revenue of the fund during the year ending Sept. 30, 1896, was \$127,734.48. The State has 3 normal schools for the training of teachers, and 67 towns have established high schools. The secretary of the Board of Education said in his report: "The question now is, whether it is not the duty of the State to compel all who begin the work of teaching hereafter to secure for themselves the training which will make them fit instructors of the young."

Agriculture, etc.—The report of the Board of Agriculture gives evidence that the farming and dairy industries are making great advances in scientific and practical knowledge of soil, crops, and domestic animals. The Storrs Agricultural College is in a prosperous condition, offering at small cost instruction in all the departments that pertain to rural life. A cottage for girls has been built, at a cost of \$12,000. An experiment station established at the school by the Legislature receives annually from the State \$7,500. The State also gives an annual appropriation of \$1,800 to this station for investigating food economy. The State Agricultural Experiment Station is at New Haven. Its work includes the inspection of commercial fertilizers, which prevents a fraudulent article being used in the State, analyzing butter and molasses for the State Dairy Commission, and field experiments to ascertain the effects of different fertilizers upon various crops. There are 60 creameries in the State, and the introduction of the system is reported to have greatly developed the dairy industry by putting upon the market butter of such excellent quality that the poorer grades can not longer find sale, except at very low and unremunerative prices. The most important duty of the office of Dairy Commissioner is to enforce the law relating to the sale of imitation butter.

Charitable and Penal Institutions.—There are 168 institutions maintained in the State for the care of its defective and dependent classes. The amount paid by the State for the support of these institutions during the year ending Sept. 30, 1896, was \$662,329. The Industrial School for Girls, founded by gifts from charitable persons, for the care and instruction of girls without homes or whose surroundings were evil, reported: Whole number of girls received since opening the school (1870), 1,257; under care during last two years, 469; paid by the State, 1896, \$40,784. Ninety per cent. of the girls who have gone out of the school are said to be leading pure and useful lives. The School for Boys reported the number received for the year ending Sept. 30, 1896, at 190; number returned on old commitments, 68; whole number in school, 469; money received from the State during the year, \$70,087. Since the opening of the school (1854) there had been received 5,815 boys.

The trustees of the State Hospital for the Insane reported that the north hospital, which the previous session of the General Assembly had ordered built, had been completed and furnished at a cost of \$101,786. The whole number of insane patients under care of the State was 1,782.

At the Industrial Home for the Blind 52 children were trained and educated during the year.

The number of convicts in the State Prison was

385. Improvements on the prison to the amount of \$20,000 had been made.

Labor Bureau.—The report of this bureau was largely devoted to the subject of taxation and to the irregular methods in valuations of property which prevail in the towns. The total number of manufacturing establishments reporting in the State was 789, having 83,051 employees. The average weekly hours of labor for the whole number of establishments and employees during the year was 53.79, exclusive of hours lost by the employees by reason of days closed. The proportion of business done as reported by the manufacturers as being the proportion of actual or full capacity of the whole number of establishments reporting was 79.69 per cent. The amount paid in wages by the 789 establishments reporting was \$38,509,484 for the year. If the number of employees reported was the true average for the year, the yearly wage rate for all industries was \$463.68 per employee.

Factory Inspection.—The report of the Inspector of Factories showed: Total number of factories inspected, 1,461; number of male employees, 96,225; number of female employees, 39,684; total number of employees, 135,909; factories in which no changes were ordered, 1,002; factories in which changes were ordered, 459; number of changes ordered, 769; number of factories with improper means of egress where proper authorities were notified, 28; number of fatal accidents during the year reported from different sources, 19.

Militia.—The Connecticut National Guard, under the command of Brig.-Gen. George Haven, consists of 205 commissioned officers and 2,678 enlisted men. The Governor's Guard is composed of 25 commissioned officers and 373 enlisted men. Total expenses of the National Guard for the year ending Sept. 30, 1896, \$140,847; of the Governor's Guard, \$14,370. The Naval Battalion had 17 commissioned officers and 149 men.

The number of inmates borne on the rolls of the Soldiers' Home, at Norton, was 454, being an increase of 100 over the preceding year; total expenses, \$74,700.

Fish and Game.—With the present shad-hatching facilities the commissioners are able to turn into the Connecticut river each October from 6,000,000 to 8,000,000 shad from 3 to 5 inches long. The United States Fish Commission gave to the State 3 car loads of cans of shad fry and 50,000 salmon eggs, which were placed in a retaining pond at Poquonock for release into Farmington river. The catch of shad in 1896 numbered 57,318. The commissioners have co-operated with the United States commission in lobster hatching, and an egg-taking station was established at New London.

There are very few wild deer now in the State, and there is a fine of \$100 for killing one at any season.

The oyster business of the State is reported as growing rapidly, the foreign trade having become very great. Practically all the oysters are shipped to England, where a large proportion are transplanted, to be used as required. It is stated that none but Connecticut oysters are sent to Europe from the United States. One firm, of South Norwalk, claiming to be the largest oyster-exporting house in the country, sent to England 40,000 barrels of oysters in 1896.

Good Roads.—A law passed at the preceding session of the General Assembly apportioned the expense incurred in the construction of improved roads, one third to be paid by the State, one third by the county in which is located the town having road improvement, and the remaining one third to be paid by the town. The law limits the amount to be taken from the State treasury to \$75,000 an-

nually. Eighty towns applied for aid under the law in 1895, and 86 towns took advantage of the law for building better roads in 1896. For this enterprise the State has paid \$146,863; counties have paid the same; towns have paid \$515,279.

Liquor License.—There has been an increase in the number of license towns. Returns from the entire State, including New Haven and the five other places at which elections are held at other times than in October, show a total of 80 licensed towns against 71 in 1896. The license vote of increase is said to be due in some cases to the dislike of the agitation and expense of the preceding year for liquor raids, and in some others to objection to the new law under which licenses may no longer be granted to druggists to sell in no-license towns, even on prescriptions. The unusually light vote of the women was said to be owing to the new law, which requires that they shall vote as men do. This is somewhat more troublesome than the old requirement of simply registering with the town clerk.

Sunday Closing.—A new Sunday-closing law that went into operation in July reads in part: "Every person who shall do any secular business or labor, except works of necessity or mercy, or keep open any shop, warehouse, or manufacturing or mechanical establishments, or expose any property for sale, or engage in any sport, between 12 o'clock Saturday night and 12 o'clock Sunday night, shall be fined not more than \$50."

New Legislation.—Some abstracts of new legislation by the General Assembly of 1897 are here given:

Creating the office of Attorney-General, to be elected by the people in November, 1898, he and his successors to be elected for four-year terms.

Prescribing a State flag with a blue ground on which is a shield bordered in silver and gold, bearing the three grapevines on a white ground. Beneath is a streamer of white bordered with gold and brown, with the State motto, "*Qui Transtulit Sustinet*," in deep-blue letters.

That no bill or resolution affecting private interests only shall be introduced in the General Assembly until there has been paid to the State Treasurer a fee of \$5 for each legal page (280 words). If it becomes a law the money shall be retained by the State, if not the fee shall be returned. Corporations having capital stock shall pay an additional fee of \$1 for each \$1,000 of stock, and a like fee on any amendment increasing the stock.

That if the guest of a hotel delivers his valuables for safe keeping, the proprietor shall not be responsible for loss beyond \$300, unless otherwise agreed in writing. He shall not be liable for loss of chattels unless they are in the guest's room or checked.

That if selectmen willfully neglect to provide a flag for a schoolhouse, under the act of 1893, or to renew the flag when necessary, after thirty days' notice, they shall forfeit \$10; half to the town and the remainder to the person who shall sue therefor.

That any person willfully or maliciously injuring a bicycle path shall be fined not exceeding \$50, or imprisoned not over three months, or both.

That if any bicycle rider on the highway runs against any person and injures him, and does not stop, render aid, and give his name and residence, he may be arrested and fined up to \$500 or imprisoned not exceeding six months.

That debts for personal wages, due for labor within three months, up to \$100, shall be preferred claims against any corporation or firm for which a receiver may be appointed.

Allowing the establishment of crematories and regulating them.

Providing that the constitutional amendment that "every person shall be able to read in the Eng-

lish language any article of the Constitution or any section of the statutes of this State before being admitted an elector," shall be submitted to the people at the October election, 1897. At the October election this amendment was adopted.

COREA. See KOREA.

COSTA RICA, a republic in Central America. The Congress is a single chamber of 21 Representatives, elected for four years by electoral colleges composed of delegates chosen by all respectable citizens. Half the Representatives retire and are replaced by fresh elections every two years. The President is elected by the same indirect method for the term of four years. The President for the term ending May 8, 1898, is Rafael Iglesias. The Cabinet at the beginning of 1897 was composed as follows: Foreign Affairs, Worship, Public Instruction, Benevolence, and Justice and Minister of Finance, Ricardo Montalegre; Gobernacion, Dr. Juan J. Ulloa; War and Marine, Juan Bautista Quirós. The Vice-Presidents of the republic were José Joaquín Rodríguez, Dr. Carlos Durán, and Asencio Esquivel.

Area and Population.—The area of Costa Rica is estimated at 23,000 square miles. The population in 1892 was 243,205, besides 3,500 Indians and 19,456 estimated to have been left out of the census. There were 6,289 foreigners, of whom 831 were Spanish, 622 Italian, 342 German, 246 English, 204 American, and 634 British West Indian. There were 1,490 marriages, 10,567 births, and 6,027 deaths recorded in 1893; immigration in 1891, 6,330; emigration, 3,706. San José, the capital, has about 20,000 inhabitants. Education is free and compulsory. There were 267 elementary schools in 1892, with 11,472 pupils. The sum expended by the Government on education was 546,000 pesos in 1891.

Finances.—The revenue in 1896 was 6,528,975 pesos; expenditure, 6,187,927 pesos. The military force of the republic is 600 regular soldiers and 12,000 militia, which in case of war can be increased to 34,000. A loan of £1,000,000 was raised in England in 1871, and one of £2,400,000 was issued at the price of 82 in 1872. These sums were raised for a railroad that the foreign contractors afterward failed to complete. The unpaid principal amounted in 1887 to £2,691,300. This was converted into a new debt of £2,000,000 bearing 5 per cent. interest, while for the arrears of interest, then amounting to £2,119,512, shares of the Costa Rica Railroad were given at the rate of 22½ per cent. of the full amount owing. In 1895 the Government defaulted on the new debt, and negotiations were opened with the English creditors for a new settlement. The internal debt amounted to 1,381,591 pesos on March 31, 1896. In 1894 the Costa Rican Government informed the English creditors that owing to the decline in silver it could not fulfill its existing obligations by paying gold, and it therefore proposed that the debt should be reduced to 50 per cent., on which 4 per cent. interest should be paid. The bondholders would not agree to this, but offered to consent to a temporary reduction of the rate of interest. In 1897 an arrangement was finally made reducing the annual interest charge on the foreign debt to nearly half, or from £100,000 to £55,000.

Commerce and Production.—The principal exportable products are coffee and bananas. The coffee of Costa Rica is sought after in the European markets, and is mainly exported to Hamburg. Corn, rice, wheat, and potatoes are raised for home consumption. The soil is so fertile and the climate at different elevations so various that almost any products of the tropical and temperate zones can be raised. The live stock in 1892 comprised 77,043 horses, 345,665 cattle, and 2,765 sheep. The coffee export in 1895 was 188,766 bags, valued at 11,200,283 pesos. The

export of bananas was 784,257 pesos in value. Other exports are cabinet woods, cedar, and hides and skins. The total value of imports in 1895 was 13,250,000 pesos, against 10,165,201 pesos in 1894; of the exports, 14,509,440 pesos, against 12,183,609 pesos. Of the imports in 1894 Great Britain supplied 32 per cent., and in 1895 28 per cent., while the United States supplied 35 per cent. in 1894 and the same proportion in 1895, and Germany 19 per cent. in 1894 and 21 per cent. in 1895.

Navigation.—There were 458 vessels, of 427,674 tons, entered during 1895 at the ports of Limón and Punta Arenas, and 450, of 432,770 tons, cleared. The merchant marine of Costa Rica in 1893 consisted of 1 sailing vessel, of 318 tons, and 2 steamers, of 528 tons.

Communications.—The railroad from Limón to Alajuela is 147 miles long. Of the railroad building from Punta Arenas, on the Pacific coast, to meet it, 14 miles have been completed. Other lines are projected. The railroad receipts in 1895 were 2,449,893 pesos.

The post office in 1893 forwarded 791,591 internal and 865,275 foreign letters. The telegraphs belonging to the Government have a length of 630 miles. The number of dispatches in 1891 was 222,231.

Politics and Legislation.—The national Congress opened its regular session on May 1. The public finances were declared to be satisfactory, the revenue for the fiscal year 1896-'97 having been \$7,435,610, exceeding that of the preceding year by \$851,102 and the estimates by \$538,226. The expenditures had amounted to \$6,697,326, leaving a surplus of \$738,284, which, added to the balance of the previous year and export duties on coffee not yet collected, left \$1,270,000 in the treasury on March 31, 1897. In accordance with the boundary convention with Nicaragua, arranged through the mediation of Salvador, the President of the United States, on Feb. 17, selected E. P. Alexander to accompany the boundary commissioners of the two countries and decide whatever questions may arise between them in their work of establishing the boundary. Before a final settlement of the boundary was arrived at, the Costa Rican Congress revived the quarrel and angered the Nicaraguans by passing a bill early in July, declaring the San Juan river free to the navigation and commerce of all nations. The Nicaraguan Government made a vigorous protest, and was supported by the Central American Federal Diet. The boundary commission suspended work pending the settlement of this new dispute. Political excitement reached a high pitch as the presidential election approached, and after some signs of disturbance appeared and several arrests had been made, the right of *habeas corpus* was suspended for sixty days from Sept. 15. Within a few weeks some hundreds of suspected revolutionists were placed under arrest. Ex-President Mora, who was believed to be the candidate of the Opposition party for President, was exiled.

CRETE, an island in the Mediterranean Sea possessing autonomous institutions under the suzerainty of Turkey. The island, which lies southeast of Greece, is 30 miles in extreme width and 156 miles long. The seat of government is Canea, which has a population of 14,610, of whom 4,750 are Greek Orthodox, 9,500 Mohammedans, 200 Roman Catholics, and 160 Israelites. The foreign consuls reside in the neighboring town of Halepa. Candia, with a population of 13,000 Turks and 6,000 Greeks, and Retimo, with 6,321 Turks and 1,320 Greeks, have smaller harbors than that of Canea, but the fortified harbor of Suda, where is the Mediterranean navy yard of Turkey, is one of the largest and safest in the Levant. A third of the area of the island con-

sists of barren mountain, a third is tillable land that remains uncultivated, and a third is cultivated rudely, but produces superior olives and other fruits, for which Crete has been celebrated from ancient times. Orchards of orange, lemon, citron, and almond trees abound in the valleys. Olive oil and olives are the chief exports. Grapes of many varieties are grown, and raisins and wine are important products.

The untrustworthy census taken in 1881 by order of Photiades Pasha gave a total population of 279,165, of whom 205,010 were Orthodox Greeks, 73,234 Mohammedans, 647 Israelites, 253 Roman Catholics, 13 Protestants, and 8 Armenians. The present population includes about 200,000 Christians and 110,000 Mohammedans. All except a few Arabs and Africans and other foreigners in the coast towns are of the Greek race. The Mohammedan Cretans are descendants of those Greeks who embraced Islam when the island was conquered from the Venetians in 1669 and were rewarded with lands and made the ruling and military class. Some of the Cretan beys are still large landowners. There are also many small proprietors among the Mussulmans who are frugal and industrious olive growers. Owing to the spread of education among the Christians these have outstripped the Moslems in trade, industry, and professional pursuits within the period since all have stood on the same civil and political footing, and the latter feel sore over the loss of their predominance and prestige and the reversal of their ancient relations to the Christians.

Crete revolted with the other Greek islands in 1821, but was restored to Turkey in 1830 by the Treaty of London. In 1866 there was a formidable uprising that lasted two years, the suppression of which cost the Turkish treasury over \$30,000,000, and which resulted in the granting in 1868 of a new organic law promising liberal concessions to the Christians. In the Treaty of Berlin the Porte undertook to apply this organic law, which till then had remained nugatory, reserving the right to introduce modifications. The delay in the execution of this clause led to another insurrection. The Porte sent Mukhtar Pasha, with power to grant certain privileges in pursuance of the law. Negotiations between the Turkish commissioner and delegates of the Christians resulted in the pact of Halepa, signed Oct. 15, 1878, by the terms of which the Governor was to be a Christian and the island was endowed with a limited degree of autonomy. Fresh uprisings took place, in consequence of which the pact of Halepa was suspended in 1889.

The Cretan Constitution was very liberal in its provisions. There was a General Assembly, which met every year, and which was elected by the whole population. The imposts and duties were carefully limited, and the expenditure was under popular control. There was a Christian governor for every Christian district, assisted by a council of Christians, and for every Mussulman district there was a Mussulman governor, with whom was associated a Christian deputy governor as coadjutor. There was also a gendarmerie supposed to be recruited from Christians and Mussulmans indifferently. This Constitution was safeguarded by the absolute liberty of the press and of discussion.

The Plan of Reforms.—During the Cretan insurrection of 1896 the six great powers—England, Austria-Hungary, France, Germany, Italy, and Russia—recommended to the Sultan and he adopted a scheme of reforms based on the demands of the Christian Deputies of the Cretan Assembly. The scheme provided for a Christian governor general to be appointed for five years by the Sultan with the consent of the powers; the governor general to have the right of veto on all laws voted by the Assembly except such as introduce modifications of

the pact of Halepa, and to appoint all secondary officials, the higher posts to be filled by the Sultan, Christians to have two thirds and Mohammedans one third of the offices; elections to the Assembly and the sessions of that body to be held biennially, instead of annually; the Assembly to vote the biennial budget, control accounts, and vote bills submitted by the governor general or by Deputies by an absolute majority, save bills modifying the laws in force and requiring under the Halepa convention a two-third majority, no proposal involving an increase in the expenditure to be discussed unless introduced by the governor general or the competent department; the provisions of the firman of 1887 assigning to Crete half the customs revenue to be again put into force, and the Cretans to acquire a right to the revenue from imported tobacco; a commission comprising European officers to reorganize the gendarmerie; another commission comprising European lawyers to study the reform of the administration of justice, rights arising out of the capitulations being reserved; no law to be put into force unless voted by the Assembly; the publication of books and newspapers, the establishment of printing presses, and the foundation of scientific societies to be subject to the authorization of the governor general in accordance with the law; no native of Cyrene to be allowed to emigrate and settle in the island without the authority of the governor; and the General Assembly to be convened within six months, and elections ordered in accordance with the law of 1888, the governor general conjointly with the Administrative Council regulating in the meantime the execution of the reforms by means of provisional ordinances.

The ambassadors at Constantinople, who drew up this scheme of reforms, recommended a customs surtax to raise money to pay indemnities for losses sustained during the insurrection, the payment to be supervised by the consuls. While these reforms, which were intended to establish friendly relations between the two sections of the population, were being considered by the ambassadors and the Sultan, the state of affairs in the island became more and more unsatisfactory, and the Greeks of the Hellenic kingdom fomented the agitation. To prevent further disturbance from this quarter several powers considered it necessary to take measures against Greece. On July 27, 1896, the Austrian ambassador at London proposed to Lord Salisbury that the powers press the Greek Government to prevent the dispatch of volunteers, arms, and munitions from Greece to Crete, and in case the Greek Government should declare its inability to prevent arms and men from being sent to the insurgents, that the signatory powers should agree to institute a blockade of the Cretan coast.

Count Goluchowsky wished the powers also to intimate their intention to "restore to the Sultan his liberty of action" if the existing situation continued, and to state plainly that the responsibility for the consequences would rest with those who have hampered the efforts of Europe for the restoration of peace. To these proposals Lord Salisbury refused to accede, the reason alleged being that to take part in such a blockade would place Great Britain in the position of an ally of the Sultan in the task of repressing the insurrection of his Christian subjects. Owing to the opposition of Great Britain the idea of a blockade was given up, and new efforts were made to obtain the Sultan's sanction to the proposed reforms, which was obtained in August, and early in September the Christian and the Mohammedan Deputies in Crete accepted the scheme in behalf of their respective parties.

Renewal of Disturbances.—Though the settlement of the Cretan difficulty proposed by the pow-

ers in the summer of 1896 was finally accepted by the Porte and by the Cretan Deputies representing the Christians and the representatives of the Mohammedan community, the followers of the insurgent chiefs in the remote mountain districts still preserved their revolutionary organization. This, however, dwindled to an insignificant band, and acts of terrorism and retaliation ceased toward the end of the year. The population rested expectantly, waiting for the powers to carry into effect the agreement wrested from the Porte, and to organize an impartial constabulary force for the protection of Christians and Moslems alike. For a long time no steps were taken to organize the gendarmerie, as no fund existed as yet for the payment of its expenses. The absence of any efficient force for the preservation of order and the delay and inaction of the powers, to whom the Ottoman authorities had resigned the task of preserving the peace, afforded an opportunity to the turbulent elements on both sides. The Greek Government had fallen entirely under the influence of the patriotic societies that sought the annexation of Crete and the acquisition of Thessaly, and the Chamber at Athens voted large sums for military preparations. The nucleus of the revolutionary Government was preserved in the mountainous districts.

Early in January, 1897, disturbances broke out afresh in the vicinity of Canea. Georgi Berovich Pasha, the Vali of Crete, addressed a note to the consuls, pointing out the insufficiency of the gendarmerie, and Tewfik Pasha, the Turkish Minister of Foreign Affairs, requested that instructions should be sent to the consuls to exercise their influence to calm the public mind. Bands of Christians attacked Mohammedan villagers and threatened Canea, where during several days a panic prevailed. The Vali, aided by the Greek consul general, M. Gennadius, succeeded finally in appeasing the Christians for the moment.

The recrudescence of disorder stimulated the European military commission that was studying the problem of a new gendarmerie. The Austrian ambassador, on Jan. 12, 1897, presented to the Porte the scheme devised by this commission, and after first objecting to the enrollment of foreigners in the new gendarmerie, the Porte, on Jan. 14, signified the acceptance of the plan recommended by all the ambassadors.

In the meantime fresh murders and reprisals kindled again the religious feud. The Christians, especially in the Kisamo district, attacked the Mohammedan peasants, and the latter abandoned their homes and fled to the fortified towns. The influx of these refugees alarmed in turn the Christian families of Canea and Heraklion, where those possessing the means prepared to remove to Athens. Major Bor, formerly commandant of gendarmes in Cyprus, was nominated by the European commission to be colonel of the new gendarmerie, and was finally accepted by the powers, though at first M. de Nelidoff, in behalf of Russia, objected to the appointment of an officer of the British army. A loan of £100,000 obtained in Paris removed the chief impediment to the realization of the new reforms, but the annexation movement had now gone too far in Greece, and the Cretan Christians were now wholly under the influence of the Ethnike Hetairia, the secret Greek patriotic society, which before the end of January sent bands of filibusters over the Macedonian border to threaten Ottoman rule on the mainland also. Armed bands of Christians numbering nearly 3,000 men in the vicinity of Canea attacked and burned Taratzo and two or three other Mohammedan villages, while bands of Mohammedans made forays from the city and burned Galata, and on Feb. 2 Murnies

and Tsikalaria. Many persons were murdered. The foreign fleet left Suda Bay and anchored off Canea. Another uprising of Christians took place in the neighborhood of Retimo, where Mohammedan villages were blockaded, and disorder reigned to such an extent that the governor informed the consular body that he had not the power to preserve the peace. A committee of notables of both creeds vainly begged the Christian insurgents to withdraw. While the Vali and the consuls went through the country endeavoring to prevent more serious catastrophes the European powers dispatched more war ships to Cretan waters. Major Bor organized two or three companies of gendarmes recruited in Montenegro, but it was too late for this puny force to accomplish anything. The Vali was reluctant to employ the military forces, lest any conflict between the troops and the Christians should lead to a general insurrection.

Greek Intervention.—On Feb. 4 serious fighting occurred between the Christian and Mohammedan population in Canea. About 30 people were killed. Incendiary fires were kindled in many places, and one whole quarter of the town was destroyed. The Christian families went on board the ships in the harbor, while sailors and marines landed with pumps to extinguish the flames, in which work the inhabitants of both parties aided, when order and tranquillity had been restored, after two days of fighting. At Halepa, a few miles away, 700 armed Christians were confronted by a body of Mohammedans, also armed. The Greek and Cretan refugees from Canea to the number of 1,000 were conveyed on a cruiser to Syra. The situation at Retimo and Heraklion was likewise so serious that the consuls asked for the protection of men-of-war. At Retimo were congregated most of the Mohammedans from the provinces of Retimo, Hagios Vasilios, and Mylopotamos, who had forced their way into the town. Others laid siege to the Christian villages of the Retimo province. In the district of Heraklion it was the Mohammedans who were blockaded in their villages, while their coreligionists of the town called upon the *mutessarif* to effect their instant release if he would not have them take up arms and march out to free their brothers.

On Feb. 7 the insurgent body at Halepa proclaimed the union of Greece and Crete. The Greek squadron arrived in time to take off the last of the refugees from Canea. The powers had raised no objections to the sending of Greek war vessels to Crete, such as they had interposed in May of the preceding year. When the ships arrived and omitted to salute the Turkish flag, according to custom, the senior officer of the British squadron paid a visit to the Greek commander and induced him to exchange salutes with the fortress. Prince Georgios, of Greece, assumed command of the torpedo flotilla of eight boats that was about to be dispatched to Crete by the Greek Government with the avowed purpose of preventing the landing of Turkish troops. The powers had unitedly notified Greece before the dispatch of her war vessels that she would not be allowed to interfere on the island, besides averting the chance of collision by preventing the Porte from sending fresh troops. By Feb. 12 the insurgent body concentrated before Canea numbered 12,000. Arms and ammunition had been landed at Sphakia, on the south coast near the western extremity of the island, by expeditions from Greece. After a prolonged fight, the Mohammedans were driven into Canea, and the Christians made ready to attack the town. A Turkish transport that sailed with re-enforcements from Heraklion was fired on by one of the Greek war ships and put back. On Feb. 13 the insurgents, joined by volunteers from Greece, assembled in great force on the peninsula of Akro-

tiri, and, displaying the Hellenic flag, advanced upon the Turkish fort at Canea. The Turks, under cover of the guns of the fortress, made a sortie, and after being driven back, sallied forth again 1,700 strong, after nightfall, retiring finally into the fortress, after desperate fighting, in which the losses were heavy on both sides.

The fighting at Canea caused the wildest excitement at Athens, and impelled the Hellenic Government to send war ships to Crete, while the Chamber and the populace enthusiastically acclaimed the union of Crete and Greece. In all, 5,000 Cretans had escaped on foreign war vessels to Milo, to be thence distributed by Greek steamers to the Piræus, Syra, and various Greek islands. The Cretans resident in Greece urged union with Greece as the only solution possible after the signal failure of the plan of reforms elaborated and applied under the direct supervision of the powers. The Ethnike Hetairia, the secret organization that has collected funds for the furtherance of Panhellenic aspirations from the Greek colonies in all countries, and had now worked up the Cretan and Macedonian agitation to such a pitch that not even the King would dare to stem the tide of popular feeling, published an address to the Cretans proclaiming the union of Greece.

As the ironclad "Hydra," the cruiser "Mykale," and the gunboat "Alpheios" sailed away for Crete, and the "Spetsai" and "Psara," the cruiser "Miaoulis," and several torpedo boats were got ready for sea, the Greek Minister of Foreign Affairs called upon the representatives of the powers at Athens to assure them that the concentration of Greek war ships in Cretan waters was not intended as a hostile demonstration against Turkey, but merely as a measure for the protection of the numerous Greek subjects in Crete and for the rescue of Cretan fugitives. When the Turkish Government proposed to strengthen the garrisons in Crete, the ambassadors expressed strong disapproval of such a course, urging that any intervention of the troops or the arrival of re-enforcements would only increase the excitement of the Christians and render the situation extremely dangerous. The Greek Government was at this time rapidly summoning the reserves to the military depots and making large purchases of arms abroad. The Greek Premier made reply that the Hellenic Government, having full knowledge of the situation, did not hesitate to assume the whole responsibility for the measures it had taken.

Foreign Occupation.—The German Government considered that this unqualified defiance of the will of Europe precluded further diplomatic steps at Athens. On Feb. 13 Greek troops, after being reviewed by the Crown Prince, embarked at the Piræus on Feb. 14, and set sail for Crete. The ambassadors at Constantinople agreed to the British proposal not only to deter both the Greeks and the Turks from landing troops or using their naval forces to assist either of the contending factions on the island, but also to occupy jointly in the name of all the powers the ports of Canea, Retimo, and Heraklion. Accordingly 450 bluejackets were landed from Austrian, British, French, Italian, and Russian ships at Canea. Another detachment was debarked at Sitia on Feb. 15. By this act the powers assumed the responsibility for the restoration and maintenance of order in Crete. Mushavir Ismail Bey, to whom Georgi Berovich Pasha had delegated the powers of administration, addressed a note to the foreign commanders, gladly accepting the foreign occupation, and requesting that it be extended to Kisamo, Selino, and other towns.

The Greek corps of occupation, consisting of 2,000 infantry, artillery, and engineers, commanded by Col. Vassos, chief aid-de-camp to King Georgios, effected a landing at Platania, nine miles west of

Canea. The British, Italian, and Russian consuls went to Selino, where massacres were occurring in the villages, 104 Mussulman men, women, and children having been murdered in Barakina alone. They were unable to enter into negotiations with the belligerents, who appeared determined to fight to the bitter end. Both sides had massacred their prisoners. The Christians at Candano fired upon the consuls, though they were known and bore a flag of truce. At Serakimos 100 were massacred, including 20 women and 61 children, and an equal number in the surrounding villages. Near Sitia, in the eastern extremity of the island, 1,147 men, women, and children, almost the entire population of nine villages, had been slaughtered, only about 100 Moslems escaping. The villagers had been induced to lay down their arms by the Christians, who promised them a safe escort to Sitia. The life of no Moslem was safe outside of the cities. Eight villages were surrounded by the insurgents. The Mohammedan villagers in the neighborhood of Hierapetra were given a safe conduct into the town through the intervention of the bishop, but when they arrived there they seized 150 Christians and detained them as hostages. The fort at Bukolies, garrisoned by 500 Turkish troops, underwent a long siege by a large force of well-armed insurgents. Col. Vassos on Feb. 16 captured the Turkish fort at Aghia, taking 400 prisoners. With the aid of the regulars the insurgents mounted guns on the heights of Akrotiri, and prepared to attack the city of Canea. According to Turkish official reports, 25 villages had already been pillaged and burned, and more than 27,000 Moslems had been killed. After the precipitate departure of Georgi Berovich Pasha the duties of his office were provisionally intrusted to Photiades Pasha, who received the offer of a definitive appointment as Vali of Crete, but at first declined. Karatheodory Pasha was then asked to go to Crete as the Sultan's High Commissioner, and he also declined, after which Photiades Pasha was again offered the governor-generalship, and finally accepted.

On Feb. 15 the Greek Minister of War issued an order appointing Col. Vassos to the command of the troops sent to Crete. This document set forth that the Greek Government, in consequence of the state of anarchy prevailing in Crete, had decided to dispatch an army corps to occupy the island and restore peace and order. The Greek Government on the same day communicated to the powers its absolute decision to persist in the occupation of Crete and the protection of the Cretans, who had declared that they were prepared to shed their last drop of blood for the fulfillment of their national aspirations. Col. Vassos issued a proclamation to the people of the island stating that they were suffering from the existing state of anarchy and the excesses of a fanatical populace, and that therefore the King of Greece had decided to put an end to this state of things by a military occupation of the island. Col. Vassos promised to respect the honor, life, property, and religious convictions of all the inhabitants, to whom he was bringing peace and legality. When the Greek consul at Canea raised the Hellenic flag the naval commanders of the powers, whose flags were flying over the town in token of the occupation in which Greece had no share, ordered him to lower the flag. The Greek guard was likewise removed from the consulate at their command, against the protest of the consul, who closed the consulate a few days later and joined Col. Vassos in the interior, first communicating to the various consuls the intelligence that all the provinces of Crete had voted in favor of union with Greece.

On Feb. 18 M. Skouses, the Greek Minister of Foreign Affairs, replied to the demand of the pow-

ers that the Greek flotilla in Cretan waters be withdrawn at once in an identical note, saying that the withdrawal of the flotilla would be impossible until Crete was completely pacified, and furthermore that the Greek Government would not rescind its orders to the Greek troops in Crete to oppose the landing of Turkish forces upon the island. Col. Vassos established his headquarters at Gonia and made preparations to attack Selino. He began to organize local administrations in the name of the King of the Hellenes and arranged for the holding of municipal elections. The insurgent forces, which soon numbered 20,000 men, were assiduously trained, furnished with arms, and formed into battalions under the command of Greek officers. A second body of Greek troops landed at Platania on Feb. 17 and another regiment a day or two later. One expedition was intercepted by a British cruiser and prevented from landing. An English war ship stopped a Greek vessel conveying arms for the insurgents and another prevented the landing of provisions, arousing great indignation in Greece. Admiral Canevaro informed the Greek consul that any attack of the Greek forces upon Canea, Retimo, Sitia, or Heraklion would be repelled by the naval forces of the powers. The same note contained a warning against any further hostile action on the part of Christian insurgents or Greek troops in other parts of the island. While the Greek troops were capturing important positions and Col. Vassos was arming the insurgents the great powers could not agree on any plan for restraining Greek intervention or holding in check the Hellenic Government, bent on defying Turkey and provoking war in spite of their warnings. Germany proposed a blockade of the Piræus, but to this Great Britain and Italy refused to give their consent before the question of the future of Crete was settled. France, too, wished to exhaust all means of conciliation before consenting to extreme measures. Austria supported the German proposition. Russia was willing to bring about the forcible expulsion of the Greek flotilla from Cretan waters, the disarmament of the Greek troops in Crete, and the blockade of the whole coast of Greece if the Hellenic Government persisted in its defiant attitude. The powers were agreed that if Greece went to war with Turkey she would be left to fight her battles alone. Lord Salisbury notified the European cabinets that Great Britain would never consent to any plan that contemplated the return of Crete to any form of Turkish control. The German Government was equally firm in refusing to consider any settlement of the Cretan question that did not first compel the evacuation of the island by Greece. The British and Italian premiers recommended that the powers should agree to grant autonomy to Crete upon lines similar to those upon which autonomy was given to the island of Samos, the *status quo* to be preserved meanwhile. The French Government agreed to the British proposal, which Germany did not absolutely condemn, though stipulating for the maintenance of the Sultan's supremacy. Premier Delyannis, who said that he had sought in vain to discover the reason for the action of the powers in opposing the Cretan operations of Greece, declared to the Boule, on Feb. 18, that Greece would persist in her course of action in Crete. The German Emperor declared to the French ambassador in Berlin on Feb. 14 that Europe could not allow Crete to kindle a fire in Macedonia and provoke a European war, and that the only effective remedy was to blockade the Piræus; that, having prevented Turkey from sending troops to Crete, it would be treacherous for the powers to allow the Greeks to take the island. Austria was willing to accept the proposal, but Lord Salisbury considered it premature, and M.

Ilanotaux could not decide between it and the English proposal that Crete should be made a privileged province. Shortly afterward Germany isolated herself entirely from the rest of the powers, taking no part in subsequent discussions, sending tardily a war vessel to Crete, but abstaining from all part in the military occupation.

The commanders of the foreign war ships dispatched officers to the insurgent camp at Akrotiri and to the Greek commander to inform them that the powers had taken measures to prevent Greek interference. The insurgent leader replied that he would for the present maintain his position, and Col. Vassos returned answer that he had orders from his Government to occupy Crete and would do so. At the same time an *ultimatum* was addressed to the Greek commodore, whose fleet was drawn up outside of the squadron of foreign war ships that formed a cordon around the harbor. Great Britain had 10 war ships—4 battle ships, 2 gunboats, and 4 torpedo-boat destroyers—off Canea, besides a battle ship and 3 cruisers at other points on the coast. Italy was represented by 4 battle ships, a cruiser, and a gunboat; Russia by 3 battle ships and a cruiser; France by a battle ship and 2 cruisers; Austria by a battle ship; and Germany had a first-class battle ship on the way. Vice-Admiral Canevaro, of the Italian navy, as senior admiral of the united fleet, was chosen commander of the combined naval forces.

Two of the Greek ships went to Retimo, where the Mohammedans refused to allow Christian refugees to leave, wishing to detain them as hostages for the safety of the peasants besieged in the district of Amari. The Christians had now risen all over the island, and the Turkish garrisons held no territory except the coast towns and the isolated posts in the interior where they were invested by the insurgents. The station at Suda was abandoned. At Kiamo Kasteli the Mohammedan inhabitants were besieged in their houses after a fight in the streets on Feb. 7, in which 22 of them were killed. In a Turkish blockhouse in the Alikianu district the garrison were reduced to the last extremity. In the neighborhood of Sitia several villages were surrounded by insurgents, and the town itself was besieged. Subsequently 13 villages were destroyed by fire and many Moslems slain. A detachment of troops from Heraklion was embarked for the succor of this place, but at the request of the consular body it was recalled. At Heraklion the Mohammedans broke open and pillaged Christian houses. Cretan and foreign refugees were fired upon when they attempted to escape by sea. In this district 300 Mohammedans had been slain by Christians. In the eastern part of the island a body of 1,500 insurgents blockaded the Mohammedan villages. The Christian Governor General wished to resign, but the Porte was desirous of having him remain in his place. Nevertheless he left Crete on Feb. 14, having previously taken refuge on a foreign war ship.

Parties of Greek volunteers, including officers of the army, were surreptitiously landed with arms and ammunition from the Greek vessels about 10 miles from Canea. The French minister at Athens presented to M. Delyannis the formal protest of the powers against the action that Greece had taken in Crete, and intimated that they would take decisive steps to prevent further hostile proceedings. The ministers unanimously advised the recall of the Greek flotilla, promising that the powers would take into consideration the claims of Greece in Crete and the question of a union of the island with the Hellenic kingdom.

Bombardment of Canea.—The insurgents occupying the hills back of Canea on Feb. 19 sent a

warning of their intention to attack the town from Akrotiri. To this notice Admiral Canevaro sent a reply giving the insurgent leaders to understand that the foreign war ships would intervene at the first sign of an attack. In spite of the warnings of the foreign admirals, Col. Vassos and his soldiers took the offensive and attacked the Turkish outposts at Platania, which were driven back toward Canea. One of the Greek vessels opened fire on the Turkish fort, but desisted when fired upon by a ship of the foreign fleet. On Feb. 19 the Greek ships were permitted to land large supplies of provisions, both for the regular force at Platania and for the insurgents at Akrotiri, the members of both forces being in sore need of supplies. The Turkish garrison at Bukolies, with the Mussulman families that had taken refuge there, were attacked on Feb. 19 by Greek troops with artillery. The fort was demolished before the garrison of 450 men abandoned it and retreated to Alikiano, where they were sharply attacked and surrounded once more. Mussulmans in Canea, although the Turkish authorities were forbidden to distribute arms, received Martini rifles and went out to relieve them. A column of 500 Turkish soldiers and 500 irregulars was held in check by 200 Cretans in a defile until a battalion of infantry and a company of rifles sent by Col. Vassos came up. The Turks made a desperate defense, but were defeated by the Greek troops and pursued almost to Canea, losing 50 killed. In these operations the Greeks gained possession of the castles of Livadia, Monodendrion, Anempali, and Aya. Their losses were 4 officers, 18 soldiers, and 100 Cretan irregulars.

The Christian insurgents having advanced against the town in the face of solemn warnings, the admirals of the foreign fleet, on Feb. 20, visited Col. Vassos and summoned the commander of the Greek war ship "Navarchos Miaulis" in order to repeat their warning that if the Greek troops or the insurgents approached to attack Canea the fleet would shell them. The Greek naval commander would not accept any message for the insurgents. Col. Vassos replied that he did not intend to attack Canea or the flags of the powers. Notwithstanding this assurance the insurgents, who had announced their intention of occupying the heights over Halepa and warned the foreign consuls to leave that village, advanced on the position. The first fighting took place on the hills east of the town on Feb. 21, where the Cretan Christians attacked the Mussulmans and were driving them out of their positions. The Christians raised the Greek flag on the crest of a hill in plain view of the ships and began firing upon the Turkish fort and into the town. The admiral of the united fleet then signaled the vessels at that end of the line, which were three English ships, and one vessel each from the German, Italian, and Russian squadrons, and they promptly opened fire on the Cretan position. After the British ships had fired 40 shells and the others about 30 the insurgents, whose position had become untenable, hauled down the Greek flag. The firing, which had lasted ten minutes, then immediately ceased at a signal from Admiral Canevaro. Thereupon the Greek flag was again hoisted, and the Cretans once more showed themselves in full force on the rocks, but were more busy removing their wounded than in replying to the fire of the Mussulmans, who now, emboldened and encouraged by the assistance of the fleet, began a lively fusillade on the Cretan position. During the bombardment the Greek dispatch boat "Pemeios" opened fire upon a Turkish frigate, which returned the shots, but when the fort fired at the Greek vessel, using blank cartridges only, the latter withdrew. The Turkish losses in the various engagements amounted to 500 killed, wounded,

and missing, and 104 prisoners. The insurgent forces that attacked Canea were commanded by Greek officers, and had regular Greek troops scattered in their ranks. They advanced by a forced march in a soldierlike fashion, using all the strategy necessary in that rugged country to guard against surprises. The Turks, seeing that the fleets did not move, sent a part of their small force to meet the insurgents after the latter had fired upon the outposts and driven them in. In the skirmishing of the outposts they showed to less advantage than the insurgents. The attack in force was not expected to take place till the following day, but the naval commanders determined to act at once, according to their threat. The war ships, extended in a long line, fired methodically one after the other. The insurgents, who had taken the necessary precautions, retired rapidly into the defiles and ravines as soon as the bombardment began, leaving nothing in sight but their abandoned camps, at which the gunners of the different fleets, vying with each other, made excellent practice, firing at the positions rather than at masses of men, so that all the casualties occurred in the first two or three cannon shots, when the insurgents, taken by surprise, had not yet made up their mind that the bombardment was serious. About 150 men were hit by the bursting shells. A few of these fell in the town of Canea, making wreck of whole streets. The French and Italian vessels were at the farther end of the line, so that the order to cease firing was given before the turn came to them to fire. The Greek official report of the action admitted that the insurgents took possession of the heights above Halepa, but asserted that firing then began from the Turkish bastions and outposts and from the Turkish man-of-war in Suda Bay, and that when the insurgents replied the foreign fleet opened fire and did not cease till more than 100 shells had been thrown into the insurgent positions.

The foreign admirals on Feb. 25 issued a proclamation extending the zone under the protection of the powers to the plain about Canea and to Suda, and warning both Christians and Mohammedans that any acts of hostility within this area would be suppressed by force. The foreign war ships no longer permitted Greek expeditions to land in Crete, and even stopped the victualing of the troops and insurgents from Greece. No communications were allowed between the Greek war vessels and Col. Vassos. The Christians at Selino were finally compelled to permit the departure of the besieged Moslems and their families, and the foreign war ships in the harbor took the fugitives on board. In like manner an Italian cruiser compelled under threat of bombardment the Moslems of Hierapetra to release the Christians that they held as hostages to save their town from being attacked by the insurgents. In Canea the Konak, or Government palace, was burned by incendiaries on Feb. 25.

On Feb. 26 serious fighting took place at Vrisina, near Retimo, where the Moslems were forced to retreat, leaving the insurgents masters of the field. There was a sharp fight at Malaxa, which the Turks from Canea succeeded in revictualing with a loss of 11 killed and 10 wounded. An insurgent cordon of 15,000 men surrounded Canea an hour distant. The chiefs assured the captains of the war ships that they would abstain from attacking the city for the present. Another force, 5,000 strong, threatened Hierapetra, against which Col. Korakas led an attack with three guns. Fresh fighting occurred outside of Heraklion, where the Mohammedans were repelled by the Christians. The investment by Korakas of this town, now containing 25,000 persons, counting the regular Mohammedan population and the refugees, was complete, and large numbers of refugees

were already dying of starvation. Repeated sorties having proved futile, the officials implored the assistance of the foreign war ships to raise the siege. Tewfik Pasha, the new military Governor of the island, arrived in Canea on Feb. 28. The international fleet took measures, in the first place, to relieve as soon as possible the beleaguered Mussulman populations in the interior, and then to prevent or to localize the armed conflicts between the Turkish Bashi-bazouks and the Cretan insurgents. The insurgent leaders had little or no control over a large number of their followers, whose object was plunder, and who were encouraged in their depredations by the Greek agitators scattered all over the country. A large proportion of the insurgent forces consisted of such marauders, bent on exterminating the Moslem Cretans and appropriating their property, over whom no restraining power could be exercised by the Cretan leaders, while the Greeks had no wish to restrain them. The power of the Turkish authorities over the Bashi-bazouks was much greater, and the officials were held accountable for the misdeeds of the latter, while the Greeks disclaimed responsibility for the acts of the insurgents altogether, and the insurgent chiefs stated their inability to control the rougher part of their forces. Every man and boy on the island was provided with arms. The Greek regulars assisted and directed the insurgents in all their military operations, both with advice and leadership. The admirals insisted that nothing could be accomplished toward restoring order and tranquillity on the island until the Greek forces were withdrawn. While they remained it was impossible to get the self-government offered to the Cretans by the powers to the knowledge of the native inhabitants of the island. The admirals on Feb. 28 issued a proclamation declaring their purpose to oppose any hostile acts by Greeks, Turks, or Cretans by having war ships at any point where disturbances might occur. War ships were sent to relieve the beleaguered garrisons at Selino and to bring off the refugees. The insurgents in March captured Fort Stavaros, commanding the village of Cadano, or Kandamos. The garrison and refugees numbered 3,700 souls, and these would all have been massacred had not Col. Vassos induced the insurgents to allow their departure.

Ultimatum of the Powers.—The admirals informed their respective governments that anarchy was increasing, and that they could not answer for the avoidance of conflicts unless they were authorized to prevent the landing of all supplies, and unless the powers obtained from Greece the recall of her troops and fleet. Col. Vassos withdrew his troops from Platania and marched into the interior. The Boule, on Feb. 23, passed the following resolution: "The Greek Chamber, interpreting Panhellenic sentiment and opinion, expresses, in behalf of the sacred rights of freedom and Hellenism in Crete, its deep grief at the unfortunate occurrence of the bombardment of the valiant champions of liberty in Crete by the combined fleet of Christian and civilized Europe." The King of Greece addressed a message to the army saying that in the present critical circumstances he relied on the aid of the nation, the officers, and the army in general, and on no foreign power. On the same day Capt. Tritakis left the Piræus with another band of volunteers for Crete. A force of 600 Greek troops with guns and ammunition had already landed at Chersonesus, in the province of Candia. M. Delyannis made a statement in the Chamber to the effect that, whether the Porte were prevented by the powers from sending re-enforcements or persisted in sending them, the Greek Government had fully decided on the measures to be taken, and would execute them promptly and decisively. On the departure

of the torpedo boats the Greek Government addressed a note to the powers declaring that Greece could not remain a mere spectator of events in Crete, not only from a sense of her duty toward the Christian population of the island, but also by reason of the sentiments she entertains for people of the same race and religion; nor could she remain indifferent when Crete demanded a union with the mother country. The Greek Chamber voted money for the relief of the Cretan refugees, of whom 8,000 had already arrived at the Piræus, many of them in a destitute condition. The English and German cabinets, the two most divergent in their views, consulted as to a collective note conveying an *ultimatum* to Greece and Turkey. The British Government, on Feb. 25, telegraphed to all the capitals a declaration of the policy it intended to pursue, which was that the establishment of administrative autonomy in Crete was necessary to the termination of the international occupation of the island; that, subject to such system of autonomy, Crete ought to remain a portion of the Turkish Empire; that the governments of Greece and Turkey ought to be informed of this resolution; and that, if either Turkey or Greece persisted in a refusal when required to withdraw her naval and military forces, the powers should impose their decision by force. The Greek forces were to be required to withdraw at once, and the Turkish forces as soon as the new organization got into working order. The settlement now outlined by Lord Salisbury was a plan that had been propounded some time before by Count Muravieff, the new Russian Minister of Foreign Affairs, to which Great Britain was the last to give adhesion, Germany having agreed to it at once without reserve, and Austria and France having been the next to accept the proposal. King Georgios and his Cabinet proclaimed their resolve to maintain their present policy, declaring that it was impossible for them to recall their troops from Crete. The popular feeling in Greece was so strong in favor of resisting at all costs the demand of the powers for the evacuation of Crete that the King could not run counter to it without losing his throne. The Greek populace looked upon Crete as already Greek territory, and would not hear of withdrawing the army in Crete, deeming that, if the powers were even unanimously in earnest in making such a demand, Greece had the means of bringing about a general conflagration by making war on the Macedonian frontier, which would result in the advancement of the Hellenic idea and the enlargement of the area and power of the kingdom. The insurgents at Akrotiri sent an answer to the admirals' note, declaring that union with Greece was the only solution that would give definite peace to the island, that autonomy would satisfy neither side, and that Turkish rule was now utterly out of the question. They also made an appeal to the Christian nations of Europe, protesting against the degrading spectacle of Christian fleets endeavoring to suppress the struggle of a Christian nation for liberty when the whole matter could be settled in less than a week by the Greek forces.

The *ultimatum* of the concert of Europe was presented to Greece on March 2 in the following identical note to M. Skouzes from the Austro-Hungarian, English, French, German, Italian, and Russian representatives:

"I have been instructed by my Government to inform your Excellency that the great powers have agreed upon a common course of action with the object of putting an end to a situation which it did not rest with them to prevent, but the prolongation of which would be calculated to compromise seriously the peace of Europe.

"With this view the governments of Germany, Austria-Hungary, France, Great Britain, Italy, and

Russia have come to an agreement on the two following points:

"1. Crete can in no case, in the present circumstances, be annexed to Greece.

"2. In view of the delays caused by Turkey in the application of the reforms agreed upon in concert with the powers, which now make it impossible to adapt those reforms to a changed condition of affairs, the powers are resolved, while maintaining the integrity of the Ottoman Empire, to endow Crete with an absolutely effective autonomous administration, intended to secure to it a separate Government, under the high suzerainty of the Sultan.

"The cabinets are convinced that these views can only be realized by the withdrawal of the Greek ships and troops now in the waters and on the territory of the island which is occupied by the powers. We accordingly confidently expect this decision from the wisdom of his Majesty's Government, which can not wish to persist in a course opposed to the decision of the powers, who are determined to carry out an early pacification, which is as necessary for Crete as it is for the maintenance of general peace.

"I will not, however, conceal from your Excellency that I am instructed to warn you that, in case of a refusal of the royal Government, the great powers have arrived at the irrevocable decision not to shrink from any measure of compulsion if, on the expiration of six days, the recall of the Greek ships and troops from Crete has not been effected."

A collective note of the same date presented to the Porte announced the decision against Greek annexation and in favor of an autonomous administration, or *régime*, at which the great powers had arrived, stating that, animated by the desire to assure the maintenance of peace and to see the integrity of the Ottoman Empire respected, they had sought for the means of ending the disorders that have led to their armed intervention in Crete, as well as of putting an end to the presence of the Greek forces in the island, but now recognized that, in consequence of the delay in applying them, the reforms contemplated in the arrangement of Aug. 25, 1896, no longer correspond to the requirements of the situation. A further collective note, dated March 5, notified the Porte that, as the autonomy to be established in Crete implied the progressive reduction of the Ottoman forces, it would be necessary as soon as the island was evacuated by the Hellenic troops to take measures for the concentration of the imperial troops in the fortified places occupied by European detachments.

A mutiny of the Turkish gendarmes who were about to be disbanded occurred at Canea on March 2. The men refused to give up their arms unless they received fifteen months' pay due them, and when Major Bor, summoning to his aid a guard of marines, commanded them to lay down their arms and proceeded to take their weapons from them, the men, of whom there were 45, fired several shots, killing Suleiman Bey, a Turkish officer in Major Bor's suite. When the Russian detachment of marines fired, killing 4 of the mutineers, they surrendered.

When the people of Athens knew that the *ultimatum* of the powers had been presented, a crowd of 30,000 gathered about the palace, waving flags and shouting for war. Premier Delyannis had the day before denounced the bombardment of the Christians as savage, impious, and unjust, and declared that the blockade of Crete was contrary to international law, and that Greek representatives abroad had protested against it. "We are a small nation," he said, "and can not prevent such acts, but we protest against them with the weight of a great nation, for we know that all great peoples are with us." The first act of the Greek Government after receiving the collective note was to call

out 4 more classes of reserves, making 10 in all, each of 12,000 men. There were 60,000 troops on the Macedonian frontier. Arms, ammunition, provisions, and military stores were conveyed with all speed to Thessaly, where a concentration of troops was proceeding. The Porte replied to the first collective note of the powers on March 5, acknowledging the solicitude of the powers for the integrity of the Ottoman Empire, and declaring the Porte's readiness to adopt their recommendation of Cretan autonomy, reserving for the present the consideration of details. The Greek reply to the *ultimatum*, delivered on March 8, when the time expired, was as follows:

"In view of the extraordinary gravity of the results that will follow, his Majesty's Government considers it to be its duty to submit to the powers its opinion of the measures decided upon, an opinion which is the result of long experience and a profound acquaintance with the situation in Crete.

"Impressed by the sentiments that animate the powers, and their solicitude for general peace, the Greek Government will not fail in this duty, since Greece also ardently desires to contribute to the maintenance of peace, and to save from utter ruin the population of an island put to so severe a trial and so often decimated.

"We believe that the new *régime* of autonomy adopted by the powers unhappily can not correspond to the noble intentions that inspired it, and that it will suffer the fate of the different administrative systems which at various times and without success have been tried in Crete.

"This is not the first time that Crete finds herself in a state of insurrection. In recent times on more than six occasions the horrors of anarchy have shaken and imperiled her existence.

"If, then, the new *régime* with which it is proposed to endow her is not calculated to re-establish order in a definitive manner, the Greek Government can not doubt the impossibility of putting an end by means of it to the present state of revolution. Anarchy will continue to ravage the country with fire and sword in its hands. Blind fanaticism will continue its destructive work of exterminating a people which assuredly do not deserve such a fate.

"Before such a prospect our responsibility would be enormous if we did not most earnestly urge the powers not to insist upon the scheme of autonomy proposed, but rather to restore to Crete what she already had at the time of the enfranchisement of the other provinces which form the Kingdom of Greece, and to lead her back to Greece, to which she had belonged since Capodistrias was President.

"In the presence of the recent scenes of massacre, pillage, and conflagration in Canea, in the presence of the frightful anguish which the inhabitants of Crete have suffered, exposed, as they have been, to massacre by the boundless fury of the Mussulman population, who prevented the departure of Christian families for Greece, which has always been a providential refuge for all these miserable beings, our whole country was torn with remorse for the responsibility it assumed last year in inducing the Cretans to lay down their arms. The misfortunes that resulted forbid us to undertake once more such a task, and if we had attempted it our voice would certainly have been feeble. Its echo would not have reached the Cretan people.

"It being the case, therefore, that a new *régime* of autonomy could not fulfill the noble aim of the powers, it is obvious what would be the situation of the unhappy island from to-day until the establishment of this *régime*.

"If the powers believe it to be their duty to persevere in their resolutions, with the above views, and in the name of humanity, as well as in the in-

terest of the island, the pacification of which is the unique object of the solicitude of the powers, we do not hesitate to appeal to them on the subject of the other measures—namely, the recall of our military forces. Indeed, if, because of the presence of the united squadrons in Cretan waters and in the conviction that these squadrons will not permit Turkish troops to debark on the island, the presence also of all the ships of the Greek fleet off Crete is judged to be unnecessary, the presence of the Greek army on the island is nevertheless shown to be desirable alike from sentiments of humanity and in the interests of the definitive re-establishment of order.

“Our duty specially forbids us to abandon the Cretan people to the mercy of Mussulman fanaticism and the Turkish army, which at all times has deliberately and intentionally participated in the aggressive acts of the populace against the Christians. Above all, if our troops on the island, who are worthy of all the confidence of the powers, had received a mandate to pacify the country, their desires and intentions would have received promptly the most perfect satisfaction. It would be then, after the re-establishment of order, that it would be possible to learn the desires, freely expressed, of the Cretan people for a decision as to their fate.

“The sorrows which have recurred regularly in Crete for many decades past not only do not occur without profoundly agitating the Hellenic people, but they also interrupt social activity, and gravely disturb the economy and finances of the state. Even if we admit that it would be possible to forget for an instant that we share the common religion of the Cretan people, that we are of the same race and bound by ties of blood, we could not in silence allow the powers to assume that the Greek state is able any longer to resist such shocks.

“For this reason we appeal to the generous sentiments animating the powers, and beg them to permit the Cretan people themselves to declare how they desire to be governed.”

The Greek envoys abroad were instructed to inform the European governments that Greece was prepared to recognize the temporary suzerainty of the Sultan, to withdraw her fleet completely, and to place the Greek army in command of any military representative of the powers, senior in rank to Col. Vassos, for the purpose of restoring order in the island, if the powers would agree to leave ultimately the decision as to the fate of Crete in the hands of the people.

Blockade of the Coast.—While England, France, and Italy were disposed to regard the Greek note as leaving an opening for further discussion, the governments of the three emperors insisted on applying coercive measures at once. The attitude of the Greek Government made it certain that a blockade of the Piræus would precipitate rather than avert hostilities on the Macedonian frontier. The powers decided to restrict their action for the present to blockading the coast of Crete, and landing troops for the purpose of pacifying the island and preparing the way for the establishment of autonomous institutions. The blockade was announced to begin on March 21. Before that date supplies were hurried in to the Greek troops on the island, which took up position in Sphakia. Notice was given to Greece to withdraw her war ships. A Greek schooner with munitions of war and volunteers on board was sunk by an Austrian gunboat before the blockade began. The foreign admirals issued a proclamation announcing the conditions under which autonomy would be granted, promising the adoption of measures to regulate the workings of complete autonomy, and guaranteeing to every person, of whatever race

or religion, perfect liberty and security of property. They appealed to both parties to lay down their arms, saying that the powers counted on the co-operation of Christians and Moslems alike to aid in the task that promised order and prosperity.

Relief of the Mohammedan Garrisons.—The foreign admirals decided to proclaim the protection of the districts of Selino and Hierapetra. The flags of the powers were hoisted in Selino, but there was danger that the Turkish garrison and the Mohammedan inhabitants would be massacred. The Christians were reported to be exterminating Moslems wherever they went. At Heraklion 60 Moslems were killed in a fight near the gates of the town. The foreign commanders expelled a number of Greek subjects found in the districts under their control, and against this the Greek Government protested. Col. Vassos agreed to rescue Mussulmans at Selino and other places, if they laid down their arms and surrendered as prisoners to be taken to Greece on Greek war ships. The Greek vice-consul was willing to go to Candano to intercede for the captives, if allowed to proceed thither in a Greek war ship. The foreign ships landed 500 men at Selino on March 6, after having negotiated for a long time with the Greek Admiral Reineck, Col. Vassos, and the Greek vice-consul, and only received evasive answers to their demands, while the Greek admiral protested against the obstacles placed by Europe in the way of his action, and Col. Vassos replied that he had no authority over the insurgents. On March 6 the Greek fleet, after receiving re-enforcements, sailed away from Canea. The siege of Candano lasted thirty-five days, during half of which time the place was under constant fire. The place was relieved by a force of 655 European marines with 4 guns, who protected the rescued people on the march to Selino, but was not large enough to prevent many of them from being attacked and plundered by the horde of 7,000 Cretan insurgents surrounding the refugees. The town had surrendered before the arrival of the foreign detachment, and the Moslems narrowly escaped massacre, which was averted by the efforts of Col. Vassos and some of the insurgent leaders. An armistice secured by the intervention of the consuls was declared ended by the insurgents on March 8, and an attack was made on Heraklion. Fighting was renewed on March 9 also in the vicinity of Canea, where the Turkish troops and war ships were allowed to fire upon the insurgents. On the same date the leader Korakas attacked Hierapetra. The Greek vice-consul, Baraklis, was expelled from the island by order of Admiral Canevaro, and this act incensed the Christians. The Selino district was at last cleared of Moslems, of whom 600 soldiers and 2,500 natives were brought away under the supervision of the British consul, Sir Alfred Biliotti. The Mohammedans of Sarakina, which was forced to surrender before Candano, were actually slaughtered by the insurgent Cretans. Kisamo contained a Turkish garrison, which still held out, though the town was demolished by a bombardment of the insurgents. Conferences between the admirals of the foreign fleets and chiefs of the insurgents revealed the fact that the Greek admiral never had transmitted to the insurgents the message confided to him offering autonomy to the island. Nevertheless, the insurgent leaders declared that only union with Greece would satisfy them.

In the blockhouse at Malaxa, an hour's march from Canea, the Turkish garrison still held out. Provisions had been brought on March 7 by a party of 600 men from Canea, which was divided on the return march and the smaller division driven back into Malaxa with fearful loss. On March 24 the insurgents, who had made no impression on the

stone fort with their rifles, battered down its walls with artillery furnished by Col. Vassos and assisted by his officers. The Turks were compelled to evacuate the position, and they would have been annihilated had not the Greek officers interposed to prevent a massacre. When the Greek artillery fired on Malaxa the foreign war ships shelled the insurgents. In the fighting the Turks lost 60 and the insurgents 200 men. The town of Malaxa was afterward occupied by the international forces. Malaxa was one of the fortified places that the foreign admirals had declared in a proclamation to be needed to maintain security and order, and hence must not be fired on; otherwise they would use force against the attackers. The other forts included in the injunction were Kisamo, Suda, Retimo, Candia, and Hierapetra. Several Greek vessels bringing volunteers and munitions from Greece were seized when they attempted to run the blockade. The signatory powers agreed to land 600 soldiers each to restore order in Crete. Notwithstanding the presence of their troops, warfare, rapine, and pillage went on in every direction. The international forces were powerless to preserve order even in the coast towns. The insurgents captured all the positions surrounding Canea except Butsunaria, which was guarded by international troops, lest they cut off the water supply. Christian and Mohammedan refugees were starving in the mountains. Before the end of March the admirals called for, and the powers decided to send, each a further battalion of 600 men. The insurgents shut up in the Akrotiri peninsula begged food from the war ships, but it was denied them. When the insurgents attacked Izzedin fort at Suda, on March 28, the Italian war ships fired upon them. Another determined attack was made on March 30; the foreign ironclads bombarded the attacking force, and finally landed troops to occupy the fortress. On the same day there was fighting at Retimo and Heraklion. In a two days' battle at Spinalonga the Turkish garrison met with a heavy loss, and was finally compelled to flee to an island. A vessel bringing ammunition fell into the hands of the insurgents. A British war ship revictualled the forts at Kisamo after shelling the insurgents, who had nearly undermined the fortifications. At Kisamo the war ships fired 80 shells into the camp of the insurgents because the latter fired upon boats that were taking Mohammedan women and children from the fort to the ships.

Withdrawal of the Greek Troops.—The Russian consul had several interviews with the insurgent chiefs, who emphatically refused to accept autonomy. Later the British, Austrian, and Russian admirals met by appointment near Candia a large delegation of insurgents, but their spokesmen were Greeks, who declared that the Cretans would have annexation or death, and wanted to turn out all Turks and Moslems. The Christians had already taken possession of much Moslem property in the country districts, and hoped, under Greek auspices, to acquire the property of the Moslems in the towns also. The foreign occupation at Canea embraced an area of 25 square miles, within which limit food was furnished to all inhabitants in need of it. The area was guarded by 10 companies of Turkish regulars and 8 companies of irregulars, which were re-enforced from the city whenever engaged. The foreign admirals were strongly opposed to the withdrawal of the Turkish troops, of whose behavior they spoke in the highest terms, Admiral Harris praising them as second to no European troops in discipline; for if they were withdrawn, the European troops would have to act as supports for the Bashi-bazouks, liable to be drawn into their skirmishes, and if the latter were also withdrawn then the international

forces would be likely to come into conflict with the insurgents and would have besides to restrain and control the large Moslem population behind them, as well as the disbanded irregulars.

On April 3 a collision occurred between the insurgents at Akrotiri and a party of 400 Bashi-bazouks that had stolen out of Canea, and the latter, only a part of them being armed, lost 50 dead and wounded. On their return they were disarmed by the international troops. The insurgents had received permission to go from Akrotiri into the interior of the island, and the purpose of the Bashi-bazouks, most of whom were refugees from Candano and Selino that had obtained arms surreptitiously, was to block their passage. The same class continued to pillage the environs of Canea. There was little food in the island except in the camp of Col. Vassos, which was provisioned for three months. The Mohammedans on the seacoast suffered more severely than the Christians in the interior. Steamers bound for Crete with provisions for the foreign fleet and the Turkish troops were boarded at the Piræus by armed Cretans and their friends, who threw the cargoes overboard.

When war was begun in Thessaly the Greek Government sent a note to the powers protesting that, inasmuch as Greece and Turkey were at war, a continuance of the blockade was a violation of neutrality. The Governor of the island on April 19 issued a manifesto notifying the Greeks to leave Crete within fifteen days, in accordance with the orders of the Porte banishing all Greeks from Ottoman territory. The environs of Heraklion were in April the scene of almost daily fighting between the small garrison of Turkish troops and 5,000 insurgents, with Greek troops among them. When reverses overtook the Greek army in Thessaly the Hellenic Government would gladly have withdrawn from the Cretan adventure if Col. Vassos and others of the ablest officers of the army who were shut up in Crete could have been at home. In the early part of May Col. Vassos made a request of the foreign admirals that the sea and coast blockade be sufficiently relaxed to enable him to embark his troops safely. This the admirals refused to do. They offered to allow the Greek troops to receive supplies of food, a concession that they had already offered to the insurgents. Soon afterward the Greek Government approached the powers with a view of obtaining their mediation. The representatives of the powers advised the Hellenic Government to withdraw the Greek forces from Crete as an inducement to the powers to offer their mediation. According to this advice the Hellenic Government asked for the free passage of a ship to take the troops back to the Piræus. Col. Vassos had already departed secretly, and others were allowed to leave in small parties before the permission was given formally. The Cretans did not appear dismayed by the loss of Col. Vassos and the Greek volunteers, but continued to attack the Turkish outposts. The international troops, by arrangement with Col. Vassos, had some time before considerably extended their zone of occupation. The six powers made on May 11 the offer of mediation with a view to obtain an armistice and smooth the difficulties existing between Greece and Turkey, imposing the condition that the Hellenic Government should declare that it would proceed to recall its troops from Crete, adhere formally to autonomy for Crete, and accept unreservedly the counsel that the powers should give in the interest of peace. The Greek Government accepted all these conditions. The troops began to leave Crete immediately on three Greek steamers which had been captured during the blockade and were released for the purpose of taking the troops back to Greece. Col. Staikos, the Greek com-

mander, was incredulous, and refused to embark until he received orders direct from Athens. The Cretans were dismayed, and were at first inclined to resist the embarkation of the Greek troops. Their political excitement soon began to die out when they realized the futility of hoping for annexation.

Restoration of Order.—The departure of the Greek forces led to an increase of lawlessness on the part of both Christians and Mussulmans. The admirals were not willing yet to have the Turkish garrison withdrawn, as they had not the force to prevent the massacre that would follow, and moreover did not wish the European troops to come into conflict with the insurgents. In Heraklion there were 1,500 European troops holding the fortifications, while 3,500 Turkish troops formed the military cordon and guarded the 50,000 Mohammedans in the city against the 60,000 armed insurgents who invested the place and added to the sufferings of the half-famished Moslem peasants huddled in the town by frequently cutting off the water supply. Of 107,000 Mohammedans in the island, 67,000 were in receipt of relief from the Sultan.

Many times shots were fired at foreign officers. The insurgents on recommendations from their Greek friends refused to accept autonomy except on condition that the Turkish troops be previously withdrawn. A policy of firm conciliation was demanded by the situation in order to undo the mischief wrought by the intrigues of the Greek patriots. The Greek consul, army officers, and naval officers had fostered the idea of an insurrection in favor of replacing the Turkish by the Greek Government, and the international naval force, by permitting munitions of war to be landed under their eyes and by taking no effective steps to check the actions of Col. Vassos's forces inland, gave countenance to the assertions of the Greek officers that the powers, in spite of protocols and proclamations to the contrary, would suffer the revolution to be consummated. The Cretans, both Christian and Mussulman, unsupplied with any information but what they received through the Greeks, had the evidence of their own eyes as to the presence of the Greek troops, Greek guns, and Greek flags successfully attacking Mussulman positions and sacking, burning, and pillaging the villages of the Mohammedans. Hence the prospects of a peaceful settlement that seemed fair when the international fleets appeared in overwhelming force in the latter part of February, at which time the chief desire of all parties except the Greeks appeared to Admiral Harris to be for peace and good government, soon were lost, and the peace party disappeared in the background. The Christians as a whole had no sentimental desire for Greek rule; they wanted, above all, a government that would maintain law and order among the various factions. With the progress of anarchy and demoralization the Christians and Mohammedan combatants alike grew in love with the excitement of battle without much danger to life and with the pleasures of idleness, so that it would take long years before many of them would care to return to agricultural toil. The Cretan Moslems, who had lost most and had most to lose by revolution, professed themselves ready to accept any form of autonomy or government by the great powers, but not Greek rule, which they declared they would resist to death, if necessary. The rougher element of that party became troublesome after the departure of the Greek troops, the last of which were taken away by Col. Staikos on May 23. There were 35,000 Mohammedan refugees crowded into Heraklion, many of whom, lacking the necessities of life or fodder for their cattle, made raids into neighboring districts, which resulted in conflicts with armed bands of Christians. On May 29 armed

bands of Mohammedans from Heraklion burned the village of Kalivia and killed 14 persons. This raid exasperated the Christians, who had petitioned Col. Chernside, commanding the British and Italian troops in Candia, to restrain the Mohammedans from trespassing beyond the neutral zone established round Candia, which they themselves undertook to respect. They could not be convinced that the Ottoman authorities and the international troops occupying Candia did not connive at the sortie. Some persons who were arrested in connection with the raid were forcibly rescued by their coreligionists of Heraklion, after which the other prisoners were sent to Canea. The active insurgents were still bent on continuing the struggle for union with Greece. A provisional government was proclaimed at Alikianu under the presidency of a prominent chief, Hadji Michali, who said that he had been intrusted by the departing representatives of Greece on their embarkation at Platania with the task of maintaining order and security. He thanked the natives of the province of Kydonia for their orderly and willing submission to Greek authority. The first measures that he proposed to adopt were the enrollment of a strong body for the defense of the positions between Malaxa and Platania and the constitution of a communal police, whose special care would be the protection of the Mohammedan property that had escaped pillage or destruction. He recommended the convocation of a general assembly to consider the situation and adopt such further measures as might be necessary. In a second proclamation he appealed to the Christians to show moderation and discipline by respecting and protecting the property of the Mohammedans and by living at peace with them, declaring that the struggle entered upon by the Cretans was not directed against their Mohammedan brothers, but against an incapable and unworthy government. The proclamations were carefully worded so as to avoid the least reference to the questions of autonomy or annexation. The Cretan committee at Athens again began to dispatch volunteers to Crete. One band was captured with a considerable quantity of arms and ammunition on board a vessel. Vessels bringing back islanders to their homes were permitted to land these, but no munitions. Some of the most influential insurgents who had left the island to fight as volunteers in the Greek army wrote to urge their brother Cretans to submit to the inevitable and accept an autonomous constitution, warning them against the policy of the Cretan committee in Greece, which would prefer that Crete should remain under the Turkish pashas rather than that it should be granted autonomy under international guarantees. While the districts of Canea and Retimo were kept in order by the international forces, disturbances continued to occur at Candia, where the Turkish garrison was powerless in the face of the large Mohammedan population, which was compelled to go outside of the protected zone to obtain pasture for the cattle, and thereby came into constant conflict with the insurgents. A series of raids culminated on June 26 in an attack on the village of Kani Kasteli by 1,000 Bashi-bazouks, who killed more than 25 Christian villagers and returned laden with booty, which was openly sold at auction in the town. The foreign garrison was insufficient to protect Christian houses in the town from plunder by this lawless Mohammedan element. The Ottoman authorities were entirely impotent. The treasury was empty, no taxes having been collected for more than a year. The gendarmerie, who had received no pay for that length of time, were confronted with starvation and threatened to mutiny. In Canea Mohammedans who had taken possession of Christian houses

on being threatened with eviction set those houses on fire. Provisional tribunals composed of Mohammedans and Christians were appointed by the Governor here and at Candia and Retimo. On June 14 Ismail Bey, the acting Governor, issued a proclamation announcing that the international fleet would prevent foreign vessels from landing cargoes on which no customs duties had been paid. This order was not effectively carried out; hence no revenue was obtained from this source. On June 24 the Governor informed the Turkish irregulars at Heraklion that he had no more rations to give them. At the same time the killing of Moslems from ambushes exasperated the latter, and on June 26 they made a raid on the Christians who had taken possession of the Moslem village of Kani Kasteli, where a desperate combat took place. Sharp friction occurred in July between the native Mohammedans and the foreign troops both at Heraklion and at Hierapetra. Col. Sir H. Chernside issued a proclamation forbidding the people of Candia or Heraklion to carry arms, and on July 16 the disarmament was carried into effect, as similar orders had been at Canea and Retimo. On the following day the Christian insurgents attacked the whole front of Turkish outposts, which had recently been doubled in order to check the raids of Bashi-bazouks, who had sanguinary fights with the insurgents in Episcopi and other neighboring villages. In Canea the Mohammedans assumed a truculent demeanor toward Christians. All rights of property in the island were in hopeless confusion. The land and movables of one faction had been treated as lawful spoil by the others. Houses that they had not rifled and burned, olive groves not yet devastated, and crops that were left standing had been quietly appropriated by Christians in the country districts. They had driven off flocks and herds to their own pastures or had seized them with the land from which the owners had been forcibly evicted. In the towns the Mohammedans had in like manner taken possession of desirable residences and shops in good locations.

The admirals determined to extend the zone of military occupation. When columns of European troops marched out into the country, the insurgents fired upon them, saying afterward that it was by mistake. The admirals, disbelieving the excuse, announced that the columns would henceforth take cannon with them and severely repress any attack. The Porte issued a circular to the powers, informing them that, if they could not maintain order, a Turkish army would be dispatched to the island. The admirals and consuls had many weeks before urged their respective governments to send reinforcements to Crete, but their representations had been without effect. After the meeting of the Cretan Assembly the task of preserving order became much easier. The insurgents who had besieged Heraklion and other places dispersed to their homes to attend to the crops. On July 24 Djevad Pasha, former Grand Vizier and once Vali of Crete, arrived to assume command of the imperial troops in the island. This caused an effervescence of excitement among the Mohammedan population, but there was no serious recurrence of violence, the Bashi-bazouks having been disarmed and the desperate characters arrested and deported. The European troops now marched through the country unmolested. The irregular troops in the outposts, composed of Mohammedan Cretans, were replaced by Turkish regulars, who effectually averted disorders. The insurgents promised the admirals not to cut off the water supply of Candia. Some attempt was made to extend the grazing areas. When the Porte proposed to send war ships and troops to Crete the admirals announced that they would not permit the

vessels to enter the Bay of Canea. The proposal to extend the military zone round Candia, which Djevad Pasha urged in order to enable some of the refugees in the city to settle down in their homesteads again among their Christian neighbors and thus make a step toward the restoration of peaceful relations, was accepted by the insurgents on condition that the international troops should form the outer line. Col. Chernside, however, had not enough troops for the purpose, and he found that the Mohammedans were less anxious than they had been to return to their farms, for the crops had already been gathered by Christians. The plan was therefore abandoned. There were in August 2,020 British, 1,412 Italian, 1,400 Russian, 1,250 French, 600 Austrian, and 11 German troops in the island, while a French, an Italian, and a Russian battalion stood in readiness to embark for Crete. The Turkish regular troops consisted of 15 battalions, each numbering from 550 to 600 men.

The Cretan Assembly.—On their departure from Crete, Col. Vassos and the late Consul-General Gennadis, acting as Greek royal commissioner, called upon the Cretans to nominate members to a revolutionary assembly and to elect a provisional government, with the mandate of carrying on the administration and national policy initiated by Greece. The constituencies, however, despairing of union with Greece, instructed their delegates to accept the proffered autonomy and discuss its details, with the proviso that the Turkish troops should be withdrawn. The admirals encouraged the holding of the Assembly and offered to consult with the delegates as a representative body expressing the desires of the Christian population. There was a long struggle over the place of meeting, which was finally decided by the Assembly sitting for the first two weeks in Armeni, a village of Apokorona, the center of the warlike agitation in the west, after which it was to be held among the moderate and pacifically disposed eastern Cretans in the village of Arkhanes. The western districts were very much overrepresented, but their delegations were cut down by the Assembly so as to make the representation of the east and west more nearly equal.

The Christian delegates met at Armeni on July 10, and, assuming the style of the General Insurrectionary Assembly of Cretans, elected Dr. Sphakianaki, President, and Dr. Tsouderous and M. A. Criaris, Vice-Presidents. The delay in assembling, due largely to the neglect of the Cretan question by the powers during the peace negotiations, had given the Athenian committees a chance to resume their influence over the Cretan delegates, many of whom during the long weeks of preliminary negotiations had to depend on the Greeks for the money to pay their board. The delegates were warned by their Greek advisers not to declare for the proffered autonomy, and to insist on the withdrawal of the Turkish troops as a preliminary condition of any negotiations; then, after the last soldier had departed, to ask for union with Greece, and, failing this, to abate their demands gradually to a Greek occupation on the model of Bosnia, next independent autonomy, then autonomy under the suzerainty of the Sultan, under conditions to be decided by a newly elected Assembly, and last the continuance of the *régime*. The annexationist party was not numerous in the Assembly, though resolute: a large section was undecided, and preferred waiting till the conclusion of the Greco-Turkish peace negotiations; while opposed to either policy was a strong autonomist party, willing to accept the settlement offered by the powers on condition of the withdrawal of the Turkish garrison. The annexationists carried the Assembly with them in the beginning and induced it to send an address to the Athens committee and

to adopt Greek insignia, causing the admirals to decline to hold communications with the delegates unless they abandoned their Greek programme. After many of the western delegates had gone to their homes the Assembly was adjourned by the autonomists, to meet again in Arkhanes. Meanwhile some districts voted in favor of autonomy.

The Assembly convened at Arkhanes on July 31, and after recording a protest against the presence of Djavad Pasha in Crete and rejecting a motion to nominate a provisional government, as calculated to perpetuate the insurrection, appointed a committee to draft an administration and judicial organization of the country. The followers of the Ethnike Hetairia afterward gained the upper hand, elected Benizelos president, and nominated a provisional government, consisting of subsidized agents of the Athens committee. This action roused the people of the surrounding districts, whose Deputies returned to the Assembly, and on Aug. 26, by a majority of 60 to 12, adopted a memorandum declaring that the Assembly, acting in behalf of the Christian population, would abide by the decision of the powers, accepted the proffered complete autonomy, and emphasized the fact that no autonomy could be carried out if the Turkish troops remained. M. Benizelos was dismissed from the presidency of the Assembly.

Preparations for Autonomy.—The French Government on June 1 submitted to the powers certain proposals as to the measures to be taken toward the establishment of the new autonomy in Crete. They comprised the enrollment of a foreign gendarmerie, the arrangement of a loan for the expenses of this gendarmerie and of inaugurating the new administration, and the selection of a governor. These proposals had the support of the Russian Government and they were finally accepted by the powers as the basis of the new autonomy. Lord Salisbury, seconded by the Italian Government, expressed in August the view that it would be inexpedient to organize autonomy pending the conclusion of the peace negotiations between Greece and Turkey. M. Droz, of Switzerland, was invited to the post of Governor, for it was decided to have a European Governor; but he declined. It was decided to convoke the General Assembly on the inauguration of autonomy. The withdrawal of the Turkish troops was to take place gradually. The admirals decided on Aug. 12 to institute a military commission to administer justice in a summary manner. Against this the Porte protested as a violation of the sovereign rights of the Sultan. It was decided to maintain the blockade for the present to prevent the landing of volunteers or arms. The Turkish outposts were gradually called in and replaced by European troops. The Cretan representatives having accepted autonomy without making it conditional upon the departure of the Turkish troops, the Russian Government proposed to raise the blockade on Sept. 10, but the other cabinets would not consent. The Turkish gendarmerie were placed under the command of European officers, the powers agreeing to bear the expense of maintaining the force, in consideration of which they received half the customs revenues and the surtax. Suddenly the Porte made a demand that the powers should sanction the appointment of a Christian Turk as Governor with the title of Vali, and that the Turkish troops should be maintained in the chief towns. Outrages were still committed by insurgents in various parts of the island. Near Canea they fired upon Austrian troops on Oct. 3. The Mohammedans were not yet restored to their lands, although the seedtime was passing. The admirals extended indefinitely the delay of two months decreed for the restitution of land and houses. The Mohammedans in the cities,

who for a long time refused to deal with or work for Cretan Christians, and the Christians who had held them besieged and deprived them of food and water, began to fraternize once more: but where there were no European troops or gendarmerie to keep order collisions occurred. The insurgents declared that the Mohammedans were at liberty to return to their homesteads, provided they were not escorted by Turkish troops, but the admirals did not consider it safe until a large and efficient gendarmerie were organized to provide for their security. The Turkish gendarmerie were found to be useless, as they would not arrest their coreligionists. European experts estimated the damage done to their property at 20 to 35 per cent. Col. Schaefer, of the Luxemburg army, was proposed in October as a provisional commissioner for the powers, to assume military direction for the restoration of order, but the Ottoman Government objected, and Germany supported the objection.

CUBA, the long irregular-shaped island lying about 87 miles south of Florida. It is the largest of the West India group, and, with the exception of Puerto Rico, is the last of the Spanish possessions in the New World. [The condition of affairs in Cuba during the present insurrection has been such as to make it next to impossible to obtain accurate information of events there. The articles in this "Cyclopædia" have been compiled from the best available sources, but were necessarily liable to inaccuracy from the very nature of the case. This year we are enabled to present a consistent account, written by a gentleman who has followed the campaigns there for two years, has been in both camps, and has traveled widely through the territory affected by the military operations, and who, moreover, being simply an American citizen in search of information, may be trusted for a disinterested account.—EDITOR.]

Population.—The latest census of Cuba, taken in 1887, gave the total population as 1,631,619. Of these, 950,000 were white creoles, 500,000 were colored, and 160,000 Spaniards, emigrants from Spain. In addition, there were about 50,000 Chinese, imported originally to replace slave labor, which was freed ultimately in 1886. This population was very unevenly distributed in the several provinces, being to each square kilometre as follows: Santiago de Cuba, 7.75; Puerto Principe, 2.10; Santa Clara, 15.34; Matanzas, 30.59; Havana, 52.49; Pinar del Rio, 15.09. To classify this population as white and colored creoles and native Spaniards seems insufficient. It is generally supposed that the Cubans are a mixed race, whereas the greater mass of them are pure whites, and the social lines between white and black are drawn very much as they are in our Southern States. The present insurrection has brought forth a strange and incomprehensible people known as the *pacíficos*. Although little understood by the foreigner, the *pacífico* is rightly named by both his Spanish oppressor and his insurgent brother in the field. He is truly pacific. He represents fully half of the Cuban population, and his submissive character is reflected upon the rest of the Cuban people. It is this submissiveness, more than anything else, that has caused the Spaniards to appear as tyrants in the island of Cuba. The *pacífico* will not oppose, retaliate, or fight. The tax collector may come round with his exorbitant list, but the Cuban peasant has no word of protest. On the contrary, he orders his fattest pig killed and roasted, and not only serves it to the representative of an avaricious Government, but in all probability slips a coin into his hand. The *pacífico* seems incapable of hatred. Peace at any price, is his motto. The economic question is nothing to him, and he cares little whether the mill grinds or

not. A mere patch surrounded by a prickly hedge serves to supply his immediate wants of sweet potatoes and yams. The necessity of work and economy is incomprehensible to him, and his idea of happiness seems to consist in letting things run as smoothly as possible. Although professedly a Roman Catholic, he little understands the religion, and cares less. He is apt to look upon the priest and the *guardia civil* with an equal amount of fear, they both being Spaniards. His only vice besides indolence is his love for cockfighting and a mild form of gambling. He is fond of poetry and song, and, when not too indolent, he may be found composing verses of his own. Next to the Cuban peasantry in numbers comes the negro. The negro has been badly represented in Cuba, and as a real political factor he has counted for much less than is generally supposed. Neither the white creole nor the Spaniard has taken very kindly to him, and he looks on both with suspicion. Although many negroes had obtained their liberty long before the final abolition of slavery, in 1886, they do not seem to have followed the example of the Spanish colonists and taken to the occupation of the rural districts as small farmers; they have preferred to labor in the field for the sugar planter or have looked for employment within the towns and cities. Standing between the peasant and the negro is the mulatto, who usually lives in the towns and follows occupations that require skilled labor—as the making of cigars, shoes, clothes, and carpenter work. The really industrious class of Cuba are the Spanish colonists. They are encouraged to immigrate from Spain under such inducements as exemption from military duty, and they come to Havana usually as apprentices determined to work their way to the front, and for a generation at least they form a small class of hard-working and industrious people. Then follow the intelligent, well-educated Cubans, who are mostly sons of rich families, not so far removed from Spanish ancestry as the peasants usually are. These are the Cubans mostly met with in the United States.

Resources.—The agricultural resources of Cuba, though generally understood to be great, are really astonishing when it is considered how little they have been developed. While tobacco and sugar have been considered the great wealth producers of the island, little attention has been given to the other products of its abundant fertility. Of the 35,000,000 acres composing Cuba, it is estimated that only 2,000,000 ever have been under cultivation. There are 17,000,000 acres of virgin forest and 9,000,000 acres of fertile plains, which have only served as natural pastures. Of Cuba's commercial wealth, \$68,000,000 worth of sugar and \$9,000,000 worth of tobacco have been exported annually. Owing to the profitableness of the sugar industry, when it was practically destroyed in the English West Indies by the emancipation of the slaves vast sums were invested in the Cuban sugar estates, rendering many of them comparable to the abodes of Eastern princes. Extensive tracts of land were mapped out for the planting of the cane, which could be cut year after year without replanting, as is required to be done in Louisiana. In the center of these tracts were constructed the edifices constituting the *ingenio* (as they are termed in Spanish) for the manufacture of the sugar, the guarding of the slave help, and the business offices, as also the residence of the owner. On the larger estates the most elaborate and perfect machinery known for the manufacture of sugar from the raw cane juice was procured, and on many plantations a fortlike edifice forming an angle with the other buildings was constructed, in which were quartered the slave help before its emancipation. This edifice, built in

the form of a hollow square with cell-like apartments opening into the inner court, is termed the *barricon*. Since the abolition of slavery the cells or apartments are let out to the negro and Chinese laborers employed on the plantation. The owner's residence is often little else than a palace surrounded with gardens of tropical plants and fruit trees, and ornamented with marble statuary and fountains. Porcelain-lined baths contributed to the enjoyment of these abodes, and there were few of the luxuries of foreign civilization that did not add their share to the comfort of the wealthy planter. These estates were flourishing in Havana, Matanzas, and Santa Clara provinces at the beginning of the present outbreak, but during the insurrection of 1868-'79 many of those in the extreme east and south of the last-named province were destroyed. In the valley of San Luis there were 40 of these estates, supplying a lucrative commerce with the city of Trinidad and the port of Casilda, the harbor of which was then alive with American ships. Although, after centuries of cultivation, there is no appreciable diminution in the fertility of this valley, only two of its estates are still devoted to the sugar industry, and these two have only been kept from destruction during the present war by the continual presence of Spanish soldiers. The tobacco industry has been confined almost exclusively to the western province of the island known as Pinar del Rio, although its cultivation had been taken up successfully in that portion of Santa Clara bordering the Siguanea mountains.

Coffee was at one time the principal source of Cuba's wealth. In the early part of the present century 91,000,000 pounds of coffee were produced in Cuba in a single year, representing a money value of \$20,000,000. The industry was originally started by the French, who made their escape from the negro revolts and massacres in Santo Domingo in the latter part of the last century. With what they had been able to rescue from their shattered fortunes they established themselves in Cuba, resorting to the mountains, as resembling the spots previously cultivated in coffee by them in the other island. It was then supposed that coffee could be grown only on the mountains, but others found that it would grow as well on the lowlands, and extensive plantations were the result. The French planters were driven from Cuba while the Spanish Cortes was in power, but returned to their possessions when the ancient *régime* was restored. The expulsion of the French settlers has been given as the cause of the decline of the coffee industry, but careful research has revealed the fact that in 1828 plantations of coffee extended within a few miles of Havana westward, beautifully laid out and in a high state of cultivation, where to-day nothing remains but vacant fields. These plantations were owned by Americans and Spaniards, those of the French being chiefly in the mountains. It was estimated that there were then six coffee estates to one of sugar, and the tobacco industry was in its infancy. One plantation of coffee is mentioned as having a million trees, and the writer has found an authentic account of a plantation containing 750,000 trees and 450 slaves in a part of the island where at present there is neither the vestige of a coffee plantation nor even a negro population. The price of coffee had begun to decline in 1828, and it was undoubtedly this decline in price, with the expense of carting over bad roads, which caused it almost to disappear as an article of commerce from the island. At the outbreak of the last insurrection there still remained many plantations in the mountains of Santiago de Cuba and Trinidad, but these were destroyed during the ten years of war that followed.



VIEW OF HAVANA, FROM CASABLANCA.



ADMINISTRATOR'S HOUSE ON PLANTATION, CARMEN DEL CRESPO.

But little attention has apparently been given by the Spanish Government to the source of wealth in Cuba's 9,000,000 acres of natural pasture lands. Spain's political economy never has consisted so much in a direct land tax as in a tax upon industries and commerce, consequently the ranchman, or landed proprietor, may be the owner of extensive pastures over which roam countless heads of cattle, and yet his wealth not be considered by the Government until he negotiates his stock in the market. During the occupation of Pinar del Rio by the insurgents under Maceo, in the present insurrection, it was a strange oversight on the part of the authorities that in attempting to starve the rebels out of that province they did not take into consideration the fact that many heads of cattle roamed over the plains and the forest-covered hills and valleys were alive with hogs, which furnished the insurgent invaders with an abundance of food. The pasture lands north of Trinidad are so well adapted to the raising of horses that it was formerly a common phrase to say that even the beggars of Trinidad rode horsback. Yet one may search the Government records and find no mention of this source of wealth. In the vicinity of Sancti Spiritus, extending eastward to the province of Santiago, are extensive prairies which furnish grazing for great herds of cattle. Some of them are without natural water supply, but they have been provided with enormous wells at intervals. These sometimes reach a depth of 300 feet, and the water is drawn by a *noria*, a device employed by the Moors when they occupied Spain. This consists of a large wooden wheel made to revolve by animal power, over which passes an endless belt, to which buckets are fastened. The cattle ranges extend far across that part of Cuba termed Camaguey to Santiago province, which is mountainous and covered with dense forests. As an illustration of the internal wealth of Cuba may be cited a typical peasant's home and surroundings, visited in the interior of the island during the present insurrection. The family consisted of a mother and her numerous offspring and her invalid husband. She was de-

pendent almost entirely upon the labor of her only grown son for subsistence, which was obtained from the land, scarcely more than an acre of which was under cultivation. Her possession consisted of 12 *caballerias* of land, and it supplied her with all the necessities of life except clothing and salt. Her products as enumerated at the time consisted of coffee, sugar, molasses, beans, rice, honey, wax, sweet potatoes, yams, yuccas, bananas, corn, poultry, pigs, a cow or two, several horses, and tobacco. In cases of emergency salt, or a fair substitute, could be obtained from the royal palm by a peculiar process of boiling, and the only reason for not raising her own cotton and making her own cloth, as was done by the aborigines, is that with the Cuban, cotton spinning and weaving is a lost art. Everything about the place had a slovenly and abandoned look. The children were either entirely naked or clothed in tattered garments, but what they lacked in clothing they made up in dirt. The bodies were literally covered with it, and the mother herself was not much neater in appearance. A huge wooden mortar, merely a section of a hollowed log, served as a mill in which to clean rice, grind coffee, thrash beans, etc. Cowhides were in use for drying coffee and beans and for making lariats. Receptacles made of the stem of the royal palm served for holding almost anything, from the morning's milk to the boiled dinner, and sections of the wild bamboo served in lieu of buckets to bring water from the river. Even the cups and saucers and spoons were furnished by a neighboring tree, whose gourdlike fruit was easily prepared in various shapes for this purpose. The pots were almost the only things seen in use that were not a product of the immediate vicinity. Even the large mill for the grinding of cane was constructed of timbers obtained in the neighboring woods.

Cuba produces a great variety of fruits and honeys. Oranges, pineapples, and bananas grow to perfection, almost without any attention, and their varieties are not surpassed by those growing in any other part of the world. There are many other delicious fruits which have not yet found their way

into the Northern markets and are not known in the United States. The native woods of the island have been exploited to some extent. It is said that the 17,000,000 acres of forest lands furnish 40 varieties of fine cabinet woods, among them mahogany and cedar. The mineral resources are imperfectly known. Valuable iron mines have been discovered and worked profitably, the ore being exceedingly rich and of a superior quality. Mines have been worked by two American companies, the ore being loaded directly from the mines into vessels and taken to the United States, where the metal is used in the manufacture of Bessemer steel. Large deposits of manganese ore have also been discovered, the ore yielding in some instances 58 per cent. of metal of a superior quality. About 12 miles from Santiago there is a range of mountains known as the Sierra del Cobre, in which are large deposits of copper. One mine was worked by an English company with great profit for many years, but other deposits remain untouched. Bituminous-coal deposits in extensive layers have been reported.

Finances.—Until 1868 the finances of the island were exceedingly prosperous. For many years there was an excess of revenue over expenditure. From 1850 to 1860 the Cuban treasury was in such a prosperous state that with only a tax of 2 per cent. on the produce of rural property and of 4 per cent. on the rentals of urban real estate, a small tax on the sale of realty, the stamp tax, and the custom dues, its surplus never fell below \$3,000,000, while it rose in some years to \$5,000,000. This favorable state of affairs ceased after 1860. Filibustering attempts previous to 1868 and the rebellion of 1868-'78 caused a large increase in the estimates for the army and the navy, which previously had been slight. The revenues in consequence of the revolt were much reduced, while the expenses rose to huge proportions. Extraordinary taxes were levied, but they proved insufficient. Loans were obtained, first from the Banco Español of Havana and subsequently from other banks. Treasury notes and bank notes guaranteed by the treasury were issued. The treasury issued bonds guaranteed by the customs dues, and a floating debt for the liquidation of previous expenditures was formed. All these debts were consolidated by the issues of bonds guaranteed by the Cuban treasury to the amount of \$124,000,000 in 1886 and to the amount of \$44,500,000 in 1870. The revenue for the fiscal year 1893-'94 was \$26,492,764, and the expenditure \$26,230,176. The military expenditure was \$8,541,200, and the naval expenditure \$1,097,385; the cost of the civil administration, \$3,663,909. In 1895 the expenses of the war added \$122,500,000 to the debt, not counting \$10,000,000 of arrears of salaries and unpaid obligations. In 1896 the war expenses were \$10,000,000 or more every month. The Government in 1895 and 1896, owing to the civil war, could collect no taxes, and the customs receipts at Havana fell off to one quarter the normal amount. The destruction of sugar estates and tobacco fields took from the laboring class their principal means of support, and deprived the Government of its main sources of revenue for years to come. The sugar crop, which was 1,050,000 tons in 1894, was estimated at less than 200,000 tons in 1896, and the tobacco crop at 50,000 bales instead of the normal amount of 450,000 bales. The total exports were valued at \$60,000,000 in 1895, but in 1896 they were not expected to exceed \$15,000,000. The Government estimates of expenditure for 1896-'97 were \$92,000,000, and of revenue \$30,000,000. The increase of revenue over that even of 1894 was expected to come from a higher tax on imports, although the whole produce of the country would hardly pay for the foreign breadstuffs needed to

feed the starving population huddled in the cities. When merchants and bankers exported all their gold to Spain and the United States and thousands gave up business and returned to Spain, the Spanish Government authorized the Bank of Spain in Havana to emit \$12,000,000 of notes for the payment of current obligations in Cuba, to be guaranteed by a reserve of \$3,000,000 in silver coin deposited by the Government and redeemed in gold. When the merchants refused to take the new currency except at a discount the Captain General issued a decree ordering all persons to accept the bills on a par with gold, and endeavored to enforce it against the retailers until they began to close their shops; against the wholesalers until they emigrated; against the Stock Exchange and against the bankers, including the Bank of Spain, which refused to accept them in payment for gold drafts on Spain, until the banks closed their exchange departments.

The Insurrection.—The Governor General is the highest official representative of the National Government in the island, having as vice-royal patron all the powers inherent in the patronship of the Indies. His power is almost absolute at the best of times, and his rule is that of a military commander. The laws of Spain are liberal, and they do not tend to deprive the native Cubans of any of the privileges enjoyed by her subjects born in the peninsula, but the administration of these laws has always been bad. The Cubans themselves are a peace-loving, gentle race, but the despotic rule of many military chiefs, from the Captain General down, has given them for generations ample ground for complaint.

A few years ago a young man, educated in Spain, but a Cuban by birth, took upon his own shoulders the task of liberating his countrymen. From a student in Seville and a graduate at Madrid he became a political convict at Havana, and at length, finding refuge in the United States, began his work, which has resulted in the present insurrection. Finding no support among the wealthier classes, he addressed himself to the humbler ones. By his power of oratory he readily won the attention of the latter, and knowing how many failures had been due to the lack of proper organization, he strove to organize. With unceasing activity he sought to bring together all the Cubans residing in the United States, Mexico, Central America, and Colombia, for the purpose of accumulating funds and carrying on a well-directed propaganda for the independence of Cuba. The work soon began to bear fruit. Cuban artisans joined in making weekly contributions to a general fund, newspapers were published, and an active preparation was carried on by the Cuban emigrants, inspired and effectively conducted by José Martí, the father of the present insurrection. In the island secret organizations were formed and members were pledged for the cause, with the special object of knowing the leaders and their followers who could be depended upon to support the movement when the time should arrive for it. When Martí thought the time had arrived he issued an order fixing the date of Feb. 24, 1895, for the uprising. In response, several leaders and their few followers took the field in Cuba, but they remained inactive and undecided. The country people refused to join them, and, except in Santiago province, they were soon dispersed by Spanish troops, and those who were not captured surrendered a few days later. For the first few months the success of Martí's plans appeared doubtful, but with the landing of Antonio and José Maceo, followed by that of Gomez and Martí, the aspect of the uprising changed, and Spain, conscious that the rebellion was assuming a serious phase, sent her most famous general, Martínez Campos, with re-

enforcements to quell the uprisings. He debarked on April 16, 1895, at Guantanamo, and took immediate command of military affairs in the island. His plan was to put down the revolt by fair fighting and judicious enterprise. He had the confidence of the Cuban people, and the leaders in the revolt looked upon him as a just man and a fair fighter. His proposition was to find employment for laborers by the building of roads and public works, and to conciliate the people rather than oppress them; but neither his soldiers nor his officers were educated up to his standard, much less the Spanish people, and with the insurgents in the field and the conservative element opposed to him he soon found things going decidedly wrong.

Maceo and Gomez.—Although the country people of Cuba were not much better prepared to fight against tyranny and oppression upon the landing of Maceo and Gomez than they had been upon the capture of Cardenas by Lopez, in 1850, the present leaders had concentrated years of labor and ambition in their plans. If the people would not fight for their liberty, the leaders well knew that they would not oppose the movement, while a certain class could be depended upon to do some fighting; hence the general plan of winning a people's independence without the actual force of arms was conceived. Antonio Maceo was known to be a brave fighter, with the cause of Cuba's freedom at heart; but he was a mulatto, and the Cuban leaders, who were white, knew that his color would give rise to the belief that the insurrection was a negro revolt. Therefore Marti had visited Gomez at his home in Santo Domingo, and had induced him to embark for Cuba, offering him the command of the rebel army.

Maceo, with several of the former insurgent leaders, sailed from Costa Rica and landed near Baracoa. They were immediately attacked by Spanish soldiers. Making their escape, they were attacked again, and driven from place to place, hiding in caves till only Maceo and two or three others of the little expedition of the original 23 were left to find their way to the leaders, who were already forming bands in the mountains of Santiago. With scarcely better success, Marti and Gomez made their way to the interior with 5 companions, where they joined Maceo and the other rebel chiefs. Here they reviewed their situation, and while Maceo, Quintin Bandera, Rabi, and others determined to scour the country for recruits, Gomez was directed to march into Camaguey, the principal theater of his operations during the last insurrection. Marti, after seeing the Dominican chief well on his way, was to return to the sea in order to embark for the United States and there continue his work as revolutionary agent; but he lost his life in a skirmish at the Mouth of Two Rivers. Gomez, referring to his situation, wrote: "From that moment my position became considerably worse. I was without health, without troops, and without arms." Nevertheless he determined to proceed, "sick not only in body, but in soul as well." To increase his despair, he was informed that "the people of Camaguey wanted no war," and to this effect they had formed a junta with the object of coming to meet him and manifesting the decision of the people of the province and obliging him to re-embark, even offering him the means to do so. One morning at day-break the members of his escort refused to continue their march, on the pretext that they had only agreed to carry on the insurrection in the east, where they belonged, and ought not to be taken from their own province. "It cost me trouble," says Gomez, "to reduce them to obedience." Continuing his own account, "three days later a traitor presented himself to the enemy and informed him

of my situation, and again my escort insisted in their proposition not to follow me. In vain their own officer in command interposed his authority; the soldiers refused to obey. Then, indignant, I rebuked them severely, calling them disloyal and bad companions. 'Return to the east,' said I to them; 'I alone will go to Camaguey.' Even more indignant than myself, Gen. Borrero addressed them energetically, in a manner which I had never before witnessed, for he was of a violent temper. Among other things that I remember hearing him say was: 'You are bad Cubans and worse soldiers. You are disgracing yourselves. Gen. Gomez is a foreigner, who has come to help us in this holy war, and you wish to abandon him, sick and persecuted by the enemy. Oh, if that is the way you do, then the whole world can say with reason that you are cowards.' The words of Borrero impressed themselves on the souls of those men, and they agreed to continue, but not without two or three of their number deserting in the night of that same day."

Gomez confessed that, in spite of his confidence in his friends of Camaguey, there were moments when he could not but feel "troubled with the most terrible doubts." But his hopes were revived upon hearing that Gen. Campos had "urged that his march be stopped at all hazards," for, if he entered Camaguey, Spain might consider her cause lost. Gen. Borrero gave this news to their followers, saying that they were saved, for if Gen. Campos laid such importance upon Gomez's entrance into the territory, it must be for a reason favorable to the revolution. On June 5 the Dominican leader and his small force of Orientales crossed the Jobabo river, and later joined the venerable Cisneros, Lope Recio, Dr. Agramonte, and other instigators of the movement.

While Gomez with such indomitable courage was surmounting the difficulties before him, the Maceos, Rabi, Bandera, Tamayo, and others, mostly colored, were recruiting men and ambushing the Spanish troops in the east. Their ambushes were mostly successful, and each encounter renewed their hopes. On July 12 they gave battle to the columns under command of Santocildes and Campos respectively, on their way to Bayamo. Gen. Santocildes was killed, leaving Campos to take command of the shattered columns and get them into Bayamo. This was looked upon as a victory by the insurgents, who now prepared to carry the insurrection farther west. On Nov. 1 they concentrated in the estate Mala Noche, near Holguin, and there formed the army of invasion, with Antonio Maceo chief in command and José Miro chief of staff. This force was mostly negroes, and, according to Miro's report, consisted of 1,700 men. On Nov. 3 they took up their march westward to enter Camaguey, and there join the general in chief, Maximo Gomez. The Dominican, in his account, says that from the very moment that he joined the men who were to form the provisional government, there began a series of triumphs obtained by force of arms, and the revolution gained consistency and strength. His escort of Orientales, chiefly blacks, was re-enforced in Camaguey by white Cubans from the towns, many of them sons of former revolutionists. With this force Gomez successfully attacked the Spaniards at Altigracia, ambushed a Spanish guerrilla, and took El Mulatto and San Geronimo. With the booty captured he loaded the men who had been induced with such difficulty to follow him from the east, and sent them back to their homes. From his new recruits he selected a hundred men disposed to follow him wherever he might direct, and, naming them as his escort, he crossed into the province of Sancti Spiritus.

The Trocha.—During the former insurrection a Spanish engineer conceived the idea of separating that part of the island where the Spanish were in active operation from that part of it where there was no insurrection. For this purpose he proposed the construction of a line between Jucaro, on the south coast, and Moron, on the Junco river, near the north coast. By this line it was proposed to confine the insurrection to the east, where it had begun, and thus prevent its spreading. This line was termed a trocha, which simply signifies a way or path across a country without regard to its topography or other roads, such as is often cut through a forest to designate the limits of a territory or to mark a boundary. The military authorities entered upon the establishment of the line at once, and

immediately began a series of movements with the object of bewildering and tiring the enemy without risking any real engagements. The success of these movements was crowned by the treasonable surrender of the Spanish garrison at Pelayo, with 50 rifles and 23,000 cartridges. For this act the Spanish authorities sentenced Capt. Feijoo, the commanding officer, to life imprisonment in chains.

On the morning of Nov. 29 Antonio Maceo, with a part of his force, simulated an attack upon the trocha near Ciego de Avila, and as the Spaniards concentrated to give battle at this point, the insurgents marched around an unprotected part of the line, and, without losing a man or firing a shot, joined hands that same day with Maximo Gomez and his followers.



A STREET SCENE IN VILLA CLARA.

such stress was laid upon its construction by the Spaniards that it came to be considered as impregnable as the great wall of China. But when numerous rebel chiefs had crossed it and recrossed it, and the old warrior chief Maximo Gomez had crossed it in company with his wife and servants, the military authorities began to wake up to the worthlessness of their trocha. So badly were the plans of the originator carried out that upon his visiting the line he is reported to have exclaimed, "This is neither a trocha nor a military line, but a badly staked way which serves for nothing." Although it was condemned by both Capts.-Gen. Valmaceda and Campos, when the latter returned to the island in 1895 and found that the insurgents, counting upon greater elements than he had supposed, had entered Camaguey, he hastily distributed nearly 50,000 soldiers along the old line between Jucaro and Moron, hoping to keep them from entering the province of Santa Clara. Forts were rapidly constructed, and trees and undergrowth cleared away for 200 yards each side of the railroad track which ran along the line; and thus came into existence for a second time the old trocha as a military line.

The Invasion.—Scarcely did Campos get his boundary line into effective shape before Gomez with his retinue of Camaguey recruits crossed it into the jurisdiction of Sancti Spiritus, where he

In the meantime Gens. Roloff and Sanchez had successfully landed a large expedition of arms, men, and ammunition in the vicinity of Tunas, Sancti Spiritus, and these, joining Maceo and Gomez, constituted then the entire army disposed to invade that part of Cuba, garrisoned by overwhelming odds. According to Miro, Maceo's chief of staff, this entire force numbered scarcely 2,600 men, including servants without arms, soldiers, and officers, which in the eyes of the leaders at that time seems to have been a formidable force. The plan was then adopted to carry the war into the western province at once by dividing this army into small bands. These bands were then to march forward by separate routes, and at every opportunity they were to make a pretense of giving battle to the enemy. By presenting a small skirmish line, they hoped to hold in check any Spanish column which might attack them, while the pack train, with the bulk of the force, could make their retreat, and then by a retrograde movement advance farther into the provinces where there had been no successful insurrection. By continuing such movements as these the insurgents were to avoid any serious encounter with the enemy; but in certain localities farther west they were to concentrate, that the Spaniards, unprepared for them in that locality, might be surprised and routed. Scarcely had the plan been determined upon, when, on the

morning of Dec. 2, firing was heard upon the outpost of the camp. The insurgents were immediately prepared to move in accordance with these plans. The forces with their *impedimenta* were hurried through a narrow defile in the forest, while Maceo with 80 infantry and a few horsemen advanced to check the enemy. The Spaniards, supposing that they had now met the insurgent army, prepared to give battle by forming their companies in compact lines and directing their fire in volleys at the few dodging insurgents, whose plan they supposed was to lead them into ambush. This gave the main body of the insurgents ample time to make their retreat. After sustaining the fire of the Spaniards for an hour, losing but 1 man killed and 6 wounded, Maceo ordered his men to run, he being the last to leave the field. When the Spaniards, seeing their enemy flee, advanced with their *flanqueiros* cautiously thrown out, they found that the rebel army had disappeared. The next day found the insurgents on their march to the west, sustaining various skirmishes with the Spanish columns, whose officers, in absolute ignorance of the enemy's tactics, reported battles with formidable numbers of insurgents.

At Igua, on Dec. 3, the insurgents sustained a combat with the troops under Segura, with a loss of 5 killed and 32 wounded. They then continued their march through the southern part of the province, sustaining various encounters with the troops. Entering the jurisdiction of Cienfuegos on the 15th, they met the Spaniards at Mal Tempo, and there ensued the most decisive action of the insurrection. The fight began in the morning at 8 o'clock, and the hastily formed squares of the Spanish raw recruits were repeatedly broken by the charges of the insurgents, who report having killed 210 of the enemy with the *machete*. The troops were undoubtedly put to flight, leaving in the hands of the rebels various trophies of their defeat. While the insurgents were dividing their booty they were warned of the approach of another column, which they immediately proceeded to attack under command of Maceo, and after half an hour's fight the Spaniards retired. About the same time Gomez, who was in another direction, stumbled upon another column, which he also fought with success; thus the insurgents had three victories in a single day. Continuing their advance the following day, they surprised and cut up a Spanish guerrilla near Santa Isabel de Lajas. Campos now endeavored to check their rapid movements by concentrating 8,000 soldiers to prevent their passing the valley of Cienfuegos; but by the usual skillful evasions of the rebel leaders a conflict was avoided until the opportune moment, when an inferior force could be surprised. By a series of forced marches they left Campos in their rear at Colon with 7,000 troops, and dashed across Matanzas province. By means of the railroads the Captain General moved his troops ahead again to check them, but by a series of zigzag movements Maceo was able to avoid the concentrated Spanish forces, while Gomez with 500 horsemen made a dash somewhere else. At Coliseo the insurgents under Maceo burned the town, and with a skirmish line of 200 horsemen held in check 2,500 Spanish infantry under Campos. They then made a retrograde movement to Las Villas, and again entered the jurisdiction of Cienfuegos after five days of continual marching. But without waiting for the Spaniards, who supposed the insurgents to be retreating, to determine upon any definite plans, they advanced again into Matanzas along the south coast, sustaining a serious encounter at Calimets with veteran troops, in which they lost 10 killed and 27 wounded—thus far their most serious en-

gagement. Maceo thence continued his rapid march along the southern borders of Matanzas and Havana provinces to the town of Guira de Melina, which he took, and thence northward toward Havana.

Throughout these movements of the insurgents their numbers were constantly being increased by negro field hands and Cuban youth, mostly from the neighboring towns, who, encouraged by the success of the movements, hesitated no longer to take the field. The banditti, who had always claimed to have been carrying on a war against Spain, in most cases hastened to join the insurgents, and their leaders were given a rank as well as all others who presented themselves with any number of recruits. Those bandits who did not proclaim for the rebellion and many free lances who deemed the opportunity had come to reap a harvest of plunder on their own account were shortly wiped out by the insurgent chiefs, who hanged them wherever captured. Gomez did not participate in so much of the fighting as did Maceo, but, attended by his escort, he planned continually to confuse the Spaniards with his circuitous movements, and with a policy at times conciliatory, and at other times despotic, he sought to claim the services of the peasants, who he well knew would not fight. He issued various decrees prohibiting the grinding of cane, the running of trains, and the supplying of the Spanish troops with provisions. By the hanging of an occasional unfortunate, he hoped to make these decrees effective, and by setting fire to the cane fields and destroying the railroads, he sought to create a reign of terror that would materially strengthen his cause.

On Jan. 7, 1896, he united with Maceo near Punta Brava, a dozen miles from Havana, and Miro reports that the concentrated force numbered 11,700 men. Here it was decided that Gomez should keep up his tactics of moving about with his escort, while the bulk of the force should return and distribute itself over Matanzas. Maceo, with 4,000 men, including his original Orientales, should continue into the westernmost province of Pinar del Rio. This plan was immediately put into execution. The Spanish military authorities were unprepared for any such movement, and while a column under the command of Gen. Garcia Navarro was sent in pursuit of Maceo, others were sent after Gomez. Maceo's advance into Pinar del Rio was eminently successful. So rapidly did he move that Garcia Navarro's column could not get up to him, while the surprised garrisons in front of him surrendered to his surging horde, which was continually being increased by the Cubans, who looked upon the multitude as already having won Cuba's freedom. Maceo's rapid movement continued along the north coast to the very last towns of Guane and Mantua, where his raids became more like a triumphal procession, the people rising *en masse* to welcome him. From Mantua he swept southward to the vicinity of the city of Pinar del Rio, and thence he continued his march along the southern highway back toward Havana. At Paso Real he was taken by surprise by the of column Gen. Luque, and thence ensued the famous but indecisive battle of Paso Real. While the Spaniards remained in possession of the city Maceo marched away, and with colors flying entered the city of San Cristobal, where he was received with demonstrations of joy even by those people who did not favor his cause. He then proceeded to attack Candelaria, which city had shown no disposition to receive him; but as he failed to force its surrender, and the pursuing columns came to its relief, he took to flight. Gen. Sabas Marin had hastily formed another trocha across the narrow part of the island between Mariel and Majana, to prevent Maceo's forces joining

those of Gomez, and had stationed 8,000 troops in the vicinity of Artemisa to intercept him. Maceo with his usual skill avoided an encounter with these, crossed the line, and was again in Havana without having fired a shot.

Failure of Campos.—The political policy of Campos had been one of conciliation, with a certain amount of reform, but it had failed. His military policy was to meet the insurgents on the field of battle, and with superior numbers and resources end the rebellion. Seconded by officers who had learned the science of warfare at home by planning battles on paper and with boy soldiers who scarcely knew how to carry a gun, his operations in the field had also failed. The beginning of 1896 saw the entire island, except the cities, in the possession of the rebels or else in a turmoil. Where there had been no rebels or tendencies on the part of the people to rebel, the country was rife with insurrection. The very people who had protested against the uprising now hailed the chiefs as harbingers of their independence. Gomez was marching back and forth, distributing his bands throughout Matanzas and Havana provinces, burning sugar estates on the pretense of their having violated some order of his or destroying railroad trains because they transported troops and hanging and shooting his followers as an example to the others. The whole country was claimed by him, and the Spaniards, with the exception of the columns sent in pursuit of Maceo, put themselves on the defensive by rapidly fortifying themselves in the towns and cities or on sugar estates. Burning cane fields illuminated the sky about Havana at night, and the smoke told of the destruction going on by day. Many Cubans, both white and colored, who had previously refused to sanction the conspiracies against the Spanish Crown now took the field, and many of the lower classes joined the rebels in some particular raid, only to return to their homes again and mingle with the Spanish soldiers as unconcerned as though they were their faithful allies. The great mass of peasants who inhabited the rural districts would not fight, but the Spaniards soon discovered them in coalition with the insurgents, and, *pacificos* that they were, they misled the Spaniards on every occasion. Soldiers and officers called for their punishment, but Campos refused to make war upon noncombatants. The Conservatives called this weakness, and cried out for more rigorous measures. The Spaniards in Havana, astonished at the rapid march of the insurgents and the inability of the army to check them, with the destruction going on at every hand, coalesced and demanded the recall of Spain's greatest general, and Campos went home, a failure.

Gen. Weyler.—This officer landed as Governor General of the island at Havana, Feb. 10, 1896. He was infamous to the Cubans for the atrocious deeds imputed to him when operating in Camaguey years before in the last war, but regarded by the Spanish Conservative element as a general who would end the strife by most energetic methods. His arrival in Havana was consequently attended with demonstrations of joy on the part of the Spaniards, and he promised to have the immediate provinces shortly cleared of the rebels and the paralyzed industries once more assuming their usual activity. He then proceeded to reorganize the scattered and somewhat demoralized troops, and in doing so he made the grave mistake of trying to locate an insurgent army, using a big map of Cuba as the means of so doing. Scarcely had he assumed his duties in the palace of Havana when Maceo effected his return into Havana province from Pinar del Rio, and, to show his disregard for

the new Captain General, swooped down upon the comparatively large city of Járucó, looted and burned it, and then moved away again as rapidly as he had come. Gomez joined him, and the two chiefs discussed future plans, while their detached bands, without discipline or organization, continued to sack and burn villages, houses, and plantations, attack railroad trains, and destroy the stations, culverts, and bridges. By means of mounted messengers these bands were brought together to withstand some concentrated attack or loot a city, and then dispersed again to continue their depredations. Tribute was levied upon the planters who sought to remain friendly to the cause of independence, others were hanged when caught; servants were macheted or shot, and pandemonium seemed to have been let loose. Weyler, like his predecessor, failed to comprehend the movement and check its impetuous ferocity by making himself acquainted with the tactics employed, and, going a step or two farther, issued decrees preventing correspondents from learning the true state of affairs, and by his own ridiculous bulletins sought to make the public believe that he was winning victories. He massed his troops to attack

an army when no such army existed, and when informed that the insurgents got away because they were mounted, instead of mounting his own soldiers, he ordered them to kill all the horses they could find, whether they belonged to the peaceable farmer or were abandoned by the insurgent. His rigorous measures consisted in giving his officers to understand that war was cruel, and they must kill—kill the enemy; armed or unarmed, it made no difference. Prisoners were a hindrance and expense, and when he was informed by his lieutenants that the *pacificos* coalesced with the insurgents a significant nod was sufficient to sanction the slaughter which followed his assumption of duties as Captain General. Aware of the protest and clamorings of the people in the United States against this barbarous method of warfare, he sought to quiet them by publishing orders that no sentence of death should be executed without his signature, and persistently denied the massacres that followed. No doubt matters were going bad enough on either side, but Weyler, by his blind policy and mismanagement, his ignorance of facts and want of military skill and sound judgment, prevented the facts becoming known, and by his war upon the newspaper correspondents he created an enmity which had its natural result in the mass of pure fiction that found its way into the American newspapers and stirred the American people almost to the point of demanding intervention on the part of our Government. His attempt to muzzle the press clearly demonstrated either his ignorance or fear of the truth, and his false reports were only surpassed in ridiculousness by those sent via Key West by the American correspondent in Havana. He not only deceived himself as to the true situation



A SPANISH SENTRY.

in the field, but prevented others learning it, while for every American correspondent expelled two others returned, prejudiced and prepared to work against him. On but one occasion does he seem to have shown any real understanding of the situation, and that was by the issue of a circular announcing that the war was not upon the negro, as had been supposed by the raw recruits and their officers fresh from Spain; and means were accordingly taken to incorporate the Cuban negroes who had not already joined the insurgents into the Spanish ranks. This movement met with success, for the Cuban negro, unlike the peasant, if properly encouraged will fight, and he cares little whether it be for or against the white Cuban or the white Spaniard.

The Occupation.—After the sacking of Jaruco, the Spanish infantry columns pursued the insurgents under Maceo and Gomez back and forth through Matanzas and Havana provinces for nearly a month without arriving at any decisive action other than the slaughter of horses and noncombatants, and a few insurgents. Gen. Weyler having declared the province of Pinar del Rio pacified, Maceo set out to re-enter that province and occupy it. With a host of followers, he entered the port of Batabanó on the night of March 13, sacking and burning it, and again before Weyler could get his columns of infantry up to him he was well on his way into the pacified province. The scene of war was now suddenly transferred from Las Villas, where Weyler was supposed to have been driving the insurgents, to the western province. Maceo, after one or two sharp fights, took up his headquarters in the mountains, and there bade defiance to the Spaniards. Weyler, instead of sending picked bodies of cavalry to pursue him and using his infantry to occupy the field permanently and cut off his enemy's escape, concentrated his efforts in the construction of a *trocha*. This line was run between Mariel and Majana, was 18 miles long, and consisted for the most part of the well-constructed cart road between Artemisa and Guanajay. Ports or blockhouses were built at intervals of 500 yards along this road and fences of barbed wire put up to prevent the passing of the insurgent cavalry. Two months were spent in the construction of this line, and it was reported that 30,000 troops were required for its defense. In the meantime Maceo, with his forces distributed in the hills, occupied himself with taking possession of the country. As Maceo's previous march through the province was one of triumph, it now became one of terror. Maceo himself appears to have been desirous of pursuing as humane a policy as circumstances would permit, but the wanton cruelties perpetrated by his lieutenants and their followers were as shocking as any of those imputed to the Spaniards; but, owing to Weyler's shortsighted policy in preventing correspondents mingling with the insurgents, these crimes in many instances were carefully covered up or else the seeker for information had only the word of the Spaniard to depend upon. The agricultural industries of this province were chiefly in the hands of small farmers, among whom figured a large proportion of Canary Islanders, a sober, hard-working people who, having no real grievance against Spain, did not favor the insurrection. But upon Maceo's first sudden and wild rush into the territory these people saw no other remedy than to proclaim for him and independence. Maceo ordered their property and tobacco fields respected, and frequently prohibited the rank and file of his followers entering the towns which had surrendered to him. On several occasions he meted out swift justice to those who violated the common laws of decency and good faith, and their placarded

bodies were left dangling to a tree as a proof that the rebels intended to preserve order. On leaving the province to confer with Gomez he left one Bermudez, an ex-bandit chief, in command. Bermudez at first kept to the hills, but upon the return of Maceo he at once inaugurated a reign of terror throughout the southern part of the province where he was detailed in command. Federico Nuñez, in charge of the district along the *trocha*, seconded Bermudez in his inhuman and atrocious deeds, on several occasions capturing Spanish soldiers and stringing them up in open defiance of the insurgent orders pertaining to the release of prisoners. Peaceable farmers were hanged without a shadow of reason, and it was a frequent occurrence to fire the peasant's ranch at night, on the pretense that the occupant was not wholly opposed to Spanish rule. Bands rode about the country intimidating the farmer gathering sweet potatoes for his family, and the least show of fear on his part was sufficient evidence to merit his being hanged to the nearest *quasima*. Tobacco sheds were burned, stone edifices pulled down, and the country desolated and depopulated. "To the trenches or to the mountains!" was the insurgent cry as they rode about the country, and then woe to the poor *pacífico* who was caught seeking the protection of the Spanish trenches, while Weyler remained on the defensive building his *trocha*. It has been reported that the march of Bermudez was marked by the bodies hanged to the trees, and the climax was reached when he hanged twenty-odd to a single tree. Those who did make their escape to the Spanish fortified towns were not allowed to remain in safety, for at the least expected moment the insurgents would concentrate, and under the cover of darkness crawl up to the town, or into it, and then, with a wild whoop and flaming torch, set fire to the frail houses and sack and plunder. By May 1, 1896, only four intrenched and fortified cities were left in the hands of the Spaniards in the southern part of the province, and as these were overcrowded with refugees, their condition was pitiful. Appeals were made to Capt.-Gen. Weyler to do something to better their condition, but his only answer was that the sufferers must submit. Operating columns were sent back and forth through the province without making any intelligent attempt to reoccupy the country districts, and although they were massed on several occasions to attack Maceo in his fortified positions in the hills, owing to their lack of correct information and military ability they were discomfited on every occasion. During the summer months that followed operations were at a standstill, with Weyler holding the *trocha* and Maceo holding the province. The Captain General showed no inclination to take the field in person, and even Weyler's own constituents began to show signs of discontent. To the east of the *trocha* the rebels continued to hold forth in detached bands, raiding towns and burning cane fields and sugar factories. Operations were continued on the part of the Spaniards by marching small columns from town to town, firing upon *pacíficos*, and having an occasional brush with the armed bands. During these months several insurgent leaders were killed, including Zayas, Mirabal, Sanchez, and José Maceo. Gomez with his escort retired to Santa Clara, and thence into his old territory of Camaguey, where, gathering about 500 followers, he met Gen. Jimenez Castellanos, who had sallied out of Puerto Principe with 2,000 troops. The Spanish general, unable to handle such a body of men, upon finding himself attacked, formed a square, where he was at the mercy of the insurgent fire until he ordered a retreat. His want of practical military knowledge cost him the lives of more than 200 soldiers, against

10 killed on the part of the insurgents. At last, when overwhelming odds were brought to bear upon the Captain General, he opened his autumn campaign by taking the field in person, and with 30,000 troops occupied the province of Pinar del Rio, seeking to starve and drive the rebels out.

Death of Maceo.—During Maceo's occupation of Pinar del Rio he had practically been abandoned by Gomez and the other insurgent chiefs east of the trocha. For months the Cuban *laborantes* had been looking forward to some movement on the part of the general in chief to concentrate his forces, break away through Weyler's trocha, and join Maceo or allow Maceo to join him; but nothing of the kind took place. Gomez continued in Camaguey, which was practically undisturbed by any operation on the part of the Spaniards after the loss sustained by General Castillanos at Saratoga; Laceret's force had been nearly demolished in Matanzas, and Aguirre's brigade, near Havana, had dwindled down to insignificance. Several small bands were scattered through the western and southern part of Havana, and had fought under the command of Collazo, but separated upon his death. Gen. Bruno Zayas was sent to take command of these detached bands, but he was killed before he could get them together. Maceo, upon finding himself pressed by Weyler in the mountains of Pinar del Rio dispersed his followers through the rugged territory, and with a few of his escort proceeded to the north coast, and there crossed in a small boat the Bay of Mariel and landed safely to the east of Weyler's costly if not formidable trocha. He immediately sent out couriers to the chiefs of all the forces in Havana and Matanzas provinces, ordering them to concentrate at a favorite camping place near Punta Brava. While he was waiting for this concentration, on the afternoon of Dec. 7, some of the bands having already come in, firing was heard upon the outpost. Maceo, as usual, was the first to mount and ride forward with his escort, but this time he counted without his fighting negroes from the east. The insurgents who had already arrived in response to Maceo's summons proceeded to the attack, but the soldiers who had intrenched themselves behind a stone wall, directed their fire at the chief who rode out upon the slope of a hill to watch the engagement. As he saw his men making an attempt to surround the Spaniards, who were behind the stone wall, he said, "It goes well," and then fell, mortally wounded. Upon seeing their chief fall, those at his side fled precipitately, many of them being wounded, and the Spaniards occupied the field. As usual, they proceeded to strip the dead, while the officer in command, satisfied with the victory, returned to headquarters, little dreaming that Maceo, whom they supposed Weyler to be pursuing in the extreme west, had been their victim. The spoils of the dead chief fell to a native guide, who recognized upon the naked body the wounds of many a battle. While the soldiers were still in the act of plundering the dead, Pedro Diaz, learning that Maceo had fallen, came up with a force, and a desperate fight ensued, which resulted in the insurgents getting possession of their chief's body. The Cuban guide escaped with his booty, and, suspecting it to be the belongings of some important chief, he turned it over to the inspection of Major Cirujeda, commander of the Spanish force. It then dawned upon the Spaniards that they had killed Maceo, but as they could not conceive of the possibility of Maceo's crossing the trocha they refused to believe it. Then came the surrender of Dr. Zatuca, Maceo's staff surgeon, who, believing that with the death of his chief the cause of Cuba's freedom had ended, told how Maceo and a few of his

followers had crossed the Mariel Bay at night in a small boat.

The Revolutionary Government.—The scheme of the revolutionary leaders was to organize a civil government in Cuba at once, without waiting for the revolution to develop sufficient force to overthrow the existing government. After the meeting of Gen. Gomez with the leaders in Camaguey the scheme was carried out with the venerable Salvador Cisneros as President, other leaders forming his Cabinet. No attempt was made to establish this Government in a permanent locality, but the President with his Cabinet, surrounded by an armed escort, accompanied Gomez into the province of Las Villas, where later they were joined by Maceo with his invading army from the east at La Reforma. After the concentration at La Reforma and the determination to carry the war to the west the Government followed, with the invading army as a part of its *impedimenta*, avoiding conflicts with the Spanish troops until arriving at a point of concentration in the vicinity of Sancti-Spiritus. Here the army was reviewed, and a flag embroidered by the beautiful daughters of "Tinima" was presented to Antonio Maceo by the President, and the army proceeded on its western march, leaving the President and his Cabinet with their escort to return to Camaguey. While no attention was paid to this peculiarly formed Government by the Spanish military authorities, its existence was taken up as a basis for the recognition of the belligerency of the Cubans by the United States, and the Cuban *laborantes* and newspaper correspondents in Havana at once located a capital for it on the Cubitas range 25 miles from Puerto Principe, to which capital they gave the name of Cubitas. All manner of stories were circulated and published about this visionary capital which was generally described as an impregnable position which could not be reached by Spanish artillery. It was said to constitute the chief storehouse and manufacturing establishment of the revolutionists, where were compounded dynamite, giant powder, etc. Notwithstanding the fact that the Spanish columns marched through the range of mountains on several occasions without being able to discover any such stronghold or capital the story was persisted in and accepted as truth in the United States. Reports were also published that a mail service was established by this Cuban Government, and it was claimed that it was the only postal system in operation over two thirds of the island, and for its use an issue of Cuban postage stamps was printed in the United States. The writer, who has spent considerable time in the field with the Cubans, never has been able to discover any of these stamps in actual use in any part of the island. The Government organization did, however, map the island off into zones and formulate a plan to appoint a civil governor with jurisdiction in each zone. The zones were to be subdivided into districts or *prefecturas*, with a magistrate presiding in each district, to be known as the *prefecto*, with the rank and pay of a captain in the army. It was the specific duty of the Governor to appoint the *prefectos* in his particular zone and see that they complied with their duties as specified in the decrees issued by the President and his Cabinet. These duties finally consisted in the *prefecto's* taking possession of everything in his particular district, in the name of "Free Cuba," and appropriating it to the use of the officers and their followers as needed, who should give a receipt upon its delivery. Maceo seems to have carried the scheme into the extreme west of the island. Gomez used the *prefectura* system as it suited his convenience, appointing and disposing the *prefectos*, and even executing them,

according to his personal whims or passions, until called to a halt by the council formed by the President and his staff, upon his return to Camaguey, in June, after he had made the invasion.

The Cuban peasants who did not want war, but who had always looked upon the Spanish military rule in the island as unjust and oppressive, seeing the advantages obtained over the Spanish troops by the insurgents, at once showed a willingness to recognize the Government of his countrymen and obey the decrees and accept the commissions imposed upon them. By these decrees they were prohibited selling any produce for Spanish coin, and as there was no other money they could not sell at all. The prefectos were required to make a list of all the male inhabitants living in their particular district and obtain from each an acknowledgment of the supremacy of the civil Government, upon which they were to issue a certificate of citizenship, after which any one found roaming about the country without such certificate and written authority from their prefecto was to be considered an enemy of the republic. Upon these slight grounds Gomez executed many Cubans while moving about the central provinces with no apparent object except to keep out of the way of the Spanish troops. This he termed the organization of the country; and the levying of tribute by the various detached bands upon the sugar planters, cattle drovers, and fruit venders was termed the collection of taxes; and after these taxes were gathered the payee was very frequently strung up to a tree for having violated the Government decree prohibiting the selling of his products for Spanish gold or taking produce from the country into the city in violation of other decrees.

In some parts of the island where the Spanish columns were unable to operate, owing to their attention being taken up by the activity of the insurgents in other parts, the *prefectura* system was established with an admirable degree of perfection. Some peasant of superior intelligence was selected as captain-prefecto, and his neighbor peasants were set to work planting crops to supply the insurgents and themselves with food. Again workshops were established within the depths of a forest or among the mountains for the manufacture of shoes, saddles, and other articles. In the execution of their various schemes the Provisional Government does not seem to have considered the necessity of any established force, either to protect the citizens who willingly recognized their authority or to see that their decrees were systematically complied with, but it was left to the good will of the citizens themselves to obey and execute, or to some roving band of armed rebels, frequently at the command of an arbitrary chief, to execute the erring citizen, or, on the other hand, with no adequate force to protect that which the Government had instituted, the citizen was often obliged to submit quietly to the destruction of his cattle and potato fields by the prowling rebels, who despised him because he did not fight. In those parts of the island where the troops were carrying on active operations the unprotected citizen was driven out, butchered, or taken prisoner, and his home and potato field were destroyed that he and his might no longer prove a benefit to the rebels.

Filibustering.—A large amount of war material was purchased by Marti, and vessels were chartered to transport it to Cuba, where arrangements were made for its reception, before the beginning of hostilities, but at Fernandina, Fla., it was seized by the United States authorities. Prior to May 1, 1895, three vessels, the "Amadis," the "Lagonda," and the "Baracoa," are reported as having taken arms and ammunition to Cuba.

Subsequently the tug "George W. Childs," the "Antoinette," the "Lark," the "Attie," and the "Mallory" were all engaged in the service of the insurgents. Besides these, there have been recorded 36 expeditions fitted out in the United States, in spite of the vigilance of the Government at Washington. Of these, 17 are reported as total failures and 5 as partial failures, leaving only 14 as having successfully landed their supplies on the Cuban coast. Of the unsuccessful expeditions may be mentioned one that attempted to sail from Wilmington, Del. The men and arms were taken out into Delaware river in the middle of the night by a tug belonging to the Wilmington Tug Company, with orders to wait for an outward-bound steamer, which would blow three whistles, aboard which the men and arms were to be put. The expedition was engineered by Col. Emilio Nuñez and Gonzalo de Quesada, and the men being arrested, there were found in their possession letters addressed to Gen. Maximo Gomez, to the Marquis of Santa Lucia, and to the "Chief of Communications at Camaguey"; also presents of stylographic pens for Gen. Gomez and other leaders from Gonzalo de Quesada. It appears that the "Laurada" was outward bound that night, but owing to some accident to her machinery did not start. The arms were returned and ultimately went to Cuba. In the autumn of 1895 the steamer "Commodore" became an object of suspicion at New London, Conn., and when she went to Wilmington, N. C., a cargo came by express to her from the north. It was expressed from Providence, R. I., and from New York to Wilmington, the express charges amounting to \$942. The "Commodore" had been cleared for Cartagena, via Southport, N. C., and the captain, being apprehended, stated that he did not know what the articles were which were to be shipped, but he intended to clear the cargo as mining implements and machinery. About the same time a considerable body of strange men arrived in Wilmington, but the men disappeared upon learning that the ship was proceeded against. The cases marked "hardware" and "agricultural implements" were found to be arms and ammunition, including a rapid-firing gun of the most improved pattern. There was no direct evidence that the vessel was fitted out to commit hostilities against Cuba, and it was released. On July 9, 1895, the steamer "James E. Woodall" left Baltimore and subsequently landed a large expedition, under Roloff, Sanchez, and Rodriguez, in the vicinity of Tunas, Sancti Spiritus. Proceedings were instituted in Baltimore against Roloff, one Smith, and Dr. J. J. Luis for the fitting out of this expedition, and Dr. Luis was convicted March 27, 1897. Roloff forfeited his bail, and Smith never was apprehended. Two successful expeditions and six unsuccessful ones are reported as following this. Then came the steamer "Horsa," which left Philadelphia, Nov. 9, landing its boats with men and arms on the coast of Cuba six days later. Some of the arms and ammunition were lost by being thrown overboard, and on the return of the steamer to Philadelphia, the captain, J. H. Wiborg, and his two mates were convicted of violating the neutrality laws of the United States. The case was carried to the Supreme Court, which affirmed the conviction of Wiborg, but reversed that of the two mates. On Dec. 6 an expedition encamped at Cape Sable, Florida, under Enrique Collazo, disbanded on the appearance of a United States revenue cutter. In January, 1896, an attempt to take 300 men and a large quantity of military supplies was made by Gen. Calixto Garcia on the "Hawkins," which foundered Jan. 27 off Long Island. All but five of the men were rescued by various vessels and brought back to New York. On

Feb. 15 the tug "Three Friends," assisted by the schooners "Ardell" and "Mallory," undertook to make its first filibustering trip, but on complaint of Spanish consuls the members of the expedition were detained. No case being found against them, they were liberated, after which, under command of Enrique Collazo, they again sailed for Cuba, where they landed on the beach at Veredero during the night of March 23, with their boats loaded. Being frightened at the proximity of a Spanish fort, the boats were abandoned, the men taking to the woods. The tug, unable to learn their fate, returned to Key West with the rest of the arms and ammunition, where she was detained by the authorities, but for lack of evidence was released. On March 15 the steamship "Bermuda" made her second trip, taking an expedition with Calixto Garcia in command from New York. The men

patrol boat, came in view from behind an adjacent key and opened fire. The bulk of the arms and ammunition was abandoned by Munzon, who fled with his men into the interior. The sailing master, William Gildea, and the captain of the expedition, Alfred Laborde, a correspondent, Ona Melton, and Dr. Vedia, and one Maza, members of the expedition, were captured and taken to Havana. William Leavitt and Charles Barnet, sailors, who were ashore when the firing began, were captured on their way to overtake the fleeing Cubans. There was a hasty court-martial at Havana, in which the Cuban Maza turned Crown evidence, and the prisoners were sentenced to death; but, owing to the interference of the United States consul, the proceedings were set aside, and after an imprisonment of eighteen months the men were released. The steamer "Laurada" made its third expedition, sailing from New York, May 9, with men and arms, which were landed in Cuba, May 16. A fine was imposed on this vessel at Kingston, Jamaica. Capt. Dickman and Nuñez were tried in New York, and the jury disagreed. The captain was fined \$100 at Charleston, S. C., for violation of customs laws. The "Three Friends" made her second expedition from Jacksonville, Fla., on May 23, with an expedition which was safely landed in Cuba. On June 24 the same steamer undertook a third expedition with the assistance of the steamer "City of Richmond." The vessels were seized by the United States authorities, and the men were arrested before the expedition got away, but the vessels, being released and the men discharged from custody, they got away and the expedition was landed between July 1 and July 13. On June 17 the tug "Commodore" made her third successful trip from Charleston, S. C., landing arms and ammunition on June 24. On July 17 the "Three Friends" made her fourth successful trip, landing both men and



SPANISH SOLDIERS BREAKFASTING. FORT NEAR MATANZAS.

were landed in Cuba on March 24 with a part of the arms and ammunition. The part of the ammunition which could not be landed was carried to Puerto Cortes, Honduras, where it was seized. Upon their return to New York Capts. O'Brien, Hart, and Nuñez were prosecuted, but were acquitted by the jury. A second trip of the tug "Commodore" with an expedition was attempted from Charleston, S. C., March 12. This expedition, under the command of Braulio Pena, was successfully landed in Cuba. The steamer on its return was libeled for making a foreign voyage, but the proceedings were never brought to trial. On April 20 the steamer "Bermuda" made her third trip, attempting to land in Cuba, but, failing, proceeded to Honduras. The members of the expedition returned in another steamer to Mobile, Ala. When the steamer returned to Philadelphia her British register was revoked. It is said that the arms and ammunition were thrown overboard on this trip by her captain, John G. Riley, who was fined \$315 in Honduras for landing certain of the men there. The schooner "Competitor," with arms and ammunition, left Key West on April 23, under command of Munzon, and arrived off the north coast of Cuba near Esperanza. The arms and ammunition had been put ashore when the "Mensajera," a Spanish

arms. On Aug. 5 the steamer "Laurada" left Philadelphia with the tug "Dauntless," the "Madeira," the "Oriole," and the launch "Richard K. Fox." They went to Navassa island, and thence took a large amount of war supplies to Cuba. On Capt. Murphy's return to the United States he was arrested, but was released on bail. Subsequently John D. Hart, owner of the "Laurada," was convicted in Philadelphia for violation of the neutrality laws, Feb. 23, 1897, but appealed, and was liberated on bail, Aug. 15. The tug "Three Friends" was seized by the United States steamer "Boutwell," and as nothing was found aboard but coal and medical supplies she was released. On Sept. 2 the "Three Friends" again left Jacksonville in disobedience to the Federal authorities. Her cargo of arms and ammunition was safely landed in Cuba, and on her return she was libeled in the district court at Jacksonville. On Oct. 5 the tug "Dauntless" landed successfully at the mouth of the San Juan river a large expedition of arms and ammunition, but owing to cowardice and mismanagement of the commanding officer in charge of the Cubans on shore after the expedition was landed nearly everything, including correspondence from the junta was carried away by the crew of a small Spanish patrol boat. On Oct. 6

the tug "Commodore" attempted to make her fourth trip with war supplies, but was detained by the Federal authorities. On Oct. 30 the "Dauntless" undertook to make her third trip, but was also prevented by the United States authorities. On Nov. 8 the "Three Friends" was again prevented from taking an expedition from Florida, but on Dec. 14 succeeded, on the pretense of proceeding on a wrecking trip, in taking on board at Fernandina about 40 men, with arms and ammunition. Proceeding around the west end of Cuba, she attempted to land these arms at the mouth of the San Juan river, but was fired upon by two Spanish patrol boats. The fire was returned, and without damage the filibuster made her escape. The expedition returned to Florida and was landed on No Name Key. A few days later the "Dauntless" slipped out of Jacksonville, picked up the expedition at No Name Key, and conveyed it to Cuba, landing it on the coast of Corrientas Bay. On Feb. 27, 1897, the steamer "Laurada" again made a successful trip with Carlos Roloff in command. This expedition consisted of 40 men with an important cargo of munitions and dynamite. She landed in Baines, taking care before landing to place three lines of torpedoes in the entrance to the harbor, in case there should be a surprise. For some time this point seemed to be left in the possession of the rebels, but when the authorities in Cuba were notified by the Spanish legation in the United States successful operations were carried through against Baines by the Spaniards. On her return the "Laurada" was libeled in Wilmington. On March 3 another expedition was planned by the steamer "Monarch" in Pensacola, but she was detained twice by the cruiser "Marblehead," and the expedition was disbanded. After the failure of this expedition the "Monarch" went to sea and, receiving coal in the Gulf, took on board an expedition near Punta Gorda, Fla., which she succeeded in debarking in Pinar del Rio. The greater part of the cargo was captured by the Spaniards a month later. On March 30 the steamer "Monarch" made her third trip to Cuba. On her return the vessel was to take an expedition which was being prepared at Miami, and, having received information that she would coal at Bahia Honda, the authorities were advised to send a revenue cutter, which seized her there and brought her to Key West with five men, who said they were passengers. The steamer "Bermuda," having secured a new register in Halifax, attempted to assist in the expedition that carried Roloff to Cuba, Feb. 27. After being detained in St. George, island of Bermuda, she went to Fernandina, but was not permitted to sail thence until her captain had made oath that he would not take part in any filibustering expedition—an oath which he had taken before leaving Philadelphia. On April 3, upon complaint of the consul in Jacksonville, the cruiser "Vesuvius" seized the tug "Alexander Jones," which was loading the "Bermuda" with coal and provisions. The latter was not seized because she was beyond the three-mile limit. The steamer which was to take the arms to the "Bermuda" was warned while lying at Fernandina, as were also Sanguily, Lechuga, and 50 expeditionaries, and in consequence none of them joined the "Bermuda." The expeditionaries of the preceding expedition left Jacksonville on a special train for Palm Beach, but the authorities were advised that they were waiting at the station and the train did not proceed. Afterward Emilio Nuñez landed from the "Bermuda," and was detained by the health officers; the "Bermuda" cruised around several days, loaded with coal and provisions, and sailed to Samana, where she was searched by the Dominican

authorities, who had been notified by the legation through the resident Spanish consul. At the same time the cruiser "Isabella II" arrived from Porto Rico, under orders of the Governor General of Cuba, to whom these facts had been communicated. The "Bermuda" then sailed to Port Antonio, Jamaica, where she was detained by the authorities, it being expected that her British register would be again revoked. On May 20 the tug "Alexander Jones" towed the schooner "John D. Long," loaded with war supplies, and met the "Dauntless" at Rock key. The "Dauntless" took the arms and made two trips to Cuba, landing her cargo successfully. On May 30 the "Dauntless" undertook her sixth filibustering trip, but, being pursued by the "Marblehead," threw overboard her cargo and was captured. The last reported filibustering expedition was that of the "Silver Heels," a schooner from New York, on Oct. 17, in combination with the "Dauntless."

The Cuban Junta in New York, led to the belief that Maximo Gomez was the man to master the situation in Cuba, made strenuous efforts during the summer of 1896 to fit out expeditions that the necessary war material might be landed for what they supposed would be the fall campaign. This is shown by the documents captured by the Spaniards, from the expedition landed on the San Juan river, which was in charge of one Betancourt, who refused after the expedition was landed to allow the American gunner Fredericks to fire and sink the Spanish patrol boat, which came into the river, landed its crew of 12, and carried off the supplies that had been landed thirty-six hours previously. By these documents it is shown that the junta held a meeting "on the 16th of July, 1896, in the city of New York," for the purpose of devising means "of collecting in a short time the resources of money necessary to send to Cuba in the next months arms and munitions of war in the greatest possible quantity." In ignorance of the situation in the island, the committee looked toward the sugar industry of Cuba as a means of raising these funds, and decided to publish a decree in the city of New York "prohibiting work on the coming crop in Cuba." Then it was proposed to permit secretly "the least possible number of plantations to grind," imposing upon them a tax of "50 cents for each bag of sugar worked out, paid in advance immediately in American money." It was also provided that planters who had previously made sugar in violation of the decree should be forced to pay at the rate of 50 cents a bag for their previous crop before they would be allowed the privilege of making another crop; and to all planters who respected these decrees the delegation would guarantee, in the name of the republic, "the respect of the Cuban forces for the property and the protection of the work of making the crop and the preparation to grind." In a letter dated New York, July 22, 1896, addressed to Gen. Maximo Gomez, by T. Estrada Palma, it was declared that "every kind of diligence is used to supply you with arms and ammunition. From the 31st of June to the 6th of July 400,000 cartridges and 600 rifles have been landed, among them 400 Mausers, nearly 2,000 pounds of dynamite, wires, electric batteries, *machetes*, medicines, etc. But our earnest desires and diligence are dashed to pieces against the scarcity of funds which threatens. In virtue of this state of affairs we must solve the problem in this way: The campaign of the approaching dry season may be decisive in our favor if our army should find itself well provided with arms and ammunition. In this case the enemy's army, so far from gaining the least advantage, would suffer considerable losses, and then when the end of the campaign arrives with no fa-

avorable results for the Spanish arms the Spaniards resident in Cuba and the Government of Madrid will have lost all hope of suffocating the revolution, the latter will have exhausted every resource to which it has turned, and will lack means to continue the war. It is therefore indispensable from every point of view to obtain money sufficient to land in Cuba before November 5,000 rifles and some millions of cartridges. My efforts to place our bonds and to contract loans in the United States, London, and Paris have been fruitless. After many promises unfulfilled and hopes vanished, we have arrived at the conviction that we shall obtain nothing in this way; and as patriotic gifts are extremely deficient, there remains no way other than that of taxing the approaching sugar harvest. By the accompanying documents you will perceive that I have formed a committee with this object. Miguel Betancourt will tell you who form it. If you and the Government sanction the idea we shall have within a month at least \$200,000, assuring thus the continuance of the campaign and of the economic disturbance in the island; no grinding, therefore, should be allowed except in those few sugar works that will advance a portion (50 cents a bag) of the tax upon the crop, which amount should be paid directly to the Government, to you, or to the delegation abroad. I beg you, general, to take into consideration the difficulties that surround me with regard to the solution of the problem of pecuniary resources with any other than the one I propose, and which I am already carrying out in the hope that it will be approved. . . . No one will charter us a vessel unless we deposit its value, \$40,000 or \$50,000, which for the moment we can not dispose of in this way. I am working, however, to secure the 'Three Friends,' even if I have to guarantee \$25,000, and I believe I shall manage to use her again."

In a letter of the same date, addressed to the President of the republic, Mr. Palma complains that 42,000 tons of sugar was made in Cienfuegos and 6,000 tons in Trinidad which, to his knowledge, paid no tax to the revolution, as also happened in the plantations of Matanzas. He declares the necessity of forcing these plantations to pay the required 50 cents a sack to the junta, thus hoping to raise the "\$200,000 and more which we must have."

Operations of 1897.—If the efforts of the Cuban junta had been seconded by the revolutionists in Cuba with an equal decree of earnestness there might have been a "fall campaign" on the part of Gen. Gomez. With the completeness of the destruction of Pinar del Rio and the absence of any more prospects of booty, Maceo's negro followers had dwindled away. He still had a few followers left, but not enough to make a determined stand against the concentrated efforts of Gen. Weyler, who began the autumn campaign of 1896 by moving against him with 30,000 troops. Leaving his few faithful ones under the command of Rius Rivera, Maceo crossed the trocha and met his death near Havana, as we have seen. After this event Weyler left a few troops in Pinar del Rio to pursue the remaining bands, and at once declared the province "pacified." Subsequently Rius Rivera was wounded and captured by Gen. Hernandez Velasco and sent to Havana a prisoner. Although the Artemisa or Mariel-Majana trocha had proved a failure, Weyler ordered the reconstruction of the line between Jucaro and Moron. Gomez, who had been wandering around Camaguey with the Government ever since his fight with Castillanos in June, crossed this line about the middle of December with President Cisneros and his Cabinet, returning to the vicinity of Sancti Spiritus. Pitching his camp in his favorite field, La Reforma,

he sent out messengers to bring together the scattered insurgent bands in the province. Now there was no excuse for a scarcity of war material, and it was supposed by the Cuban *laborantes* that the old chief would at once carry out the proposed campaign by again invading the western provinces to defy the Spaniards at the very gates of Havana. By the middle of January the forces had concentrated in obedience to Gomez's command, leaving unprotected certain strategic positions which might well have been held against overwhelming odds, where the peaceful noncombatants had set up *prefecturas* and workshops, and had productive fields for the maintenance of themselves and the army. With his concentrated bands Gomez proceeded to lay siege to the insignificant town of Arroyo Blanco, near Sancti Spiritus. He notified the commander of the little garrison of his intention, requesting that as an act of humanity he send all noncombatants out of the place to escape the deadly effect of his dynamite gun, which was being prepared to hurl the explosive into the town. Capt. Escobar, the Spanish commander, refused to grant the request, and the siege was begun. The dynamite gun proved a failure; and when re-enforcements arrived Gomez was obliged to withdraw, with a loss of 4 killed and 22 wounded. The Spaniards then attacked Gomez without any definite plan, and a series of fights ensued.

In the meantime Gen. Weyler declared the province of Pinar del Rio pacified, and he was proceeding with his pacification of the other provinces. Setting out with a large force from Havana, he marched along the highway to San José las Lajas, and thence to Villa Clara. As he met with no opposition, his operations were confined to the enforcement of his decree of concentration, by which all noncombatants inhabiting the country were to be brought within the intrenched and fortified towns. His column scurried over the country, burning and destroying everything that might give shelter to the insurgents. Weyler arrived in the city of Santa Clara early in February, and there discovering that there were no formidable bodies of insurgents to oppose his progress, he distributed his troops in operating columns over the entire province, with orders to burn and destroy. To see how well this work was done, he took up a line of march back and forth across the province, attended by his escort of 400 Cuban negroes and a small body of infantry. Nowhere was he met by any determined opposition. Before the end of the month his columns were poured into the fertile valleys of the mountains between Santa Clara and Trinidad, where the most perfect organization of the Provisional Cuban Government's *prefectura* system had been carried out. Herds of cattle were driven away by the troops, hospitals destroyed, coffee plantations demolished, and potato fields dug up. The noncombatants, employees of the civil authorities, were forced to take to the woods, and when captured were either killed or carried away with the women and children to the fortified towns, where the greatest misery prevailed. Gomez, after sustaining one or two unimportant engagements with the columns operating in his vicinity, ordered his bands in detachments to proceed west and harass the Spaniards at every opportunity. With his escort and about 60 armed men he remained in the vicinity of La Reforma. On March 9 he was attacked by the Spaniards, and the American correspondent, Mr. C. E. Crosby, who arrived the day previous, was killed while watching the engagement.

During the latter part of the same month Gen. Quintin Bandera came from the east with about 250 negro followers, and, going around the trocha

by wading in the shallow water out at sea, joined Gomez at La Reforma. Ordered by the general in chief to proceed to the west, he went as far as the Trinidad mountains, but, failing to meet with support, he returned to the east of Sancti Spiritus, where he was reported killed at Pelayo on July 4. Gomez continued to camp in the vicinity, persisting in his usual bushwhacking tactics by sending a few men to check the enemy when attacked, while with the bulk of his force and *impedimenta* he would make his retreat through some narrow defile. To the east of the trocha the insurgents under Calixto Garcia took the town of Las Tunas after two days and two nights of fighting. The Spanish guerrilla force of 48 men was cut down after the capture of the town, the insurgents refusing to give quarter.

The insurgent bands in the provinces of Havana and Matanzas, constantly pursued by the Spanish troops, were badly broken up in the early part of the year. Gen. Lacret, who had commanded the Matanzas division of rebels, and who had done some hard campaigning, keeping several columns almost constantly upon his trail, was relieved of his command by Gomez. He was charged with being too lenient with the *pacificos*, refusing to execute all who were caught violating some Government decree. Gen. Alexander Rodriguez was sent to take command in the province, but he seems to have remained inactive, and the former force of Lacret, either failing to recognize him as their leader or without a competent one, were generally dispersed.

Mayia Rodriguez was ordered from the east to invade Matanzas and Havana provinces, but, unable to muster any considerable force, he was confined to the Sigüanea mountains in Las Villas by the Spanish troops.

Gen. José Maria Aguirre, commander of the Havana brigade, died of pneumonia, at Ceiba Mocha, in December, 1896, and his force separated into a number of small bands, the most important of which proved to be that commanded by Nestor Aranguren. On the night of Jan. 16 he derailed a train between Havana and the suburban village of Guanabacoa, taking prisoners ten unarmed Spanish officers and three Cubans. After conducting them to his camp in the vicinity of Jaruco, he set them all at liberty with the exception of two of the Cubans, whom he hanged as traitors. His action in releasing the Spanish prisoners created a great deal of favorable comment for the insurgents. As the year drew to a close, however, he executed the Spanish peace envoy, Lieut.-Col. Ruiz, who went to him from Gen. Blanco with propositions of Cuban autonomy.

In September, Gen. Adolfo Castillo, who commanded the insurgents in the south of Havana province, was killed, and his body brought to Havana. The bulk of his force, consisting of about 400 men, mounted and unmounted, was left in command of Juan Delgado. These pursued the usual tactics of keeping an outlook for the Spanish troops and running away upon their approach.

In October Gen. Parrado with five companies of cavalry and several of infantry left Havana, scouring the country without finding any trace of insur-

gents until in the vicinity of Los Palos, where he received word that a force under the command of the Cuervo brothers was in the vicinity. Negotiations were opened with them, which led to their surrender with forty men.

In the latter part of November Gen. Pando with a large force started from Havana to carry on operations in the east. He marched across that territory occupied by Gomez without meeting with any serious resistance, and when he reached the Rio Cauto his operations were checked by a scarcity of supplies.

The Question of Starvation.—As the atrocious deeds of Gen. Weyler's most favored lieutenants caused great feeling in the United States, so did his policy of concentration. Upon his arrival in Havana he issued a decree that all the peaceable inhabitants in the eastern provinces should concentrate within the Spanish fortified towns, but this



A BARRICADED STREET IN GUANABACOA.

order was not put into force, owing chiefly to the fact that the insurgents began to put into effect their policy of concentration in the invaded provinces. The insurgent chiefs drove all the noncombatants out of Pinar del Rio, except where the Spanish troops were able to defend them behind their trenches, and in the central provinces they made them citizens of the new republic or hanged them. During the summer of 1896 the suffering of the concentrated *pacificos* had already begun in those towns occupied by the troops, but little attention was given to the subject. Appeals were made to Gen. Weyler for their relief, but he refused to aid them till their sufferings were such that the municipal authorities toward the end of the year managed to supply the needy with daily rations. These were cooked in caldrons in the open streets and served to all comers, who carried the food away in whatever receptacle they might have at hand. When Weyler decided to take the field himself to operate against the insurgents under Maceo in Pinar del Rio he published his decree of concentration of Oct. 21, 1896. But in Pinar del Rio all the people except his avowed enemies had already concentrated. In the other provinces it was a fact well-known by the Spaniards that no one was allowed to remain outside their lines by the rebels unless there to help the cause of insurrection. Consequently Weyler's determination to allow no one to live outside the Spanish lines. Adjoining each city or town fields were marked

off, called zones of cultivation, and, as the name signified, the land was allotted to all *pacíficos* who chose to cultivate it. Eight days were given by Weyler in which everybody outside the lines must surrender or come in, at the end of which time those still remaining in the field would be treated as enemies to Spain. Weyler's plans were carried out with more or less faithfulness by his various officers. Gen. Moguizo, with his headquarters at Pinar del Rio, sallied out with his troops to destroy and kill, cutting a swath of devastation and fire through the fertile country. For the *pacíficos* he had no mercy, proclaiming them all rebels. On the other hand, Gen. Hernandez y Velasco pursued more moderate means of conquering his foes, absolutely refusing to kill his prisoners, and endeavoring to induce them to see the hopelessness of their struggle against Spain. Other officers operating under Weyler in Las Villas pursued a contradictory policy, some generals refusing to kill noncombatants, others killing all whom they could find except women and children.

The result was about the same, for hundreds of noncombatants were crowded into the towns and cities, and, being naturally an improvident people, and probably sick for their homes mid the green fields of the country, they refused to cultivate the zones allotted to them, and their situation was appalling in the extreme. Some died of pestilential diseases, others of starvation. Sensational reports were spread in the United States that many of them were American citizens, and on May 17 the President appealed to Congress to pass an immediate appropriation of \$50,000 for their relief. Congress voted the sum, and three months later Consul-General Lee at Havana reported that he had fed every distressed American that he could find, and had furnished transportation to those who wished it. Of the sum voted he had not expended \$10,000. Of the whole number of sufferers whom he had assisted 95 per cent. were naturalized Americans, most of them unable to speak English, and never having lived in the United States, they being the wives and children of men naturalized in this country.

At the beginning of the present year our Government issued an appeal to our citizens for contributions to aid the suffering people in Cuba, and Minister Dupuy de Lome announced that all supplies for the purpose would be admitted at Havana free of customs duties. The steamers plying between New York and Havana agreed to transport the supplies free of charge, and the authorities in Cuba announced that while they would accept such aid from the people of the United States as an inestimable benefit, they would not accept it as intervention in the internal affairs of Spain.

Reform Measures.—Although the insurgent leaders never claimed to be battling for reform, the position was taken at once that Cuba was very much in need of reform laws. Campos well understood that it was not the laws that needed reforming, but the administration, and it was this that he set out to do. Weyler was known to be an energetic officer of the mediaeval type, and by his resolute, hard campaigning he had won rank after rank and badge after badge, although it is said that his work was always marked with blood, fire, and desolation. Señor Canovas del Castillo was a firm believer in the generalship of Weyler, and his policy was to put down the insurrection by the force of arms, and talk of reforms after the power of Spain had made itself manifest. Gen. Weyler was the officer to carry out this policy, but instead of carrying it out by skilled military manœuvres and practical force of arms against the undisciplined bands that were surging over the island, his policy was one of destruction, starvation, and blood-

shed. If it had not been for the close proximity of the Cuban shores to the United States, it is probable that he would have been allowed to continue his work. But the very Spaniards in Cuba who had rejoiced upon Weyler's arrival at Havana, believing him to be the man of resolution needed to put down the uprising, finally protested at his ruthless measures. Canovas, nevertheless, was determined that Weyler should remain to the finish. But on Aug. 8 the Prime Minister was assassinated by an anarchist at Santa Agueda. Her Majesty then intrusted the presidency to Gen. Azcarraga, Minister of War, but it was understood that a more definite change would soon be made. Nothing appears to have been done in this respect until Sept. 29, when the resignation of the Spanish Cabinet was announced. Azcarraga was requested by the Queen to remain in office till the new ministry could be formed, headed by Sagasta, who took the oath of office Oct. 4. Señor Sagasta was the old Liberal leader in Spanish politics, and, though he was a firm friend of Canovas, his policy regarding Cuba was more on the lines of that pursued by Marshal Campos. His advent to power was well received throughout the peninsula, and Gen. Blanco was appointed to succeed Weyler. Blanco, before sailing, announced his policy to be the granting of reforms, fully as outlined by the Sagasta ministry. Upon his arrival at Havana he found the affairs of the island in the most deplorable state. Not only were the starving *pacíficos*, whom Weyler had huddled together in the towns and who had not already succumbed to their fate, crying out for relief, but the soldiers, who had not been paid for months, were scarcely in a better plight. Gen. Blanco immediately gave orders to abolish the concentration plan, declaring that it would never be his method of warfare, as he only intended to fight the enemy, and not the women and children. His Government authorized him to sign a credit of \$100,000 to be devoted to the relief of the suffering peasants, and the work of reconstruction was begun. All American citizens who were in prison, including the "Competitor" prisoners, were released, besides many others who had already been sentenced to death. A circular was issued asking all Cuban emigrants, whether they had exiled themselves for political motives or not, to return to the island. Measures of relief were actively pushed by Blanco, who ten days after his arrival, Nov. 11, signed a decree affording every facility for sugar-making and authorizing agricultural and industrial labor. The surcharge of 20 per cent. imposed by the railway companies was suppressed, as also the military measures concerning agricultural implements, which practically prohibited the Cuban peasant the use of his knife and *machete*.

Gen. Weyler left Havana immediately upon the arrival of Gen. Blanco and proceeded to Spain, where his presence created some agitation, but evidently he had failed to satisfy all his Spanish adherents, for several attempts to get up demonstrations in his favor met with poor results. Upon the publication of President McKinley's annual message to Congress, Gen. Weyler addressed a protest to the Queen Regent, which he allowed to be published in the paper adherent to his policy. For this act the papers were prosecuted and Weyler was summoned before the Supreme Court and afterward to the Captain General of Madrid.

The present year finds Gen. Blanco actively engaged in putting into effect the scheme of autonomy, with the home Government sincerely assisting him. Native Cubans have been appointed to the offices of civil magistrates, and a council has also been formed of prominent Cubans to assist in the government of the island. Another \$100,000 have

been appropriated by Spain for the relief of the *pacíficos*, and employment has been given to many by the rebuilding of the small towns that were destroyed by the insurgents in their raids during Weyley's régime.

Gen. Gomez from his various lurking-places to the east of Sancti Spiritus still bids defiance to the Spanish Government, with the statement that the Cubans will have independence or death, and all peace envoys are threatened with execution unless the peace they offer be based upon absolute independence. Aranguren, pursued by the troops under Gen. Parrado, has disappeared for the present from history, while Juan Delgado holds forth upon a ridge of country to the south of Havana, where he exists upon the vegetables planted within the zones

of cultivation and runs on the appearance of the troops. In Pinar del Rio the Ducasse brothers and the cruel Bermudez still hold forth in the hills, but without any formidable number of followers to offer material resistance to the troops. Baldomera Acosta, who formerly commanded a small force in the vicinity of Havana, which was most successful in alluding the vigilance of the troops, always avoiding an encounter with them, has made his escape from the island, while Pedro Diaz, who bravely rescued the body of his chief, Antonio Maceo, Pepe Roce, a prominent leader in the early part of the invasion, and many others have failed to turn up and give an account of themselves, while many of their followers, finding themselves without competent leaders, have surrendered.

D

DANA, CHARLES ANDERSON, an American journalist, born in Hinsdale, N. H., Aug. 8, 1819; died near Glen Cove, Long Island, N. Y., Oct. 17, 1897. He was descended from Jacob Dana, the eldest son of Richard Dana, who came from England and settled in Cambridge, Mass., in 1640. His boyhood was spent in Buffalo, where he worked in a store, and prepared himself for college. He entered Harvard in 1839, but after two years his eyesight became impaired and he was compelled to leave. Several years later he received the bachelor's and master's degrees. In 1842 he became a member of the Brook Farm Association, in Roxbury, Mass., which was formed to realize an ideal of social, intellectual, and philosophical life. His associates in this agricultural and educational experiment included Nathaniel Hawthorne, Margaret Fuller, George William Curtis, George and Sophia Ripley, William Henry Channing, Theodore Parker, and John Sullivan Dwight. The Brook Farm enterprise forms the basis of Hawthorne's "Blithedale Romance," but Hawthorne declares in his preface that none of his characters are portraits. In an address at Ann Arbor, Mich., in January, 1897, Mr. Dana gave his recollections of the experiment. He said:

"Charles Fourier was one of the greatest of theorists on the subject of social institutions and social progress. Fourier's arguments were very striking. In the first place there was the economy of the new system. You could lodge, feed, and clothe a thousand people in one great combined household much more cheaply than when each family had its own separate dwelling. The organization of the 'Brook Farm Institute of Agriculture and Education' was conceived in transcendentalism, and designed to carry on social life in accordance with democratic and Christian ideas. There had been all the time a notable agitation respecting the unsanitary habits of college students and of people who pursued literature and learning. The argument was, that while any one was pursuing philosophy and literature and philology and mathematics he ought to work on the land and cultivate the earth. But there was no communism about this life. Individual liberty and independence were strictly guarded. The only thing that had the appearance of communism was the common opportunity of education and a living at the same time. Nobody could get better board than all had. In reorganizing society and bringing it down to the new basis the teaching of Fourier, which we adopted, was that all industries should be carried on in groups and series. One group included the cooks, the waiters, the dish washers. They were organized, and worked to-

gether. I know that, because I was the head waiter. And it was great fun, I can tell you. There were seventy people or more, and at dinner they all came in and we served them. It is true that the theory was not always fully realized, but we realized a great amount of instruction and a great amount of satisfaction, and when we finally separated after the burning of our building, in which so much of our hopes had been centered, we went away each to begin life in the world again. I went to Boston to earn \$5 a week on a morning newspaper. We all began anew very soon, except Mr. Ripley. He remained and settled up the affairs, and when the business was closed up and all the accounts paid, as they were, we owed nobody a dollar."

Mr. Dana's first newspaper experience was gained in the management of the "Harbinger," which was devoted to general literature and reform; then he gave two years of editorial work to Elizur Wright's Boston "Chronotype," after which he joined the staff of the "New York Tribune," in 1847. In 1848, the year of European revolutions, he proposed going to Europe as correspondent of the "Tribune." Mr. Greeley opposed this project, saying, "Dana, that's no use. You don't know anything about European matters. You would have to get your education before your correspondence was worth your expenses." But Mr. Dana was determined to go, and Mr. Greeley agreed to pay him \$10 for one letter a week. In relating this episode in after years Mr. Dana said: "I went over and wrote one letter a week for the 'Tribune' for \$10, one to 'McMichael's Philadelphia North American Review' for \$10, one to the 'Commercial Advertiser' for \$10, and one to the 'Harbinger' and 'Chronotype' for \$5 a week each. That gave me \$40 a week for five letters, until the 'Chronotype' went up, and then I had \$35. On this I lived in Europe eight months, went everywhere, saw plenty of revolutions, supported myself there and my family in New York, and came home only \$63 out for the whole trip."

On his return to New York he became a stockholder in the "Tribune," and its managing editor. He held this place till 1862, and under his management the paper acquired a large circulation and extraordinary influence. This was the period when the antislavery struggle came powerfully into national politics and culminated in the civil war, and the "Tribune" was the foremost champion in the field of journalism of the free-State cause as against the repeal of the Missouri compromise and other aggressions of the proslavery party. The Republican party, whose chief characteristic was opposition to the spread of slavery into the Territories, was formed

in 1854, and this journal was its best-known and most powerful organ, not in the metropolis only, but, in its weekly edition, throughout the country. Henry Wilson, in his "Rise and Fall of the Slave Power," says that "at the outset, Mr. Greeley was hopeless and seemed disinclined to enter the contest. He told his associates that he would not restrain them, but, as for himself, he had no heart for the strife. They were more hopeful." Mr. Dana was not only the most hopeful but the most vig-

bration at Memphis. I remember it particularly because it was there that I first met Gen. Grant. The officers stationed in the city gave a dinner that day, to which I was invited. At the table I was seated between Grant and Major John A. Rawlins, of his staff. I remember distinctly the pleasant impression Grant made—that of a man of simple manners, straightforward, cordial, and unpretending. He had already fought the successful battles of Fort Donelson and Shiloh, and when I met him

was a major general in command of the district of West Tennessee, Department of the Missouri, under Halleck, with headquarters at Memphis. Although one would not have suspected it from his manners, he was really under a cloud at the time because of the operations at Shiloh. Those who did not like him had accused him of having been taken by surprise there, and had declared that he would have been beaten if Buell had not come up. I often talked later with Grant's staff officers about Shiloh, and they always affirmed that he would have been successful if Buell had not come to his relief. I believe Grant himself thought so, although he never, in any one of the many talks I afterward had with him about the battle, said so directly."

Afterward he was sent to the Western army, ostensibly as a special commissioner to investigate the pay department, but in reality to ascertain the truth about Gen. Grant, against whom there was a powerful conspiracy among certain military men who were jealous of his success and wanted to break him down. Mr.

Dana appreciated Grant's abilities and his value to the service, and his report had an important influence in defeating the conspiracy. Gen. Sherman says in his "Memoirs": "One day early in April, 1863, I was up at Grant's headquarters, and we talked over all these things with absolute freedom. Charles A. Dana, Assistant Secretary of War, was there, and Wilson, Rawlins, Frank Blair, McPherson, etc. We all knew, what was notorious, that Gen. McClelland was intriguing against Gen. Grant, in hopes to regain command of the whole expedition, and that others were raising clamor against Grant in the newspapers of the North. Even Mr. Lincoln and Gen. Halleck seemed to be shaken; but at no instant did we (his personal friends) slacken in our loyalty to him."

Mr. Dana was in the saddle at the front a large part of the time during the Vicksburg and Chattanooga campaigns, and again in the overland Virginia campaign; and as he had appreciated the abilities of Gen. Grant from the first, so he retained confidence in them to the end.

In 1865 Mr. Dana went to Chicago to take charge of a new paper, "The Republican," which was established with abundant capital and was expected to make itself the most powerful journal in the West. But there was disagreement as to its policy, and a year later he returned to New York. There he organized a stock company to buy "The Sun," of which he became editor, with absolute control of its columns. His first number was issued in January, 1868, and he was active as its conductor nearly thirty years. He made it independent, with Demo-



CHARLES A. DANA (FROM A WAR-TIME PHOTOGRAPH).

orous, and the energy displayed by the "Tribune" was mainly furnished by him. In 1861 he went to Albany to advocate the election of Mr. Greeley to the United States Senate, but Thurlow Weed brought about a union of Greeley's opponents, which gave the office to Ira Harris.

At the beginning of the civil war Mr. Dana made the "Tribune" as vigorous in support of the Union as it had been in opposition to slavery extension, and when the pressure for an early and active campaign toward Richmond had resulted in the disaster of Bull Run a large part of the popular reproaches fell upon that journal. The next year, as it became evident that he and Mr. Greeley could not agree concerning the proper conduct of military operations and the attitude of the paper toward them, he resigned his editorship, and soon afterward he was made Assistant Secretary of War. This brought him into close personal relations with President Lincoln and Secretary Stanton, who placed the utmost dependence upon his judgment and powers of observation, and for the greater part of the time till the close of the war he was kept at the headquarters of the great armies, to give the War Department accurate information of the state of affairs at the front. In his "Reminiscences," published in 1897, Mr. Dana gives this account of his first meeting with Gen. Grant:

"All the leisure that I had at Cairo I spent in horseback riding up and down the river banks and in visiting the adjacent military posts. My longest and most interesting trip was on July 4, when I went down the Mississippi to attend a big cele-

eratic proclivities, and put into it a force and spirit that challenged attention from the first; and it was universally identified with his own personality. It was absolutely fearless, and was often accused of bitterness and malignity. His criticisms of maladministration under the presidency of Grant were met by an attempt to take him from New York, on a charge of libel, and try him in a police court in Washington. But Justice Blatchford, of the United States District Court in New York, refused to issue a warrant for his removal, holding that the proposed form of trial was unconstitutional.

Mr. Dana was no mere figurehead in journalism. He was at his desk in "The Sun" office several hours every day, hard at work, and he declared that it was a constant amusement to him. His editorial rooms were exceedingly plain. He was always on familiar terms with his staff, and no one with any legitimate errand found difficulty in getting access to him.

Mr. Dana was fond of travel, and though he was seldom long absent from his post, his numerous trips enabled him to see a large part of the civilized world. He was an accomplished linguist, having a thorough knowledge of the French, German, Spanish, and Italian languages and literatures, and of the Scandinavian tongues. His wide scholarship, as well as his energy and shrewdness, constantly manifested itself in the columns of the journal that he edited. At one time he was an assiduous collector of books, and he secured many rare and interesting volumes. He took an interest in pictures, and he was an intelligent and judicious buyer at the art sales. He also gave considerable attention to porcelain, and made a thorough study of that branch of industrial art. For several years his summer home, Dosoris, on the northern shore of Long Island, has been noted for its col-

"New American Cyclopædia" (16 vols., 1857-'63), which they thoroughly revised and reissued under the title of "The American Cyclopædia" (1873-'76). Meanwhile Mr. Dana, who had an extreme fondness for poetry, and was always on the watch for new and genuine poetic genius, issued in 1857 his "Household Book of Poetry," the first anthology of its kind in this country (revised ed., 1882). He also edited, with Rossiter Johnson, "Fifty Perfect Poems" (1883). With Gen. James Harrison Wilson he wrote a "Life of Ulysses S. Grant." He wrote a few poems in his earlier days, some of which may be found in popular collections. In his later years he delivered addresses, which were published, notably those on "Journalism" and on Abraham Lincoln. His "Reminiscences of the Civil War" and his "Eastern Journeys" appeared posthumously.

Mr. Dana was a man of fine physique, and throughout his long and active career he enjoyed the best of health. He was enthusiastically fond of outdoor recreation. He was an expert horseman, a good judge of horseflesh, and likewise a good judge of all kinds of live stock. At one time he was a very ambitious and successful poultry fancier. Immediately after his death appeared innumerable anecdotes, with many elaborate eulogies and warm personal tributes. Whatever may have been thought of the sharpness and apparently unrelenting nature of his criticism as occasionally shown in "The Sun," Mr. Dana, to those who knew him personally, was one of the most charming of companions and one of the most faithful of friends. Of all his vast learning and experience, there appeared to be not one item that was not at instant command, and it would be difficult to mention any human activity in which he was not interested. He may have had prejudices; but his love of truth and his editorial instinct (using the word "editorial" in its widest



CHARLES A. DANA'S SUMMER HOME, NEAR GLEN COVE, L. I.

lection of plants. There is also a great and beautiful variety of trees—lindens, beeches, horse-chestnuts, firs, hemlocks, pines, and strange trees seldom seen in this country. Mr. Dana's first publications in book form were "The Black Ant" and "Annie and the Elves," two small volumes of stories translated from the German (1848 and 1852). In 1855 he planned and edited, with George Ripley, the

possible sense) dominated everything that passed through his mind. He did not merely edit a newspaper and a cyclopædia, he edited himself. A single anecdote may be recalled in illustration. He was supposed to have an unreasoning hatred of President Grant, whom "The Sun" certainly did criticize severely. But when one of Mr. Dana's subordinates, preparing a biographical article on Grant,

repeated, apparently from the best authorities, the alleged refusal of the army to obey an order for a second assault at Cold Harbor (the most damaging thing, if true, in the General's whole military career), Mr. Dana promptly struck it out in the proof, and wrote on the margin, "*This is not true.*" His last illness was painful, and confined him to his country home for several months. The funeral was attended by a large delegation from New York, which included many men of eminence and nearly all that remained of his associates of earlier days. His resting-place is in the cemetery that crowns the hill back of the Protestant Episcopal Church in Glen Cove.

DAUDET, ALPHONSE, a French novelist, was born in Nîmes, France, May 13, 1840; died in Paris, Dec. 16, 1897. He was the son of a poor tradesman, who gave him the best education he could afford. His boyhood was spent chiefly at Lyons, where he attended the *lycée*, which he left to become usher in a school at Alais. For about a year he did the drudgery of that humble calling, the butt of the scholars, who ridiculed him for his near-sightedness, and who also played all sorts of cruel tricks upon him. The misery of his life at Alais left a lasting impression on his mind, and he said long afterward that his sufferings there far exceeded any that he experienced later in Paris.



ALPHONSE DAUDET.

Leaving Alais when but seventeen years old, he set out for Paris with his brother Ernest, hoping to earn a livelihood by the aid of his pen. On their arrival in the French capital both found employment with the Comte de Morny (sometimes styled Duc de Morny), at that time president of the Corps Législatif, whom Alphonse Daudet was accused of lampooning somewhat later in his novel "*Le Nabab*." The book created such heated discussions in French literary journals on account of this that Daudet wisely silenced the clamor by declaring in a new edition that he had not attempted to pasquinade any prominent character of the empire.

Daudet's first literary effort was a volume of verse, "*Les Amoureuses*" (1858), which contained an exquisite *fantasie* entitled "*Prunes*." The book was well received, and several of the newspapers threw open their columns to his contributions.

Under the title of "*Les Gueux de Province*" he described vividly, in "*Figaro*," the unhappy experiences of the ushers in the provincial schools, and he followed this by a poem, "*La Double Conversion*" (1861). In 1863 he published "*Le Roman du Chaperon Rouge*," a collection of articles that he had contributed to "*Figaro*."

Daudet also wrote for the stage, and although his fame is derived chiefly from his novels, he became well known as a dramatist. In 1862, in collaboration with Ernest Lépine, he presented at the Odéon Theater "*La Dernière Idole*," which was followed by "*Les Absents*," originally written for the Comédie Française, and produced at the Opéra Comique. His next production, originally named "*Le Lys*," was brought out at the Comédie Française in 1865, under the title of "*L'Œillet Blanc*," and was followed by "*Le Frère Aîné*" in 1868. "*Le Sacrifice*," a melodrama, was put on at the Vaudeville in 1869, and was uniformly praised by the press. Among his less successful plays were "*L'Arlesienne*," produced at the Vaudeville Theater, for which he wrote incidental music, and "*Lise Tavernier*" at the Ambigu in 1872. Subsequently he dramatized two of his novels, "*Numa Roumestan*" and "*Sapho*." The latter, in which Mme. Réjane played a leading part, was immensely popular. These were followed by "*L'Obstacle*" and "*La Lutte pour la Vie*."

Much of Daudet's best work first appeared in the Parisian newspapers, and he contributed regularly to "*Figaro*," the "*Moniteur Universel*," the "*Monde Illustré*," and "*L'Illustration*." In 1869 he collected and published his "*Lettres de Mon Moulin*," a masterpiece of pathos and irony, when the gathering war clouds interrupted his work. During the siege of Paris by the Germans in 1870 he was very active in forming companies to take part in the defense of the city, and was also engaged with the troops in several sorties. In 1871 he issued "*Lettres à un Absent*," "*Robert Helmont*," and "*Contes du Lundi*," the latter having appeared in "*Figaro*" under the pen name Gaston-Marie. He signed his verse for his journal Jehan Froissart. Subsequently he published several novels, short stories, and collections either under his own name or under the pen name Baptistet. His charming extravaganza "*Tartarin de Tarascon*," which exhibits his lightest and gayest humor, was issued in 1873, and was followed by "*Le Petit Chose*" (reminiscent of his days at Alais), "*Tartarin sur les Alpes*," "*Jack: Histoire d'un Ouvrier*," and "*Les Femmes d'Artistes*." But his best work, "*Fromont Jeune et Risler Aîné*," saw light the following year. For this he received the Jouy prize of the Académie Française, a body for which, in later years, he showed supreme contempt. Some time in 1874 he became one of the editors of the "*Journal Officiel*," a sinecure that gave him ample time to pursue his literary labors. In 1877 he published "*Les Contes Choisis*" and "*Le Nabab: Mœurs Parisiennes*." "*Les Rois en Exil*" appeared in 1879. In the course of a review of his brother's book, "*Mon Frère et Moi: Souvenir d'Enfance et de Jeunesse*," in the "*Atlantic Monthly*" for June, 1882, Henry James, Jr., said: "Alphonse Daudet is a passionate observer—an observer not perhaps of the deepest things in life, but of the whole realm of the immediate, the expressive, the actual. This faculty, enriched by the most abundant exercise and united with the feeling of the poet who sees all the finer relations of things and never relinquishes the attempt to charm, is what we look for in the happiest novelist of our days. Ah, the things he sees—the various fleeting, lurking, delicate, nameless, human things! This beautiful vivacity finds itself most complete in '*Les Rois en Exil*,' a book that could have been pro-

duced only in one of these later years of grace. Such a book is intensely modern, and the author is in every way an essentially modern genius. With the light, warm, frank, Provençal element in him, he is, in his completeness, a product of the great French city. He has the nervous tension, the intellectual eagerness, the quick and exaggerated sensibility, the complicated, sophisticated judgment, which the friction, the contagion, the emulation, the whole spectacle, at once exciting and depressing, of our civilization at its highest, produces in susceptible natures. There are tears in his laughter, and there is a strain of laughter in his tears, and in both there is a note of music."

In 1883 Daudet fought a duel with Albert Delpit, who had accused him of "disinterring the style of Chateaubriand, of lack of imagination, and of not knowing even how to write." In this encounter M. Delpit was wounded in the arm. The same year Daudet published "Numa Roumestan," in which, it is said, he introduced Léon Gambetta, and "L'Évangéliste," a romance treating of the Salvation Army. He surprised Paris in 1884 with "Sapho," which was dedicated to his son on his attaining his majority. The sensation that this book created was due partly to its being out of the author's usual line, and its dedication did not tend to abate the astonishment, which had scarcely died out when "L'Immortel" was put on the market (1888). In this work Daudet exercised all his marvelous power of ridicule in an attack on the Académie Française. Under a thin disguise he mercilessly satirized the members of that august body, and declared that the Academy itself was "a hollow idol—nothing—the under side of nothing." By doing this he cut off all chance of admission to that body; yet his recent enthusiasm for the establishment of the De Goncourt Academy seems to indicate that he was not altogether opposed to academies.

Émile Zola considers "Numa Roumestan" the one of all Daudet's productions that is most personal to himself. Of this work and of him as a writer Zola says: "He has put his whole nature into it, helped by his southern temperament, having only to make large drafts upon his most intimate recollections and sensations. I do not think that he has hitherto reached such an intensity either of irony or of geniality. Happy the books which arrive in this way at the hour of the complete maturity of a talent! They are simply the widest unfolding of an artist's nature; they have in happy balance the qualities of observation and the qualities of style."

In later years he wrote several books of a more serious nature, and his "Trente Ans de Paris" and "Souvenirs d'un Homme de Lettres" are among these. The former work treats of the struggles of his early literary career; the latter is reminiscent of more prosperous times. They appeared in 1888, and in 1890 he published "Port Tarascon, Dernières Aventures de l'illustre Tartarin." "Rose et Ninette," a pitiful story of the disposition of two children of divorced parents, was issued in 1892, and was followed in 1895 by "La Petite Paroisse," which exhibits the author's finest qualities. In 1894 Daudet wrote a charming preface to Gonzague Privat's romantic story "Joie Perdue," and in 1896 produced another novel, "Soutien de Famille." At the time of his death he was collaborating with M. Léon Henricque on a new work.

As a man, Daudet was the most accessible, never turning a visitor, no matter how obtrusive, from his door. As a worker, he was spasmodic, but when once started he would work as many as eighteen hours a day. He wrote slowly and laboriously, and seemed never satisfied with his work until he

had revised and rerevised it time and again. He belonged to the naturalistic school in French fiction. With Coppé, de Maupassant, Renan, and Zola he stood in the foremost rank of French literature of the present day. Most of his novels are marked by keen observation and brightness, but some of his later works contain many overdrawn pathetic scenes. His characters are generally from life, and he made no attempt to conceal the fact. He has been quoted as saying that rather than cease to work in that way he would cease to write. Daudet was happy in the choice of his characters, and had the art of making his reader feel a sympathy with them. He portrayed the higher culture of the social system, and at one time was called "the novelist of elegant aristocratic society." He kept closer to the ideals of Flaubert than the rest of his contemporaries, and was not an extremist. He became a classic in his native language, and a model whose lucidity and style are the envy of writers in other lands. Anatole France says: "The style of Alphonse Daudet is that of a light, supple *raconteur*. His sentences are subtle and sometimes end abruptly, yet, when they do, one feels that they end in the smile or jest of the narrator. I am not always sure that they are well formed, but they flow and sparkle. In picturesque language he excels." Daudet was a master in poetry, fiction, and the drama, and in each of these fields he has left several masterpieces.

DELAWARE, a Middle Atlantic State, one of the original thirteen; ratified the Constitution Dec. 7, 1787; area, 2,120 square miles. The population, according to each decennial census, was 59,096 in 1790; 64,273 in 1800; 72,674 in 1810; 72,749 in 1820; 76,748 in 1830; 78,085 in 1840; 91,532 in 1850; 112,216 in 1860; 125,015 in 1870; 146,608 in 1880; and 168,493 in 1890. Capital, Dover.

Government.—The following were the officers during the year: Governor, Ebe W. Tunnell; Secretary of State, William H. Boyce, succeeded, on his appointment to the bench, in June, by James H. Hughes; Treasurer, William M. Ross; Auditor, B. L. Lewis; Attorney-General, Robert C. White; Adjutant General, Garrett J. Hart; Insurance Commissioner, Edward Fowler; Agricultural Inspector, E. H. Bancroft—all Democrats; Chancellor, John R. Nicholson; Chief Justice of the Supreme Court, Charles B. Lore; Associate Justices, William C. Spruance, Ignatius C. Grubb, James Pennewill, and William H. Boyce, appointed in June, when, according to the revised Constitution, the Court of Errors and Appeals was abolished and the Supreme Court was established. Up to that date Charles M. Cullen and David T. Marvel served as associate judges of the former court together with the two first named above.

Finances.—The statement of the liabilities and assets of the State at the beginning of the year gave: Total liabilities, \$719,750; total assets, \$1,024,452; investment assets in excess of liabilities, \$304,702. The State property has been increased during the past few years by buildings aggregating a value of \$130,000, including the Insane Hospital, the library addition to the State house, and the armory in Wilmington. The expenses of the State in 1896 were about \$426,000.

Education.—Delaware College held its fifty-second annual commencement June 16. The total enrollment in 1896-'97 was 77. The enrollment for 1897-'98 had reached 89 in October; of these, 33 were freshmen. The faculty consists of 10 professors and 3 instructors. To the six courses heretofore offered a seventh, called the general science course, has been added. The entrance requirements have been raised, and the range of elective studies enlarged. A special short course in agriculture,

January to March, was inaugurated this year. Tuition has been made free to all students belonging in the State. Peter B. Ayars has been appointed to look after military instruction in the schools of the State, and expects to introduce military drill into all the public schools.



EBE W. TUNNELL, GOVERNOR OF DELAWARE.

Charities.—A committee of the Legislature appointed to examine the affairs of the State Insane Hospital reported May 7. The following items are from the report: There are 153 male and 105 female patients in the institution. The total number of employees, exclusive of the superintendent and his assistant, is 36, the male attendants in the wards receiving \$19 a month and the female attendants \$14 a month. The average daily cost for each patient is about 42 cents. The increased appropriation asked by the Board of Trustees is largely accounted for by the fact that the large annex will make it necessary to employ from 12 to 14 extra attendants, and the extra lighting, heating, etc., will entail more expense. It was recommended that imbecile patients be returned to their counties, and that an adjacent tract of 36 acres be bought for raising vegetables for the institution. The annex referred to above was finished this year.

The State Industrial School for Girls has been in operation more than three years, and now has 20 inmates. A grade system has been adopted, and promotion depends upon conduct. The grades are denoted by ribbon badges of various colors, and a silver medal marks the grade of trust and honor. For those who have remained long enough in this grade to justify their doing so, the committee find suitable homes and a visiting committee continues to exercise care over them.

Railroads.—The new Queen Anne Railroad was formally opened April 8 from Greenwood to Queens-town, Md.

The report of the treasurer of the Delaware Railroad Company in January showed: Gross earnings for the year, \$1,296,358.64; net earnings, \$443,-

274.82; surplus, \$254,619.03. Compared with 1895 the total increase was \$37,328.69. The lease to the Pennsylvania road was renewed in May for thirty years on the same terms as heretofore.

A new road, the Delaware Central, is proposed to run between Lewes and Scaford.

The Wilmington and Northern Railroad Company reported in May: Gross earnings, \$463,726; operating expenses, \$397,500.

Harbor Improvement.—The annual report of the chief of engineers, United States army, in October, has the following account of improvements to navigation in the Delaware:

"The work on the ice harbor at Marcus Hook, which was begun in 1866, has cost \$211,584.28. The object of the improvement is to provide a harbor to protect vessels against moving ice.

"The total expenditures to June 30, 1897, on the construction of a landing pier 1,700 feet long, extending into the Delaware Bay, opposite the breakwater, were \$378,500. The work was begun in 1880. The pier is of great use for the purposes of the engineer, lighthouse, and quarantine services. Since 1828, when work on the Delaware Breakwater was begun, \$2,721,992.14 has been expended on the project."

Mineral Oils.—The export of mineral oils from the customs district of the State in 1896 amounted to 92,032,487 gallons, valued at \$4,723,005. During the year ending June 30, 1897, it was 95,049,253 gallons, valued at \$4,611,500.

State Boundaries.—A decision was made in February in a case involving the line between Pennsylvania and Delaware, that the new boundary can not be treated as legal until the work of the Boundary Commission has been ratified by the Legislatures of the two States and approved by Congress. A case involving the boundary line between New Jersey and Delaware, which has been on the Supreme Court of the United States docket for twenty years, was revived in that court, Oct. 12, by the entering of a motion by the Attorney-General of New Jersey for a decree in the interest of that State. The proceeding looking to the definite establishment of the line had been instituted in March, 1877, and had been postponed by stipulation from one term of the court to another. Senator Gray said the fact of the long pendency of the case was significant of the real disposition of the two States—that they did not desire to bring it to an issue. He suggested another continuance of the case until the beginning of the next term of the court, with the understanding that if in the meantime the case was not settled by the two States it should be taken off the docket. This solution was accepted. The case involves the control of fishing rights in Delaware river.

Constitutional Convention.—This body began its sessions Dec. 1, 1896 (see "Annual Cyclopaedia" for 1896, page 241), and adjourned June 4, 1897.

The 5 Union Republican members from Kent County who at first declined to take their seats finally decided to accept the places allotted to them. Their contention was that if they were elected their 5 colleagues on the Union Republican ticket were also elected, and that all 10 should be made to fare alike—either be seated or rejected—while the convention had decided to settle the contest by admitting 5 from each of the contesting parties.

June 10, 1897, was the date fixed for the amended Constitution to go into effect. The convention decided, by a vote of 20 to 6, to promulgate it instead of submitting it for ratification to a vote of the people.

The number of Representatives was fixed at 35, and that of Senators at 17. The provision of the old Constitution that a Senator must have a free-

hold estate of 200 acres of land in his county, or an estate of the value of at least £1,000, was omitted. The *per diem* allowance of the presiding officers was fixed at \$6, and that of other members at \$5, and the session for which pay is allowed is limited to sixty days. The cost of stationery and other supplies is limited to \$25 for each member at a regular and \$10 at a special session. An apportionment of Legislative districts was included in the article on the legislature. Other additions to this article were:

"No bill or joint resolution, except bills appropriating money for public purposes, shall embrace more than one subject, which shall be expressed in its title.

"Lotteries, the sale of lottery tickets, pool selling, and all other forms of gambling are prohibited.

"No divorce shall be granted, nor alimony allowed, except by the judgment of a court, as shall be prescribed by general and uniform law.

"The General Assembly shall not pass any local or special law relating to fences; the straying of live stock; ditches; the creation or changing the boundaries of school districts; or the laying out, opening, alteration, maintenance, or vacation, in whole or in part, of any road, highway, street, lane, or alley.

"Any member of the General Assembly who has a personal or private interest in any measure or bill pending in the General Assembly shall disclose the fact to the House of which he is a member and shall not vote thereon.

"No person who shall be convicted of embezzlement of the public money, bribery, perjury, or other infamous crime shall be eligible to a seat in either House of the General Assembly, or capable of holding any office of trust, honor, or profit under this State.

"Every person who shall give, offer, or promise, directly or indirectly, any money, testimonial, privilege, personal advantage, or thing of value to any executive or judicial officer of this State or to any member of either House of the General Assembly for the purpose of influencing him in the performance of any of his official or public duties shall be deemed guilty of bribery."

Among the changes in regard to the executive department, the Governor is made ineligible for a third term instead of a second, as formerly. His appointment of the Secretary of State need be confirmed by the Senate, and, except as specially provided, such confirmation of appointments to office shall be required only when the emoluments of the office exceed \$500. The Governor has the power to veto, but an act may be passed over the veto by a three-fifths vote of each house. If a bill is not returned by the Governor within ten days, it becomes a law as if signed, unless its return is prevented by adjournment, in which case it does not become a law without the Governor's approval. The office of Lieutenant Governor is created. In case of the inability of both Governor and Lieutenant Governor, the duties of Governor devolve upon the Secretary of State; in case of his inability, upon the Attorney-General, next upon the president *pro tempore* of the Senate, next upon the Speaker of the House. The Attorney-General and the Insurance Commissioner, whose terms are four years, and the Treasurer and Auditor, whose terms are two years, are to be chosen by the people at general elections. Other officers to be so chosen are prothonotaries, clerks of the peace, registers of wills, recorders, registers in chancery, and clerks of the Orphans' Court, whose terms are four years, and sheriffs and coroners, whose terms are two years. Sheriffs may not be elected twice in any term of four years.

The Court of Errors and Appeals is abolished,

and the Supreme Court is established, consisting of a chancellor, a chief justice, and four associate justices; there must be one associate justice at least from each county. All these judges are to be appointed by the Governor, with the consent of the Senate, for twelve years; and no more than three of the five law judges shall be of the same political party. The salaries are to be not less than \$3,000.

An educational test is required of voters, the section on elections providing that no one may have the right to vote unless he can read the State Constitution and write his name. It is also provided that any person who shall attempt to bribe a voter or in any way interfere with the lawful expression of the people's will at the ballot box shall be subject to a fine of \$100 to \$5,000 or imprisonment for one month to three years, or both, with disfranchisement for ten years in certain cases. There is to be a uniform biennial registration of qualified voters, and a registration fee of \$1 is prescribed.

The clause in the old Constitution prohibiting clergymen from holding civil office while in the exercise of clerical functions is omitted.

The Board of Pardons is to consist of the Chancellor, Lieutenant Governor, Secretary, Treasurer, and Auditor of State.

A State Board of Agriculture is created, of 3 commissioners, 1 from each county, appointed by the Governor with consent of the Senate. The Legislature is to fix the compensation, and may abolish the board after eight years.

For the purpose of providing for local option the State was divided into 4 districts.

The General Assembly is to provide for levying and collecting poll taxes, to be used exclusively in the county in which they are collected.

The section on education provides that in apportionment of school moneys no distinction shall be made on account of race or color, and separate schools for white and colored children shall be maintained. No such moneys may be used by or in aid of any sectarian church or denominational school: and property used for school purposes shall be exempt from taxation for public purposes.

Legislative Session.—The General Assembly met Jan. 5 and continued in session till May 29, when a recess was taken till Jan. 11, 1898, in order that any business necessitated by changes in the Constitution might be done before the next regular session. Hezekiah Harrington was elected Speaker of the Senate, and Emory B. Riggin Speaker of the House.

Gov. Tunnell was inaugurated Jan. 19. The caucus of Democratic members nominated, on the twenty-fifth ballot, Richard R. Kenney for United States Senator for the unexpired part of the term which began March 3, 1895, Willard Saulsbury receiving 8 votes and James L. Wolcott 3. Mr. Kenney was elected Jan. 19. He was seated and sworn in Feb. 5, Mr. Chandler having said that no objection would be made to the swearing in of Mr. Kenney on the credentials now presented. He believed, however, that the seat should be filled by Mr. Du Pont, who, in the judgment of the Senator, was legally elected to the Senate. If, however, Mr. Du Pont had not been elected, then, in the judgment of Mr. Chandler, the Legislature that named Mr. Kenney was not legally constituted, as its organization was attended with fraud and irregularity. These matters would be brought before the Senate at a later stage and a full hearing asked. Mr. Chandler's statement brought the contest to an unexpected close. Senator Hoar spoke to the same effect, with the further statement that the Du Pont case could not be reopened, having once been passed upon by the Senate.

The Legislature elected William M. Ross State Treasurer, and B. L. Lewis State Auditor.

A so-called "rump" Legislature was organized by the Kent and Sussex Republican candidates who claimed to have been elected in 1896, with Thomas C. Moore as Speaker. This body elected J. Edward Addicks as United States Senator, and the certificate of his election was taken to the Governor, who refused to sign it. C. H. Atkins was chosen for State Treasurer and Beniah Watson for Auditor. An adjournment was taken *sine die* Jan. 21, after the adoption of a manifesto of which the following is a part:

"When, as now in Delaware, all the destructive influences of corrupt politics have conspired to completely overthrow the will of the people as expressed at the ballot box; have inaugurated a revolutionary government; have organized an illegal constitutional convention in which are seated men who were not elected; a constitutional convention which proposed to abolish trial by jury, and which will proclaim and impose a new organic law for the State, made by delegates who were not sworn to observe or respect any form of law or constitution without submitting it to the people for ratification; have organized a General Assembly, in both houses of which are members whose seats are held by fraudulent titles; and when these revolutionary bodies are in possession of the Capitol of the State to the exclusion of the citizens who were rightfully chosen by the people to represent them in those bodies, it becomes the duty of every citizen whose public spirit is not in its decadence, whose energy and courage have not been paralyzed by the poison of political corruption and fraud, to protest against such destructive invasions of the common and sacred rights of free citizenship.

"When the rightfully elected representatives of the people are evicted by fraud from the legislative bodies to which they have been elected, the eviction does not absolve them from the discharge of the duties imposed upon them by the people.

"We therefore, the representatives of the people of Delaware, in General Assembly convened, having to the best of our ability under the adverse conditions to which we call attention in this declaration of warning and protest, averring the truth of all which we have herein set forth and declared; appealing to the Supreme Judge of the world for the rectitude of our intentions, do in the name of the people of Delaware appeal to the Congress of the United States for the fulfillment to the State of Delaware of the United States Constitution guarantee of a republican form of government to each of the States of the Union."

An act called the Adams bill, for the taxation of investments, designed to place the burden on owners and investors, was one of the chief measures of the session. The preamble says, "The present system of taxation is unjust and oppressive, in that it taxes most the property least profitable, and relieves altogether that which produces the greatest income." Investments taxed in any other State are exempt. It is provided that "each and every debtor by bond, judgment, mortgage, recognizances, decree, or otherwise (whose debt is liable to taxation under this act), when the creditor is a nonresident of the county or State, shall be liable for the tax on his debt, in the first instance; but upon payment thereof he shall be entitled and it shall be his duty to deduct the same from the interest due or accruing thereon; and any such creditor refusing to allow such credit on taxes so paid shall forfeit all accrued interest; and no debtor shall remit or make any payment to his creditor out of the State until the tax imposed upon his said debt by this act has been paid." Of the moneys collected under the act, one fourth is to go to the State and the remainder to the county in which they are collected.

"An Act in relation to foreign corporations" requires all such corporations to file with the prothonotary of each county a certificate "designating the name of some person or agent within the State upon whom service or process may be made." Its object is to oblige these corporations to defend in the State the contracts made there.

Some important changes were made in the ballot law "to provide further for the purity and secrecy of the ballot." The office of voters' assistant was abolished; but any person physically unable to prepare, stamp, or fold his ballot may take into the booth with him another elector of the district, who is forbidden under penalty to disclose anything regarding the vote of the person so assisted. The small squares on ballots are done away with. No person not nominated for an office may be voted for for that office. Challengers named by the two parties are to be peace officers with the same powers for preserving the peace that inspectors of election have. The county committees of the Democratic and Republican parties in each county shall name and select each a judge of election for each election district outside of the city of Wilmington, who shall be appointed and qualified at the time and perform the duties as now provided by law of judges of election in the districts for which they are chosen, respectively. The Democratic and Republican county committees may each select and designate one suitable, reputable, and sober person as a special officer to stand at the entrance of the polling place, to be not less than 30 feet away from the entrance to the voting room as now provided by law to regulate the admission of persons to the polling place, and while so stationed and performing their duties as herein provided, the persons so designated shall be clothed with all the powers of officers of the peace. The penalty for violation of any of the provisions of the act by any officer of election, where no other punishment is already provided for by law, is to be a fine of \$300 to \$500 and imprisonment at the discretion of the court for not more than two years.

The returning-board law providing for the canvassing of the vote in the three counties was repealed, and it is now provided that future returning boards shall be composed of the resident judge of the county, the sheriff, and the register of wills, and on the inability of the register of wills to serve, the prothonotary. The object of this measure was to shut off further litigation on the action of the Kent County returning board at the election of 1896.

A new law was made for the maintenance, discipline, and regulation of the State militia. It provides for one regiment of infantry, doing away entirely with the cavalry companies. The Governor, as commander in chief, shall have power, in case of war, invasion, insurrection, riot, or imminent danger, to increase the force and organize it as necessary, but the increase shall be disbanded as soon as the emergency ceases.

The law in regard to the collection of poll taxes was amended. Following is a section of this law: "If any person against whom a poll tax is assessed in accordance with the provisions of this act shall neglect or refuse to pay the same within thirty days after demand, the collector shall again demand the same of such person, together with 30 cents for the cost of such demand; and if any such person upon whom second demand is made as aforesaid shall neglect or refuse to pay such tax or taxes, together with the costs of making such second demand, within five days after the date of such second demand, then the collector of taxes shall seize upon the body of such person and commit him to the jail of New Castle County, there to remain until he shall pay such tax and all legal costs."

Among other bills passed were these:

To prevent the spread of the San José seale in the orchards of the State, providing for the appointment of an inspector.

Opening Blake's channel to oystermen throughout the year.

Appropriating \$75,000 to the State Insane Hospital.

Appropriating \$4,000 for the State College for Colored Students.

For the protection of employees in New Castle County.

For the preservation of the old Latin Bible.

For the protection of oysters and sturgeon.

To promote and improve the colored schools.

To refund a portion of the State debt.

To equalize taxation for State and county purposes.

For graded licenses on grain distilleries.

Amending the charter of Wilmington.

Providing a new primary-election law for New Castle County.

Providing for the attendance of newspaper correspondents at executions.

Amending the health laws of Wilmington.

Providing for the payment of costs in cases of misdemeanor by the prosecuting witness when bills are returned ignored by the grand jury, the jury to decide whether the witness or the county shall pay, and similarly in cases of acquittal by justices of the peace, municipal judge, or petit jury.

A joint resolution expressing sympathy for the people of Cuba was passed.

The cost of the session was about \$23,000.

Political.—In the Kent County election cases the Court of Errors and Appeals reversed the decision of the Superior Court, deciding in favor of the Democrats; but in May the Chief Justice of the Supreme Court delivered a decision in favor of the Republicans, ordering the canvassers to reconvene and count the vote again.

The Union (Addicks) Republicans held a State convention at Dover, Nov. 4. The chairman said in relation to the object of the convention:

"You are aware that a recent constitutional convention changed the political conditions of the State so much that it is necessary to make new rules before entering upon another campaign. That is one reason for this convention, and the other reason is that because we polled 13,000 Republican votes, two thirds of the Republican votes of the State, the responsibility of that 13,000 votes places upon us the leadership of the Republican party in the State. To lay down this leadership would be for the Union Republicans to sacrifice their manhood. To continue this organization means ultimate Republican success in the State."

New rules were adopted and the proportion of representation was changed. It was provided that the State convention should consist of 185 delegates of whom 85 are appointed to New Castle County, and 50 each to Kent and Sussex. Wilmington's representation is 35.

DENMARK, a kingdom in northern Europe. The legislative body, called the Rigsdag, is composed of the Landsting and the Folkething. The Landsting is the upper house, consisting of 66 members, of whom 54 are elected by the highest taxpayers in the country, delegates elected by the same class in the towns, and delegates elected by the general body of electors, and 12 are appointed for life by the Government. The Folkething, or popular assembly, is composed of 114 members elected for three years by the direct suffrage of all male citizens thirty years of age who are not recipients of public charity, unless they have repaid all sums received, or are not in private service

without households of their own, and who have resided twelve months in the same electoral district. The reigning sovereign is Christian IX, born April 18, 1818, son of Duke Wilhelm, of Schleswig-Holstein-Sonderburg-Glücksburg, who was made successor to the throne by the Treaty of London, in 1852, and succeeded Frederik VII, the last King of the Oldenburg line, on Nov. 15, 1863. The heir apparent is Prince Frederik, born July 28, 1843.

The Cabinet at the beginning of 1897 was composed as follows: President of the Council and Minister of Foreign Affairs, Baron Reedtz-Thott, appointed Aug. 7, 1894; Minister of the Interior, H. E. Hoerring, appointed in January, 1894; Minister of Justice and Minister for Iceland, N. R. Rump, appointed June 13, 1896; Minister of Finance, C. D. Lüttichau, appointed Aug. 7, 1894; Minister of War, Col. J. G. F. Schnack, appointed April 25, 1896; Minister of Marine, Vice-Admiral N. F. Ravn, appointed Jan. 4, 1879; Minister of Public Instruction and Ecclesiastical Affairs, V. Bardenfleth, appointed Aug. 7, 1894; Minister of Agriculture, K. Schested, appointed May 22, 1896.

Area and Population.—The area of Denmark is 15,289 square miles, and the population in 1890 was 2,185,335, of whom 312,859 lived in the city of Copenhagen, within a space of 8 square miles; 917,401 in the islands of the Baltic, 5,024 miles in area; 942,120 on the peninsula of Jutland, of which the area is 9,743 square miles; and 12,955 in the Färøe Islands, 514 square miles in extent. The number of marriages in 1894 was 15,687; of births, 69,977; of deaths, 41,185; excess of births, 28,792. The emigrants, nearly all of whom go to the United States, numbered 3,607 in 1895 and 4,105 in 1894. Education has been compulsory since 1814. Children are kept in school from seven to fourteen years of age. The schools, which are maintained by local taxes, number 2,940, with 231,940 pupils in 1896. The state grants 300,000 kroner a year to 67 high schools and 21 agricultural schools, and 109,000 kroner to 72 trade and commercial schools, and supports the University of Copenhagen, which has 1,300 students.

Finances.—The revenue for the year ending March 31, 1896, was 79,051,735 kroner (1 krone = 26.8 cents), and the expenditure 74,470,636 kroner. For 1897 the revenue was estimated at 67,423,955 kroner, and the expenditure at 67,419,059 kroner. The budget for 1898 makes the revenue 66,634,597 kroner, of which 10,182,550 kroner come from direct taxes, 43,455,400 kroner from customs, excise, and other indirect taxes, 201,140 kroner from posts and telegraphs, 1,390,000 kroner from profits of lotteries, 765,157 kroner from balance of domain revenues, 722,275 kroner from separate revenues, 4,332,467 kroner from interest on state assets, and 5,585,608 kroner from employment of property and funding of debt. The total expenditure is estimated at 64,986,020 kroner, divided as follows: Civil list and appanages, 1,155,200 kroner; Rigsdag and Council of State, 319,016 kroner; interest and expenses of the state debt, 6,973,370 kroner; military, invalid, and civil pensions, 3,197,178 kroner; Ministry of Foreign Affairs, 618,656 kroner; Ministry of Agriculture, 2,196,705 kroner; Ministry of the Interior, 4,433,382 kroner; Ministry of Justice, 4,315,761 kroner; Ministry of Worship and Education, 4,109,654 kroner; Ministry of War, 10,066,924 kroner; Ministry of Marine, 6,719,791 kroner; Ministry of Finance, 3,686,623 kroner; Iceland, 81,764 kroner; extraordinary expenditure, 4,629,474 kroner; improvement of state property and reduction of debt, 12,482,522 kroner. The state reserve fund for extraordinary emergencies on March 31, 1896, amounted to 17,863,517 kroner. The public debt at that date stood at 199,061,871 kroner,

having been reduced 9,366,155 kroner during the year. The foreign debt, most of which pays 3 per cent. interest, amounted to 66,532,500 kroner. The investments of the state (including the reserve fund, but not the domains nor the state railroads), amounted to 57,232,857 kroner on March 31, 1896.

The Army.—All young men fit for military duty are liable to serve from the age of twenty-two for eight years in the regular army and reserve and eight years more in the extra reserve. The amount of training required of them is six months for the infantry, eight months for the cavalry, and three months for the artillery and engineers, with supplementary drill for those who have not become proficient in the first period, lasting eight months for the infantry, eleven months for the cavalry, and twelve months for the artillery and engineers. The strength of the regular army in 1895 was 751 officers and about 10,000 men. The war effective is 1,352 officers and 45,910 men, besides the volunteer corps, numbering about 14,000 men, and the extra reserve of about 16,500 officers and men.

The Navy.—The navy is one of considerable strength for defensive purposes. Appropriations of 6,000,000 or 7,000,000 kroner a year for the maintenance and improvement of the fleet have brought it to a higher state of efficiency in recent years. It consists of 1 battle ship of 5,300 tons, 3 port-defense ironclads, with another building, 3 armored cruisers of the first, 1 of the second, and 16 of the third class, and 7 torpedo boats of the first, 3 of the second, and 2 of the third class, with 2 first-class torpedo boats and 4 destroyers building. Copenhagen is completely fortified on the seaward side.

Commerce and Production.—The land laws of Denmark forbid the amalgamation of separate farms into large estates; they encourage, on the other hand, the subdivision of existing estates into small properties, and give tenants full control over leased farms so long as they pay their rent. The crop of oats in 1894 was 28,900,000 bushels; of barley, 21,760,000 bushels; of rye, 15,670,000 bushels; of wheat, 4,035,000 bushels; of potatoes, 15,900,000 bushels; of beets and other roots, 85,960,000 bushels. The value of all farm crops was 262,858,982 kroner. There were 410,639 horses, 1,696,190 cattle, 1,246,552 sheep, and 829,131 hogs in 1893. The exports of live animals in 1894 were 17,905 horses, 113,023 cattle, 8,218 sheep, and 130,107 hogs. The product of beet sugar in 1894 was 44,400 tons. The product of alcohol was 3,536,000 gallons; of beer, 45,290,000 gallons.

The total value of the imports in 1895 was 364,039,120 kroner, and of the exports 268,420,032 kroner. Of the former sum, 140,000,000 kroner represent food substances, 110,600,000 kroner raw material and products, 34,400,000 kroner machinery and other means of production, and 79,000,000 kroner manufactured goods; of the sum of the exports 210,900,000 kroner stand for food exports, 28,800,000 kroner for raw products, 16,300,000 for means of production, and 12,900,000 kroner for manufactured articles. The imports of colonial products were 31,787,284 kroner, and exports 10,158,401 kroner in value; imports of beverages 5,107,611, and exports 2,222,475 kroner; imports of textiles 41,574,414, and exports 5,494,069 kroner; imports of metals and hardware 41,695,142, and exports 5,933,539 kroner; imports of timber and wood manufactures 18,131,931, and exports 2,406,169 kroner; imports of coal 22,145,584, and exports 1,758,630 kroner; imports of animals 2,253,165, and exports 39,049,515 kroner; imports of pork, butter, eggs, and lard 35,916,790, and exports 156,049,515 kroner; imports of cereals 44,559,097, and exports 5,359,270 kroner.

The foreign trade of Denmark in 1895 was di-

vided among different countries as follows, values being given in kroner:

COUNTRIES.	Imports.	Exports.
Great Britain	70,693,676	155,375,901
Germany.....	122,101,500	65,548,053
Sweden and Norway.....	52,654,327	31,011,448
Russia.....	39,607,443	2,423,212
United States	10,084,955	934,922
Netherlands.....	9,398,449	340,968
France.....	6,995,218	1,754,418
Belgium.....	6,392,362	1,009,917
Danish colonies.....	4,188,821	3,988,376
Other American countries.....	1,634,834	234,726

Navigation.—During 1895 there were 27,760 vessels, with 2,264,559 tons of cargo, entered, and 27,736, with 548,290 tons of cargo, cleared at Danish ports, not including 31,438 coasting vessels entered and 32,368 cleared. The Danish merchant navy, on Jan. 1, 1896, consisted of 3,468 sailing vessels, of 185,102 tons, and 422 steamers, of 144,931 tons.

Communications.—There were 1,407 miles of railroad in operation in 1895, of which 1.067 miles belong to the Government, having been built at a cost of 190,080,660 kroner.

The telegraph lines belonging to the Government had a total length, on Jan. 1, 1896, of 3,246 miles, with 8,686 miles of wire. The number of dispatches in 1894 was 1,796,527, of which 627,564 were private internal, 1,130,198 international, and 38,765 official dispatches.

Dependencies.—The colonial possessions of Denmark are the islands of Santa Cruz, St. Thomas, and St. John (see WEST INDIES), Greenland, and Iceland. The Danish colony in Greenland occupies 46,740 square miles on the east coast, and has a population of 10,516 souls. The trade is a monopoly of the state. The imports in 1894 were valued at 460,606, and the exports at 396,301 kroner. Iceland has an area of 39,756 square miles. The population is 70,927. The value of the imports in 1894 was 3,235,536 kroner; of the exports, 2,716,719 kroner.

Ministerial Crisis.—When Baron Reedtz-Thott assumed office in 1894, at the conclusion of the constitutional conflict that had lasted nine years, he declared his intention to act as a mediator between the two houses of Parliament. The majority of the Landsting was still as strongly Conservative as ever, and that of the Folkething continued to be Radical. In pursuance of his policy, the successor of the unbending Estrup introduced in the Folkething a series of measures bearing a democratic stamp, by which the antiquated system of direct and indirect taxation has been reformed, and at the same time he kept the military policy of the Government along the main lines demanded by the Landsting. The Cabinet was originally composed of Landsting Conservatives, but the Premier gradually approached the Agrarian section of the Folkething and received his strongest support from that quarter, while he alienated thereby the Conservatives. An item of trifling importance in the military budget introduced in March of 1897 was so magnified by the urban Radicals and Socialists that the Folkething refused to sanction the expenditure. The Landsting insisted on its retention, and a conference led to no agreement. On April 1 a provisional budget was sanctioned by both bodies for the expenditures about which there was no dispute, and the ministry was requested to continue the administration pending further negotiations. The Agrarian Union appealed to the legislative bodies to effect a compromise so as to retain the ministers in office. The Radicals, on the other hand, threatened to drive out the Premier if he did not yield to the Folkething. The Landsting meanwhile remained passive, expecting the

Radicals to overthrow the ministry. As soon as an agreement was reached between the ministry and the Radicals the Conservatives suddenly took up a position of strong hostility to the Government, although the points at issue were insignificant except to serve as a pretext. When the budget was laid before Parliament early in May exceptions were taken on both sides, and the Premier soon found himself in conflict with both houses. Parliament suspended its sittings on May 11, and the King summoned ex-Premier Estrup. The leaders of the Landsting were disinclined to assume office, though the King was averse to the formation of a Radical ministry. The crisis was finally terminated by the retirement of the Premier and a reconstruction of the Cabinet on May 23. H. E. Hoerring became Premier and Minister of Finance; Vice-Admiral Ravn, while remaining Minister of Marine, took the portfolio of Foreign Affairs *ad interim*; V. Bardenfleth became Minister of the Interior, being succeeded as Minister of Public Worship and Instruction by Bishop Sthyr; N. R. Rump retained his portfolio as Minister of Justice; Alfred Hage, a member of the Landsting, entered the Cabinet as Minister of Agriculture; and Col. C. F. Tuxen was appointed Minister of War. The new Premier was not so closely allied with the Agrarians as Baron Reedtz-Thott, and was therefore more acceptable to the Landsting. He obtained the prolongation of the provisional budget for three months, promising the introduction of a new budget bill.

On Oct. 5 the Premier submitted the budget for 1898-'99, in which revenue was calculated at 68,600,000 kroner and expenditure at 200,000 less. The army and navy estimates were of the usual kind, being 11,000,000 and 7,500,000 kroner respectively. Several new credits were proposed for the improvement of the position of agriculture, including 200,000 kroner for establishments connected with meat exportation, appropriations for combating tuberculosis in cattle, and 8,000,000 kroner for new branch railroads.

A failure of the codfishery and diminished sheep exports have caused depression of trade in Iceland. The average value of exports for fifteen years has been 5,670,000, and that of imports 5,940,000 kroner. For many years from 50,000 to 70,000 sheep were exported annually to Great Britain, which has also received large numbers of ponies, chiefly for use in the coal mines. Salt fish are exported to Spain and Genoa, and wool to England. Other exports are whale oil and salted mutton. Cotton goods and hardware are imported from England and Germany. England supplies salt and coal, and Denmark grain and spirits. Sugar, coffee, rice, clothing, timber, tobacco, wine, and beer are other important imports. Everything that the people use comes from abroad except the fish, mutton, beef, and milk, which form the main part of their diet, and the cloth that they weave from their wool, mostly on hand looms. Of the population, which was 72,177 in 1894, about 65 per cent. live by rearing sheep and cattle and 18 per cent. by fishing. There was a good deal of emigration, chiefly to Manitoba, prior to 1890, but since there has been little. Trade is in a transition state from the old credit and barter state to the system of buying and selling for cash, which has been brought about by the operation of the Bank of Iceland, established in 1885, and the co-operating trading societies that are being formed in all parts of the island. The effect has been to lower prices very much, but at the same time to relieve the people of constant losses and accumulating indebtedness, because when money was seldom seen the merchants fixed arbitrary prices, much higher than the market values,

both for the foreign goods with which they supplied the farmers and fisherman and for the produce that the latter brought in once a year, when it was ready for export, to clear off the debt standing against them at the store. There usually remained, however, a balance to the credit of the merchant at the end of the year. The Icelandic fishermen have been alarmed of late years by the operations of British steam trawlers. It was when the North Sea fisheries began to fail rapidly that the British fishermen began to visit the fishing banks of Iceland. The catch in the North Sea grew yearly less and less and the fisheries were becoming exhausted because the demand for fish food in Great Britain suddenly expanded enormously, and no legal restrictions were placed upon the sale of undersized and immature fish in the English markets. Very large and speedy vessels were specially built for the wholesale capture of the splendid fish of Iceland. Frequently these craft poached on the shore fisheries when the fish were running inside. After many thousands of tons of fish had been taken by the British fishermen out of the Icelandic seas, until these, too, began to show the effects of the drain, the Icelandic Government passed a law forbidding any vessel with a trawl or board to navigate within territorial waters. It also enacted that no foreign fishing vessel should be allowed to visit the ports of Iceland, even for the purpose of purchasing food and stores. A Danish gunboat stationed off the coast during the season of 1896 arrested many English vessels, on which fines were inflicted for breaking the laws. Complaints having been made that vessels were overhauled and fined when quite outside the territorial waters, a whole squadron of British gunboats were sent up later to Iceland to guard the rights of British fishermen, and in 1897 it was stationed there for the entire season. The British claim the right to fish in Taxe Bay, but will waive this right in return for permission to fish within the three-mile limit along the southern coast. In the session of 1897 the Althing, or Icelandic Parliament, voted to give a subsidy of 35,000 kroner a year for twenty years to the cable company of Copenhagen, which has undertaken to lay a cable from the north of Scotland to Iceland by way of the Färöe Isles. The Danish Government also has promised financial help.

DISASTERS IN 1897. The year has not been conspicuous for great or overwhelming disasters, though probably the totals reach about the usual average. Most of the following items are gathered from the daily New York papers, modified and corrected where possible by comparison with other sources of information. The statistics of railroad accidents are from the "Railway Gazette," and are more complete and trustworthy than those relating to other accidents, since that journal makes a specialty of collecting and verifying such statistics. The figures in regard to fires are from "The New York Journal of Commerce and Commercial Bulletin," probably the best authority on the subject in the United States.

January 1. Trains in collision at Shenectady, N. Y., 2 killed, 1 hurt.

3. Storms of great violence in Arkansas, Louisiana, Texas, Missouri, and Oklahoma, men and animals perish and much property is destroyed. Train derailed, New Haven, Mo., 4 killed, cause a washout.

4. Floods: the Mississippi rises to the danger line at St. Louis. Landslide, Modena, Italy, 182 buildings wrecked in the town of Stanna.

6. Trains in collision at Terra Alta, West Va., 2 killed. Shipwreck: steamer *Belgique* sinks off the coast of Brittany, many lives lost.

15. A severe storm of snow and rain visits southern California, where snow is very unusual.

16. Train derailed by mischievous boys, nine and thirteen years of age, Media, Pa., several passengers injured. Train derailed also at Springdale, Texas, supposed to be the result of malice, 1 killed, 3 hurt.

18. Disastrous storms in the Western States.

20. Shipwreck: schooner Nahum Chapin, off Quogue, Long Island, 9 lives lost.

23. Train derailed at Shippensburg, Pa., a trestle breaks down under a train going too fast, 4 killed, 6 hurt. Snowstorm of unusual severity in the British Islands.

25. Intensely cold weather throughout the Northern States. Train derailed on a broken bridge at Spartansburg, S. C., 2 tramps killed.

28. Trains in collision at Le Roy, N. Y., 2 killed, 5 hurt.

31. United States man-of-war Brooklyn strikes a rock in the Delaware river near Philadelphia and is considerably damaged.

Fires in January: Nashville, Tenn., business houses burned, loss, \$600,000; Danville, Va., tobacco warehouses, \$175,000; Montreal, Canada, warehouses, \$160,000; Chicago, four different fires involving factories, residences, stores, grain elevators, etc., \$1,100,000; Sandusky, Ohio, business houses, \$250,000; Philadelphia, factories, \$750,000; Cincinnati, malt-house, etc., \$200,000; and 248 others; total loss for the month, \$12,049,700.

Summary of train accidents in January: 51 collisions, 68 derailments, 7 others; total, 126. Killed: 26 employees, 2 passengers, 5 others; total, 33.

February 2. Fire: Harrisburg, Pa., State Capitol burned. Trains in collision, Arlington, S. Dak., wreck catches fire, 4 killed, 2 hurt, cause fog. Train derailed between Matanzas and Havana, Cuba, several Spanish soldiers killed, also a number of the trainmen. Hurricane in South Australia, destruction of Fort Darwin.

6. Train derailed, Danville, W. Va., 2 killed.

9. A viaduct breaks down in Cornwall, England, 12 killed.

17. Train wrecked, Montana, Ala., 1 tramp killed.

21. Train derailed by a washout, Lavalatto, W. Va., 2 killed, 1 hurt.

22. Train derailed by a washout, Glen, Ky., 1 killed, 10 hurt.

23. Disastrous floods in western Maryland, Virginia, West Virginia, Pennsylvania, Kentucky, Tennessee, and Ohio, property loss amounting to many hundreds of thousands of dollars; 19 lives lost on the Ohio river alone.

24. Explosion: Nobel works, Scotland, 6 killed.

28. Train derailed, Zedikers, Pa., 20 cars wrecked, 2 men killed.

Fires in February: Harrisburg, Pa., State Capitol burned, loss, \$750,000; Salt Lake City, business houses, \$360,000; Ottawa, Ontario, Parliamentary buildings, \$150,000; Toledo, Ohio, grain elevator, \$300,000; Grand Forks, N. Dak., sundry buildings, \$225,000; Fort Wayne, Ind., stores, \$150,000; and 189 others; total loss for the month, \$8,676,750.

Summary of train accidents in February: 44 collisions, 71 derailments, 2 others; total, 117. Killed: 21 employees, 2 passengers, 1 other; total, 24. Hurt: 40 employees, 41 passengers; total, 81.

March 1. Partial destruction of the monastery of St. Bernard by an avalanche. Destructive gale on the British Islands, disasters to vessels and harbor works, many lives lost.

3. Train wrecked, Cordele, Ga., 2 tramps hurt.

4. Train derailed, Zanesville, Ohio, 3 killed, 2 hurt. Explosion in Boston subway, 6 killed, 30 hurt.

5. Train wrecked, Northville, Mich., 5 tramps hurt.

7. Train wrecked, Birmingham, Ala., 1 tramp

hurt. Mining shaft flooded, Dover, England, 8 lives lost.

9. Train derailed at Casa Grande, Arizona, with theatrical company on board, 1 tramp killed, several passengers slightly injured.

10. Train derailed at Hazelton, Ind., 4 killed, 2 hurt, cause a washout.

11. Boiler explosion, Denver, Col., 3 tramps killed.

12. The Mississippi river is dangerously high at Memphis and vicinity.

13. Train wrecked by a broken trestle at Rome, Ga., 2 killed, 3 hurt, cause high water in the Etowah river. Shipwreck: loss of the British steamer Normand and crew in the Bay of Biscay, many lives lost.

14. Trains in collision, Danville, Ill., 3 killed, and at Wolf Creek, Kan., 2 killed, 6 hurt. The river at Memphis higher than at any time for a quarter of a century.

15. Train derailed, La Grande, Ill., 2 killed, 3 hurt. Explosion of a gun on a Russian war ship off Crete, 15 killed, many wounded. Fire: Mandalay, Burmah, 1,500 houses burned, 7,000 persons homeless, estimated loss, \$2,000,000.

18. Shipwreck: steamship San Nazaire, off Cape Hatteras, all hands supposed to be lost, but part of the crew subsequently rescued. Violent and disastrous storms in Germany, lives lost and property damaged.

20. Train wrecked, Oakland, Md., 1 killed, several hurt. Floods in Mississippi continue to increase and work destruction to life and property. Some 50,000 persons, it is estimated, have been driven from their homes and usual employments.

22. Tornado in the valley of the Chattahoochee: a partial report of deaths places the number at 13, with at least 200 hurt; very large loss in property. Earthquake shocks reported at Malone, N. Y., and throughout the Canadian provinces. Trains wrecked by a broken bridge at Aldridge, Ill., 2 drowned, and at Springfield, Ohio, 4 tramps hurt.

24. Severe snowstorm in Illinois, Iowa, and Wisconsin. Explosion on board the British war ship Theseus, 30 men hurt.

28. Tornado in Texas, injuring the State University and other buildings at the capital, at least 2 lives lost.

30. Breaks in the Mississippi levees inundate some of the richest plantations on the lower Mississippi. Tornado in Oklahoma nearly every building in the town of Chandler destroyed, 25 persons reported killed, and nearly 200 more or less hurt.

31. Severe frosts injure the fruit crops in California.

Summary of fires in March: Alexandria, Ind., glass works burned, loss, \$200,000; Philadelphia, electric plant, \$500,000; Worcester, Mass., business houses, \$400,000; Peoria, Ill., grain elevator, \$350,000; Chicago, Ill., storehouses, \$350,000; St. Louis, Mo., stores, \$1,300,000; Ottumwa, Iowa, business houses, \$225,000; San Francisco, residences, \$400,000; New London, Conn., residences, \$200,000, and 183 others; total loss for the month, \$10,502,950.

Summary of train accidents in March: 49 collisions, 71 derailments, 3 others; total, 123. Killed: 32 employees, 4 passengers, 4 others; total, 40. Hurt: 47 employees, 29 passengers, 10 others; total, 86.

April 1. A destructive snowstorm in Nebraska, Colorado, Kansas, Wyoming, and South Dakota. Much suffering and probable destruction of early crops.

4. Extensive forest fires in the mountains of Pennsylvania.

5. Crevasses reported at various points along the Mississippi. About 16,000 square miles of territory under water below the mouth of the Ohio.

7. Train derailed, Pilot Mountain, N. C., 2 killed.

8. Cars burned, Indianapolis, Ind., 1 tramp killed. Fire, Knoxville, Tenn., estimated loss, \$1,500,000, several lives lost.

9. The river at New Orleans reaches a higher point than ever before recorded.

11. Trains in collision, Harrisburg, N. C., 3 killed, 9 hurt, 2 of them tramps.

19. Destructive floods in New Zealand.

21. Train derailed, Garland, Ala., 2 killed, 5 hurt, 4 of them tramps, malice the supposed cause. Levee gives way at Shipland, Miss., and 3 of the neighboring counties are inundated.

23. Earthquakes in the Leeward Islands, West Indies, houses thrown down and some lives lost.

25. Heavy and destructive rains throughout Nebraska and Iowa, disastrous floods in many of the streams.

27. Train derailed, Fairbanks, Texas, 1 killed, 12 hurt, supposed result of malice. Additional breaks in Mississippi levees near Keokuk, Iowa, and Gregory, Mo. A bomb explodes in a London Underground Railway carriage, 1 passenger killed, many injured.

28. Bridge breaks under a train near Blacksburg, S. C., no reason assigned. A sudden and overwhelming flood on the Cottonwood river nearly destroys the town of Guthrie, Oklahoma; the river, already swollen by heavy rains, suddenly increased in volume and swept everything before it, involving the loss of many lives and the destruction of houses; about 50 lives are supposed to have been lost.

29. Railway bridge breaks at Carpenter, Ohio, 22 cars fall into the water, 2 men killed, 1 hurt. The bridge had been recently inspected, and no reason for the accident is given. Earthquake in the island of Montserrat, West Indies, many houses destroyed, several lives lost.

30. Explosion: 4 wagon loads of dynamite in the city of San Salvador, many persons killed, two blocks of houses nearly destroyed.

27. Train derailed, Fairbanks, Texas, 1 killed, 12 hurt, malice the probable cause.

28. Train wrecked by a broken bridge at Blacksburg, S. C., no reason assigned.

29. Bridge breaks at Carpenter, Ohio, 22 cars fall into the river, 2 killed, 1 hurt, reason unknown.

Summary of fires in April: Cambridge Springs, Pa., sundry buildings, \$225,000; Cincinnati, Ohio, stores, \$400,000; Chattanooga, Tenn., business houses, \$400,000; Knoxville, Tenn., sundry buildings, \$1,000,000; New Orleans, La., business houses, \$500,000; Whitney's Point, N. Y., sundry buildings, \$200,000; Peoria, Ill., grain elevators, \$200,000; Newport News, Va., piers and ships, \$1,500,000; and 184 others; total loss for the month, \$10,833,000.

Summary of train accidents in April: 36 collisions, 63 derailments, 6 others; total, 9. Killed: 16 employees, 2 passengers, 3 others; total, 21. Hurt: 54 employees, 28 passengers, 8 others; total, 90.

May 1. Earthquake in Peru, causing great alarm, but no serious damage.

4. Fire: destruction of Charity Bazaar in Paris, about 150 lives lost, many persons badly burned.

5. Train wrecked, Gilmour, Mo., 4 tramps hurt.

6. Shipwrecks: 500 fishermen drowned in a storm off the coast of China.

8. Train wrecked, Lamar, Col., 2 tramps hurt.

9. Fire at sea: ship Francis totally destroyed off Little Egg Harbor, N. J. The steamship Leona arrived in New York on fire, 11 passengers and 2 stewards having already died from exposure and exhaustion. Rosse Hall burned, at Kenyon College, Ohio.

13. Train wrecked, Plainfield, Ind., 1 tramp hurt. Freezing weather in southern France destroys vines and fruits to the amount of several million dollars.

14. Wreck of a military train in Russia, 102 killed, 60 hurt.

19. Fire in Hoboken, N. J., 60 families driven out of their homes.

23. Fire in Savannah, Ga., destruction of Christ Church.

25. Flood in Texas: levee of the Rio Grande breaks, flooding the town of El Paso and sweeping away about 120 houses.

27. Train wrecked, American Falls, Idaho, 5 tramps killed, 4 hurt, 3 trainmen hurt; the tramps were suspected of having tampered with the air brakes.

28. Train wrecked by a misplaced switch, at Cabbage, Col., 2 killed, 6 hurt; 2 more killed in a railway wreck near Philadelphia.

29. A panic, caused by the falling of a candle, occurred in the cathedral at Pisa, 7 killed, 17 hurt. Earthquake shocks in Italy and Greece.

30. Fire destroys Namsos, a Norwegian town.

31. Earthquake shocks noticed from Washington to Georgia and in Ohio, Indiana, Kentucky, and Tennessee. At Valley Stream, Long Island, a trolley coach with a party of 21 excursionists was struck by a train, 5 killed, 15 hurt.

Summary of fires in May: Pittsburg, Pa., sundry buildings burned, loss, \$2,300,000; New York city, cold-storage warehouse, \$270,000; San Francisco, tannery, etc., \$400,000; Toronto, Ontario, department stores, \$275,000; Hoboken, N. J., dwellings, \$700,000; and 163 others; total loss for the month, \$10,193,600.

Summary of train accidents for May: 33 collisions, 46 derailments, 8 others; total, 87. Killed: 11 employees, no passengers, 5 others; total, 16. Hurt: 17 employees, 33 passengers, 15 others; total, 65.

June 5. Earthquake of some severity in the vicinity of Helena, Mont. Shipwreck: loss of a French fishing vessel, 23 drowned.

6. Fire: San Francisco, 2 killed; loss, \$100,000. A cloudburst in the province of Isère, France, causes much loss of life and destruction of property to the amount of 10,000,000 francs.

7. Trains in collision, Hudson, Wis., 6 killed, 2 hurt. Boiler explodes at Puebla, Mexico, 20 killed.

8. A destructive hailstorm in Texas ruins crops in the vicinity of Roger and Granger. Cholera is epidemic in certain districts of Siam.

10. Trains in collision at Bradford, Tenn., 2 killed, 3 hurt; also at Exeter, N. H., 3 killed, 1 hurt. Destructive rains fall throughout New England. A mining accident in Gaith colliery, Wales, causes the death of 10 men.

12. Trains wrecked at Welshampton, near Oswestry, England, 9 killed, 25 hurt.

13. Floods continue in New England, causing the loss of 12 lives and much damage to railroad and mill property. Train wrecked at Oliver, Mo., 4 killed, 3 of them tramps. Tornado in the Windward Islands, 3 lives lost at St. Vincent.

15. Fire: burning of the immigrant station on Ellis island, New York harbor, loss, about \$650,000.

17. Severe earthquake shocks throughout southern Mexico.

18. Destructive storms in Kentucky and several Western States, numbers of lives reported lost. Earthquakes in British India devastate wide provinces and destroy, as is estimated, some 6,000 lives.

20. Earthquake shocks occur in California, but little damage is done.

21. Trains in collision at Conroe, Texas, 6 tramps killed, 3 of them white and 3 black, 6 others hurt. A sudden flood drowns 19 Russian dragoons in the

river Kur. Fire at sea: destruction of a coasting steamer in the Baltic, 6 lives lost.

24. Tornado in the vicinity of Salina, Kan., 3 lives lost.

25. Shipwreck: the Russian ironclad Gangoot runs upon a reef near Transund and sinks almost immediately, many of the crew perish.

26. Train wrecked near Hurts, Va., 4 tramps injured, another at Missouri city caused by a broken trestle, 11 hurt. Floods in Galicia cause great destruction in the town of Kaolina, on the river Preuth; a bridge was swept away with a railway train upon it, and many persons perished.

28. A volcanic eruption takes place in the Philippine Islands and works great destruction of life and property.

Summary of fires in June: Alexandria, Va., sundry buildings, \$243,000; Ellis island, N. Y., immigrant station, \$650,000; Auburn, Cal., business houses, loss, \$125,000; New York, factories, \$160,000; New Orleans, rice mills, \$160,000; and 139 others; total loss for the month, \$5,684,450.

Summary of train accidents in June: 40 collisions, 52 derailments, 3 others; total, 95. Killed: 32 employees, 4 passengers, 9 others; total, 45. Hurt: 47 employees, 72 passengers, 8 others; total, 127.

July 2. A submarine earthquake off the coast of Spain causes the sea to rise, and at Barcelona in a very alarming manner. The sea rose and fell a yard every ten minutes for several hours.

3. Excessive heat causes much suffering and numerous deaths throughout the Western United States. A heavy rainfall does damage to the amount of some \$200,000 in Duluth and vicinity, 2 miles of pavement destroyed and 20 bridges washed away. Disastrous floods also reported in the south of France, where 300 deaths from drowning are reported.

5. Train wrecked at Kalispell, Mont., 1 tramp hurt.

6. Explosion: a thrashing machine bursts its boiler near Hartzville, Tenn., 9 killed, 5 hurt. A tornado kills 10 persons in Minnesota.

10. Many fatal sunstrokes reported all over the Northern States.

13. Trains in collision near Boone, Iowa, 1 tramp killed.

14. Reservoirs burst near Fishkill Landing and Matteawan, N. Y., village at Dutchess Junction, nearly destroyed by the rush of water, 8 persons drowned.

15. Train wrecked by a boiler explosion at Cammal, Pa., 2 fatally scalded.

16. Trains in collision, Edgartown, Kan., 5 trainmen hurt, 1 tramp killed, 1 hurt.

17. Fire: destruction of 5 oil refineries in Baku, Russia, several lives lost.

18. Earthquake in the island of Stromboli.

21. Hail destroys crops and fruit trees and damages buildings in Switzerland near the Lake of Zurich.

23. Explosion of naphtha on the steamer Nutmeg State at Bridgeport, Conn., 4 killed, 6 hurt.

28. Train derailed at Verei, Nev., 3 Indians killed, several passengers hurt.

30. Train derailed by malice at Thorntown, Ind., 4 killed, 2 of them tramps. Floods in Silesia destroy hundreds of lives and large amounts of property; also in Bohemia and the Crimea.

Summary of fires in July: Packerton, Pa., storehouse burned, loss, \$250,000; East Angus, Canada, mills, \$150,000; Peoria, Ill., sugar refinery, \$600,000; Richfield Springs, hotel, etc., \$150,000; Kankana, Wis., mills, \$250,000; Yonkers, N. Y., factories, \$450,000; Montgomery, Ala., railroad property, \$160,000; and 132 others; total for the month, \$6,626,300.

Summary of train accidents in July: 47 collisions, 97 derailments, 2 others; total, 146. Killed: 16 employees, no passengers, 9 others; total, 25. Hurt: 56 employees, 50 passengers, 10 others; total, 116.

August 2. Extensive forest fires in Algiers.

3. Railway bridge breaks at Beyers, Col., 2 killed, 11 hurt.

4. Train derailed at Irving, N. Y., 3 tramps killed, 1 hurt, cause broken axle. Train wrecked at Reno, Nev., 6 Indians killed who were stealing a ride, 2 trainmen and 9 tramps hurt.

7. Explosion of gunpowder in a cartridge factory at Rustchuk, Bulgaria. 56 killed, 25 fatally injured, 30 hurt. Landslides and storms devastate eastern Germany.

12. Fire: Grand Hotel burned near Zurich, Switzerland.

15. Train derailed at Roseburg, Ore., by a burning stump which fell from the mountain side, 1 tramp killed, 3 tramps hurt. Fire resulting from a flash of lightning burns property to the value of \$600,000 in Baltimore.

16. Fire: town of Ostrow, in southern Russia, burned, 4,000 people homeless.

27. Trains in collision, Hershey, Neb., 1 tramp hurt.

Summary of fires in August: Louisburg, W. Va., loss, \$157,000; Chicago, grain elevators, \$175,000; Barnum, Texas, lumber, \$250,000; Baltimore, Md., lumber, \$260,000; Eagle River, Wis., lumber, \$150,000; Chapachet, R. I., woolen mills, \$260,000; Paulsboro, N. J., fertilizer works, \$250,000; Chicago, trunk factory, \$150,000; Virginia, Ill., sundry buildings, \$200,000; and 142 others; total for the month, \$6,454,950.

Summary of train accidents in August: 64 collisions, 61 derailments, 3 others; total, 128. Killed: 17 employees, 2 passengers, 13 others; total, 32. Hurt: 55 employees, 67 passengers, 18 others; total, 140.

September 2. Trains in collision, Cairo, W. Va., 1 killed, 1 hurt, both tramps. Train derailed at Blodgett's Mills, N. Y., 1 killed, 12 hurt. A storm in England causes wide damage to trees, crops, and shipping. A mountaineering party of 4 ascending Mount Pleurer in the Alps are swept into a crevasse by an avalanche.

3. Train derailed, Valley Park, Mo., 3 tramps hurt, cause a defective switch.

4. Explosion of natural gas, Indianapolis, 5 killed, 25 hurt. Trains wrecked: Buffalo Gap, S. Dak., 1 killed, 1 tramp hurt; Ravenna, Ohio, 1 killed, several tramps hurt; Etna, Me., excursion train, 1 killed, 32 hurt; Foristill, Mo., 2 killed, 1 of them a tramp, 1 hurt.

6. Yellow fever appears at Ocean Springs, Miss. Several hundred persons perished during the volcanic eruption in Philippine Islands.

8. Trains in collision, Emporia, Kan., 13 killed, 2 of them tramps, 15 hurt, 11 of them trainmen.

9. Train derailed at Albany, Ind., 2 tramps killed.

10. Train wrecked, New Castle, Col., 18 killed, 16 hurt, cause disregard of orders.

11. Shipwreck: British steamship Polyphemus sunk by collision in the Red Sea, 27 drowned.

12. Yellow fever makes its appearance at New Orleans and at other points near the Gulf coast. Train wrecked at Hanson, Indian Territory, 7 tramps killed, 6 tramps hurt, cause a broken brake.

13. A hurricane destroys several towns in Texas.

15. Trains wrecked, Wesley Hill, Pa., 1 tramp killed; also at Keytesville, Mo., 1 killed, 6 hurt, 2 of them tramps.

17. Trains in collision, Chippewa Falls, Wis., 9 killed.

18. Train wrecked, Helper Switch, Ohio, 1 killed,

1 tramp hurt. A destructive fire is reported in Cabul, capital of Afghanistan.

19. Severe earthquakes are reported from Asia, Russia, and Europe.

20. Yellow fever continues to spread in the Gulf States.

22. Shipwreck: torpedo boat No. 26 capsized off Cuxhaven, 8 of her crew drowned, including her commander, the Duke Frederick William of Mecklenburg-Schwerin. Hurricane in Italy: reported loss of 40 lives and 70 more or less injured, many houses destroyed.

24. Landslide at the sulphur mines near Girgenti, Italy, nearly 40 lives lost.

25. Landslide on the White Pass trail, upper Yukon region, a mining camp destroyed and the trail rendered impassable. Train wrecked in India near Maddur, 150 lives reported lost.

28. Train wrecked, Hinsdale, N. Y., 1 tramp killed. Forest fires in Wyoming destroy some 3,000,000 feet of lumber. Fire near Manila, the capital of the Philippine Islands, many lives reported lost.

Summary of fires in September: New York city, warehouses burned, loss, \$200,000; Reading, Cal., mining property, \$200,000; Pendleton, Ore., flour mills, \$200,000; La Crosse, Wis., brewery, \$300,000; Big Horn County, South Dakota, forest and prairie fires, \$500,000; Ironton, Ohio, mills, \$350,000; Washington, D. C., power house, \$750,000; Santa Cruz, Cal., power house, \$250,000; and 176 others; total loss for the month, \$9,392,000.

Summary of train accidents in September: 77 collisions, 70 derailments; total, 147. Killed: 39 employees, 16 passengers, 17 others; total, 72. Hurt: 68 employees, 78 passengers, 19 others; total, 165.

October 2. Prairie fire in the vicinity of Winnipeg, Manitoba, many farms destroyed and several lives lost. France again devastated by floods in some of her southern provinces.

7. Prairie and forest fires cause great distress in many of the Western States.

10. Yellow fever appears at Galveston, Texas.

17. Fire in Nova Scotia: the town of Windsor, Hants County, nearly destroyed, some 3,000 people homeless, loss, estimated at \$3,000,000.

18. Cholera appears among the British troops in India. Shipwreck of the steamer Triton, supposed loss, 150 lives.

21. Cyclone in the Philippine Islands, several towns and villages destroyed and several thousand lives lost.

22. A disastrous typhoon swept over Cochin-China.

24. Train wrecked near Garrisons, N. Y., 20 killed; for some unexplained reason the roadbed gave way, hurling the engine and several sleeping cars into the Hudson river. Shipwreck: schooner Casper at Point Arena, Cal., 13 drowned. Overflowing of the river Tronto in central Italy, many persons drowned.

25. Eleven deaths from yellow fever in New Orleans.

26. A blizzard rages in Colorado and adjoining States, much damage to property, several persons frozen to death.

30. Mining disaster at Scranton, Pa., where 7 are suffocated by smoke from a fire in the Van Storch mine.

Fires in October: Ontario, Canada, brush fires, loss, \$500,000; Detroit, Mich., opera house, etc., \$750,000; Gilsonburg, Ohio, various buildings, \$200,000; Durham, N. C., tobacco factories, etc., \$250,000; Windsor, Nova Scotia, sundry buildings, \$1,250,000; New York city, stained-glass factory, \$300,000; Nelson Run, Pa., forest fires, \$200,000; Hudson, N. Y., knitting mills, \$200,000; St. Louis, Mo., business block, \$200,000; Buffalo, N. Y., grain

elevator, \$206,000; Morris, Ill., tannery, \$225,000; and 173 others; aggregate loss, \$11,387,500.

Summary of train accidents in October: 91 collisions, 68 derailments, 6 others; total, 165. Killed: 25 employees, 24 passengers, 5 others; total, 54. Hurt: 65 employees, 41 passengers, 10 others; total, 116.

November 4. Train derailed near Old Shadwell, Va., 4 killed, 17 hurt.

6. Shipwreck: The steamer Idaho sank in a heavy storm near Long Point, Lake Erie, and 19 persons were drowned.

7. Collision near Brockville, Ontario, 1 killed, 2 hurt.

12. Mining disaster near Antonienhuetta, Silesia, 7 killed. Disastrous floods, with loss of life, reported in provinces of Saragossa, Valencia, and Malaga, Spain.

13. Two seamen lost from the station pilot boat New York, off Sandy Hook, New York harbor. Snow slide near Sannon, British Columbia, overwhelms mining property, 1 killed, 1 hurt.

17. Vault of Maximilian cellar at Munich collapses, 6 killed.

18. Train derailed, Williford, Arkansas, 1 killed, 30 hurt.

19. Great London fire in Cripplegate district, loss, \$5,000,000. Destructive storms and floods in the far West.

20. Train wrecked at Coal Bluff, Ind., 3 killed, 18 hurt.

21. Trolley-car collision in Baltimore, Md., 2 killed, 6 hurt. Destructive fire at Melbourne, Australia, loss, \$4,000,000.

24. Trains in collision, Tournay, France, 12 killed. Floods and earthquake reported in Thuringia, Germany.

26. Austrian steamer sank in collision off Dungeness, England, 4 drowned.

27. Fire, Jamestown, N. Y., 3 persons suffocated.

28. Train derailed on trestle, Winchester, Ky., 2 killed. Severe gales on English coast, with many wrecks and great loss of life.

Fires in November: St. Augustine, Fla., Hotel San Marco, loss, \$250,000; Middlesborough, Ky., machinery works, \$500,000; Chicago, Ill., department store, \$165,000; Williamsport, Pa., tannery, \$150,000; Streator, Ill., department store, \$207,000; Escanaba, Mich., ore docks and steamer, \$225,000; and 160 others; aggregate loss, \$7,189,900.

Summary of train accidents in November: 92 collisions, 111 derailments, 8 others; total, 211. Killed: 23 employees, 8 passengers, 0 others; total, 31. Hurt: 85 employees, 103 passengers, 3 others; total, 191.

December 1. Anti-German riots in Prague, Austria, instigated by young Czech party, result in injuries to many people, and martial law is proclaimed in the city. Thirty miners killed and 40 injured by an explosion of fire damp in a mine in Rhenish Bavaria.

5. Fierce storms over large parts of Italy, and 25 merchantmen are wrecked in the Bay of Naples.

14. A destructive blizzard rages over the cattle district in western Kansas.

15. Wreck of the steamer Cleveland on the coast of Vancouver island reported.

16. William Terriss, a popular English actor, assassinated at the door of the Adelphi Theater, in London, by an actor known as "mad Archer."

18. Earthquake shocks in the province of Perugia, Italy, cause much damage. Pardee Hall, at Lafayette College, Easton, Pa., nearly destroyed by fire.

19. Several men killed or wounded by an explosion on the British steamer Southern Cross at Madeira.

20. Bad railway wreck caused by a runaway freight engine at Altoona, Pa.

22. Explosion of fire damp in a mine at Dortmund, Prussia, 8 killed, 7 wounded. A succession of earthquakes in the vicinity of Smyrna, Asia Minor, causes several deaths.

24. Explosion at acetylene gas works, in Jersey City, N. J., 2 deaths.

25. A number of persons, including French naval and military officers, killed in a railway collision in France. Fire destroys the Coliseum at Chicago, 1 death. Explosion during a Christmas salute at Asheville, N. C., injures 30 or 40 people. Sleighing party struck by a train near Little Falls, N. Y., 1 killed, 5 injured.

26. A woman and her 9 children perish in a fire at London.

27. The massacre of 800 residents of a Christian town in Persia by Kurdish raiders reported.

29. A fire destroyed 800 buildings in Port au Prince, Hayti; it was followed, a few hours later, by an earthquake. A further outbreak of the plague reported in the Mandvie district, India. Hurricane on the British coast.

Summary of fires in December: Philadelphia, Pa., carpet store and other business houses burned, loss, \$800,000; Grand Forks, N. D., various buildings, loss, \$750,000; St. Louis, Mo., jewelry and other stores, loss, \$335,000; Kansas City, Mo., Auditorium Hotel, loss, \$225,000; Cleveland, Ohio, several business blocks, loss, \$675,000; Chicago, Ill., Coliseum Building, loss, \$772,000; and 186 others; total loss for the month, \$11,328,650.

The aggregate loss by fire in the year 1897 was \$110,319,650.

Summary of train accidents in December: 107 collisions, 95 derailments, 6 others; total, 208. Killed: 18 employees, 2 passengers, 8 others; total, 28. Hurt: 135 employees, 50 passengers, 10 others; total, 195.

DISCIPLES OF CHRIST. The General Missionary Conventions of the Disciples of Christ were held in Indianapolis, Ind., beginning with the meeting of the Woman's Board, Oct. 15. The receipts of this organization, \$62,601, showed a substantial increase over those of any previous year. The board had 26 missionaries in India, Japan, and Mexico, and 36 in the United States. It had undertaken to establish Bible chairs in secular colleges and universities. One such chair at the University of Michigan was in successful operation, and others were contemplated at the Universities of Virginia and Georgia. One of the means of raising money that were adopted by the board was through a regular assessment of 10 cents a month on each member.

The receipts of the home board (American Christian Missionary Society) had been \$30,548, showing a gain of \$8,000, aside from a special debt collection of \$6,000. The board was out of debt, and had a balance of \$2,514. Seventy-one missionaries had been employed in 21 States; and under their labors 294 churches had been helped, 34 churches organized, and 3,174 members added by baptism. The missions had raised \$44,365 for

self-support. In the process of the unification of the mission work through bringing the State and general bodies into closer co-operation the majority of the State conventions had made themselves auxiliary to the American Christian Missionary Society, and had this year filed their reports for the first time. The State and district missionary societies had employed 304 missionaries, who returned 169 churches organized, 18,548 additions of members, and \$268,641 of money raised. A new plan had been adopted by the acting board of interesting special congregations or groups of congregations to make particular mission points their special fields, assisting them through the home board. With the Foreign Christian Missionary Society the year had been the most successful in its history. Its receipts had been \$106,222, or \$12,354 more than in the previous year, and its expenditures had been \$99,195. The Sunday schools had contributed \$30,027, and the Christian Endeavor Societies \$3,358. Of the receipts, \$6,800 belonged to the Annuity fund, no part of which was available for current expenses, and would be spent on buildings. The Permanent fund had been increased by \$3,950. The sum of \$8,570 had been received from bequests. One hundred and sixty-two missionaries had been employed in the various fields. Two new missionaries had been sent to the Congo, in Africa, where the agents of the American Baptist Missionary Union gave them all the assistance in their power. The Scandinavian missions had been extended into Sweden. Ten other missionaries had been sent to China, India, Japan, and Turkey.

All the missions showed increase in their respective totals of church membership: India of 43, Japan of 33, China of 72, Turkey of 72, Scandinavia of 80, and England of 31. The number of children in the schools exceeded the membership of the churches. In China 18,125 patients had been treated by the physicians; in India 5,000 patients had been treated, hundreds of starving children had been gathered into orphanages, 45 lepers had been cared for, and 1,992 persons had been treated at the dispensary of a native physician.

A steadily growing interest was manifested in the work of colored evangelization, which had been begun seven years before. The contributions to this cause had amounted to \$8,100. Evangelists were aided or wholly sustained in the States of Mississippi, Kansas, Virginia, Florida, Missouri, Alabama, and other States; and three schools were maintained—a Bible school in Louisville, Ky., for the education of preachers and teachers; a collegiate institute at Edwards, Miss.; and a graded school at Lum, Ala.; while a school had been begun at Martinsville, Va., and other schools were in preparation in Texas and South Carolina. The receipts for church extension had been \$32,580, and the receipts for ministerial relief \$11,068. A table was presented at the meetings showing that the total amount of the year's contributions of the Disciples for missionary and benevolent work had been \$454,337.

DOMINION OF CANADA. See CANADA.

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EAST AFRICA. The coast of Africa between Cape Guardafui and Cape Delgado, over which the Sultan of Zanzibar formerly exercised sovereign rights, has been divided, by agreement between Germany, Great Britain, and Italy, among those three powers. German East Africa is divided from the Portuguese possessions on the south by the river Rovuma; from British East Africa on the

north by a conventional boundary running north-west from the Umbe river to the shore of Victoria Nyanza, deflected so as to include the Kilimanjaro district in the German territory; and continued west of the Victoria lake along 1° of south latitude to the boundary of the Congo Free State, which forms the western limit of the German sphere. British East Africa, according to the agreement

made with Italy, is divided from the protectorate then asserted by the latter power over Abyssinia and adjacent territories by the Juba river up to 6° of north latitude, by that parallel as far as 35° of east longitude, and by that meridian northward to the Blue Nile. The British sphere merges in the Soudanese and equatorial provinces formerly ruled by Egypt and still nominally belonging to Egypt and under the suzerainty of Turkey. The Italian sphere embraces Somaliland, with the exception of the district reserved to Great Britain that fronts on the Gulf of Aden and extends from Wahadu to Bandar Ziyada in 49° of east longitude. The sphere claimed by Great Britain covers over 1,000,000 square miles. A British protectorate has been established over the territory acquired by the British East Africa Company from the Sultan of Zanzibar, having an area of about 270,000 square miles and 5,000,000 inhabitants; over Uganda, which has an area of 58,000 square miles and 1,000,000 inhabitants; and over the islands forming the sultanate of Zanzibar, with an area of 988 square miles and 210,000 inhabitants. German East Africa has an estimated area of 380,000 square miles and a native population supposed to reach 4,000,000. Italian Somaliland has an area of 190,000 square miles, with about 400,000 inhabitants. British Somaliland, with an area of 75,000 square miles, is attached to Aden, which is a dependency of the Indian Government.

British East Africa.—The British East Africa protectorate, which was evacuated by the British East Africa Company on June 30, 1895, and taken under the direct administration of the British Government, comprises the territory lying between the coast and Uganda, including Witu, the administration of which had been transferred from the company to the native sultan on July 31, 1893. The Imperial Commissioner and consul general is A. H. Hardinge. Mombasa, the capital, has a good harbor, protected by jetties, and is connected by an electric telegraph with Lamu and by a cable with Zanzibar. The revenue from customs in 1893 was 261,554 rupees. The imports at Mombasa were valued at 1,807,208 rupees, and exports at 1,287,399 rupees. The imports of Kisumu, the port and capital of the province of Jubaland, amounted to 104,132 rupees in 1895, and exports to 100,611 rupees. The shipping entered at Mombasa in 1893 was 100,602 tons; cleared, 100,388 tons. The imports are Manchester cottons, Bombay cloth, brass wire, beads, and provisions. The exports are ivory, caoutchouc, cattle, copra, cereals, gum copal, hides, etc. The foreign trade is conducted by Banian merchants from Bombay. The rebellion of Mubarak interfered with trade in the southern part of the protectorate until it was suppressed, in June, 1896. The attacks of Masai on caravans in the interior have been checked, and are becoming infrequent. Cattle-raising on the rich grass lands of the interior plateaus is encouraged by the Government, but there has been no influx of European capital and immigration. A railroad is being built from the coast to Fort Victoria, on the Victoria Nyanza.

The construction of the Uganda Railway was begun on Dec. 11, 1895. From Mombasa to Victoria the distance is 670 miles. The first 100 miles were completed and opened for traffic in November, 1897. Owing to the discovery of a shorter and less costly route to Victoria Nyanza, the original estimates have been considerably reduced. Before the end of 1898 the road is expected to be completed to Kikuyu, 300 miles from Mombasa. The railroad has been considered necessary even for the present and necessary traffic, which can not be carried on longer by human portage, which costs

£180 a ton. The building of this line is expected to give the deathblow to the slave trade of the interior, and to destroy the raiding and cattle-lifting of the Masai tribe. Indian labor only was employed at first, but gradually natives of the country were attracted by wages paid in coin. In the summer of 1897 there were 1,400 employed. The total cost of the line is not expected to exceed £3,000,000, voted by the English Parliament in 1896.

Within the 10-mile strip of the mainland the Islamic laws of Zanzibar prevail, although they are administered by British officials. An arrangement was made in the time of the British East Africa Company that slaves escaping from their owners should be returned to them by the company's police. Missionary societies were warned against harboring runaways. Search warrants were issued for slaves that had run away from their masters, who before receiving them back were required to prove ownership before the authorities. The British Government, on assuming administration of the protectorate, issued a proclamation ordering these practices to be discontinued. This proclamation, however, was disregarded by the officials in East Africa. The Imperial Commissioner and his representatives continued to award fugitive slaves to their masters, and the police took part in hunting them and seized them wherever they were found, just as the company's officials had done for eight years with the approval and by the express command of the Foreign Office. The missionary societies made no effective protests until after the legal status of slavery was abolished in Zanzibar, when the Anglican Bishop of East Equatorial Africa, Alfred E. Tucker, raised the question. The Attorney-General of the last Liberal Cabinet had expressed the opinion that the institution of slavery in the British protectorate was absolutely illegal, both by common law and by special acts of Parliament. His Conservative successor likewise considered it illegal to detain slaves against their will in the coast strip. Still the Foreign Office allowed slaves to be seized by British soldiers and handed over to their owners by the decrees of British courts, in defiance of British law and the special engagements undertaken by the powers under the Brussels act. Plantation slavery was still upheld in the coast territory under direct British administration, although it was no longer legal in the sultanate of Zanzibar. The Imperial Commissioner ceased in December, 1896, to issue warrants allowing the forcible capture of runaway slaves, but the administrator at Mombasa, who had authority to deal with each case according to discretion, continued to hand over fugitives to the slave owners without any stipulation against their being cruelly punished. The effect was that runaways made their escape into German territory, where the authorities did not deliver them up to their former owners. In the territory of the British protectorate beyond the 10-mile strip slavery is not recognized. The importation of slaves overland into the coast strip was made illegal by the Sultan's decree in 1889, and in 1890 children born of slaves were declared free, and the purchase or sale of slaves was prohibited on the mainland as well as in the islands. The condition of slaves on the mainland was less arduous than on the islands. Laboring on the coconut and mace plantations, they received a share of the produce. The Government was reluctant to free the slaves in this territory, on account of the question of compensation. When in June the question was brought up in Parliament and the practice of arresting, detaining, and restoring slaves was mentioned, the Attorney-General sustained the opinion of Sir R. Reid that, however legal such proceedings were by Zanzibar law, any British officer, magis-

trate, or private person who detained against his will the person of a slave committed an offense against British law. Mr. Balfour, the leader of the House, gave the assurance that it would be made clear to the administrative officers in East Africa that no breach of the law would be permitted.

Liquidation of the East Africa Company.—

The Imperial British East Africa Company was wound up in May, 1897, with a net loss of £193,000 on £427,000 of capital paid up. The shareholders received a return of 10s. 11d. in the pound. They pleaded in vain with the Imperial Government for a reconsideration of the terms offered and finally accepted by the directors. Of £250,000 returned to the company, £200,000 was paid by the Sultan of Zanzibar for his concession and only £50,000 came from the British treasury. They were comforted by the reflection that what they had done was their patriotic duty, but this did not alleviate the sense of wrong that they felt toward the Government. Formed to administer a limited territory, of which it was supposed it would receive peaceable possession, the company had first resisted at its own cost the aggression of a foreign state, obtaining a coast line of 400 miles from Wonga to Juba, and then in response to public opinion it had extended its operations 800 miles into the interior as far as Uganda. The Government of the day to a certain extent recognized the position of the company by proposing to build a railroad. After the survey had been made at the company's expense, in 1892 another Government came in, which would neither allow the company to go on nor relieve it of its concession, and finally, after a lapse of three years, determined to get rid of the company before constructing the railroad. The efforts of the company were thus paralyzed, and, having no further means to carry on such an enormous undertaking, it was reduced to the necessity of retiring after having secured East Africa and Uganda as British possessions.

Zanzibar.—The islands of Zanzibar and Pemba, which were all that remained of the dominions formerly ruled by the Sultans of Zanzibar after the division of the mainland between Germany, Great Britain, and Italy, were declared a British protectorate with the assent of France in 1890, and in October, 1891, a British administration was formed under Sir L. Mathews, acting nominally as Prime Minister to the Sultan. The present Seyyid, or Sultan, is Hamoud bin Mahomed bin Said, who was selected by the English to succeed Seyyid Hamed bin Thwain when the latter died suddenly, on Aug. 27, 1896, and who was placed on the throne after a fight between the British naval forces and the rival claimant accepted by the people, in which the royal palace was shelled and destroyed by the British fleet. The island of Zanzibar has about 150,000 inhabitants; Pemba, where the Arab aristocracy raise cloves by slave labor, has 50,000. In Zanzibar there are about 7,000 British Indian traders and 150 to 200 English, Germans, Americans, Frenchmen, Greeks, Italians, and Roumanians. The town has a population of 30,000. The Sultan's revenue was formerly obtained from customs duties and taxes on cloves and other produce. When the coast region belonged to Zanzibar a large revenue was collected from imports and from caravans. After the lease of these territories Germany paid the capital sum of 4,000,000 marks, yielding 82,000 rupees interest, and the British East Africa Company paid 170,000 rupees a year. His total revenue exceeded 1,000,000 rupees. When British officials assumed the administration they fixed the Sultan's civil list at 120,000 rupees annually, and decided to devote all the rest of the revenue to police, harbor improvements, and public works. The police and military number 700 men.

The imports into Zanzibar in 1895 were valued at £1,293,646, of which £466,823 came from British India, £179,529 from the Sultan's dominions, £173,589 from German East Africa, £91,163 from Great Britain, £65,126 from Germany, £52,542 from the Netherlands, £50,245 from the United States, £47,790 from Madagascar, Mauritius, and the Comoro Islands, £45,422 from British East Africa, £33,141 from Benadir ports, and £88,276 from other countries. There was an increase in American and Indian imports and a decrease in those from British East Africa and in those from Germany. The total value of the exports was £1,199,841 in 1895. The export of piece goods to the Continent was £262,751; cloves, £161,847; ivory, £119,744; rice, £106,885; copra, £57,529; caoutchouc, £31,295; gum copal, £17,582; hides, £10,823; tortoise shell, £10,421; clove stems, £6,095; simsim, £6,229; chilies, £4,795; hippopotamus teeth, £3,027; all other articles, £400,818. During 1895 there were 170 vessels engaged in ocean commerce entered at Zanzibar, of which 70, of 99,175 tons, were British; 59, of 84,884 tons, were German; and 26, of 47,738 tons, were French.

Abolition of Slavery.—In 1873, under pressure from the British Government, the Sultan of Zanzibar signed a treaty abolishing the slave trade, Sir Bartle Frere having been sent out there for the purpose of obtaining this treaty. Other treaties and edicts were issued by the Sultan under successive British representatives, the most notable being that of Aug. 1, 1890, which Sir C. Euan Smith, the British consul general, thought would so ameliorate the condition of the slaves that they need no longer form objects of compassion on the part of humanitarian societies. The lot of the plantation slaves in Zanzibar and Pemba was scarcely improved, nor was the slave trade suppressed, though British and French vessels patrolled the neighboring seas to intercept slave dhows. By the edict of Seyyid Ali the sale of slaves or their transmission except by direct inheritance was forbidden. It was declared that, subject to the conditions stated in the decree, all slaves lawfully possessed at the time should remain with their owners, and that their status should remain unchanged and their possessors could not be deprived of any rights enjoyed under the decree without receiving compensation. The proportion of the slaves lawfully held in 1890 must have been small, as their life on the plantations is much shorter on the average than the time that had elapsed since fresh importations were made illegal. Out of a total slave population of 140,000 not more than 7,000 were believed to be lawfully held in slavery at the beginning of 1897. After Zanzibar became a British protectorate and the Government was controlled in all particulars by the British Foreign Office the antislavery and religious organizations became clamorous for the abolition of slavery in Zanzibar and Pemba, where it existed in its crudest form and where the Arab slave-raiders of Africa found their chief market. Sir Arthur Hardinge, the consul general in Zanzibar, opposed such a measure, but the home Government felt constrained to act under the pressure of public opinion in England. Accordingly Lord Salisbury, on Feb. 10, 1897, in fulfillment of pledges, sent a dispatch recommending to the Sultan of Zanzibar the abolition of the legal status of slavery in his dominions. This resulted in a decree abolishing the legal status of slavery in Zanzibar and Pemba, issued on April 6, 1897, to take effect from that date. The preamble of the decree set forth that, owing to the lapse of years and other causes, the number of slaves legally imported and held in the islands had greatly decreased, so that many estates had gone out of cultivation; that the existing sys-

tem of slavery deterred free laborers from coming to the islands to take the place of those who from death or other causes had disappeared, to the detriment of agriculture and of the people, who were driven to borrow money against the law of Islam and their own welfare; and that the Sultan was desirous of following the precepts of the Prophet, who had pronounced the liberation of slaves most praiseworthy, and of encouraging the introduction of free labor. Under the decree the courts must decline to enforce any alleged rights over the body, service, or property of any person on the ground that such person is a slave, but shall report to the Prime Minister what pecuniary compensation any person claiming and establishing such rights is entitled to in consideration of the loss of his rights and damages resulting therefrom. Any person whose right of freedom has been formally recognized is liable to any tax, abatement, or *corvée* that the Government may impose on the general body of the subjects, and shall be bound, on pain of being declared a vagrant, to show that he possesses a regular domicile and means of subsistence, and where such domicile is situated on land owned by another person he is bound to pay to the owner of such land such rent, which may take the form of an equivalent in labor or produce, as may be agreed upon between them before the district court. Concubines shall be regarded as inmates of the harem in the same sense as wives, and shall remain in their present relations unless they should demand their dissolution on the ground of cruelty, which must be proved before the district court. A concubine who has not borne children may be redeemed with the sanction of the court. Any person making a claim under any of the provisions of the act may appeal from the decision of the district court to the Sultan or to such judge or public authority as he may delegate for the purpose.

The Sultan endeavored to induce the Arabs to liberate their slaves and make agreements with them whereby they would work three or four days a week for their former masters in lieu of rent for their huts and plots of ground. Few of the masters made such arrangements with the slaves, and few of the slaves applied to the courts for liberation. In the course of three months only 25 slaves were freed, the owners being compensated in 21 cases. The district courts mentioned in the decree were specially created for the purpose, the island of Zanzibar being divided into 3 districts, each under the supreme control of an Arab official having the rank of *wali*, with authority to form the district court. The Arab officials and district judges, who are all slaveholders, had no desire to carry out the decree, and after a brief show of zeal, would only make a pretense of administering justice when pressure was brought to bear upon them. They fell into the way of imprisoning for a few days the applicants for manumission, and then sending them back to their masters.

The British Government was prepared to consider the question of financial aid if the compensation to owners placed a serious strain on the financial resources of the Zanzibar Government, and it promised to renew its attempt to procure coolie labor from India to replace slave labor. Two thirds of the population of the islands were believed to be slaves. The slaveholders of Pemba and Zanzibar complained about the time the decree was issued that their slaves were being kidnaped and carried off to Soor, in Arabia, by dhows flying the Muscat or the French flag. In September the captain and crew of a French dhow were imprisoned at Mombasa on the charge of slave-dealing.

Creation of British Courts.—The establishment of British tribunals to take the place of the

system of consular jurisdiction was announced in July, 1897. A principal court will be established in Zanzibar and another in the East Africa protectorate, to be supplemented by subordinate courts when necessary. The powers conferred on the courts extend to all British subjects, to foreigners whose governments have agreed to accept British jurisdiction, and to their personal and proprietary rights; also, under certain restrictions, to natives and subjects of Zanzibar. The code of British India will be followed where it is applicable, and so far as it is inapplicable the common and statute law of England. Arbitrary powers are granted to the consul general to banish for two years without appeal any person dangerous to peace and good order or endeavoring to excite enmity of the Sultan or people against England or intriguing against the powers and authority of the British Government, and also to forbid any evidence to be taken or any document produced in court that he considers would be injurious to the service. For purposes of civil and criminal procedure Zanzibar and the protectorate are to be regarded as though they constituted a district in the Bombay presidency. From the court of the protectorate an appeal can be taken to that of Zanzibar, and from the latter to the High Court of Bombay. While the native courts of Zanzibar continue to decide cases between the Sultan's subjects, suits in which natives are plaintiffs against British subjects or foreigners coming within the court's jurisdiction must be brought in the British court. In the protectorate natives can only be sued or tried in the native court, but the Commissioner may make rules for the administration of justice in these courts, and he has power to abolish or to establish native courts. When a British subject or other foreigner under the jurisdiction of the British court is defendant, the protectorate court shall try the cause.

Uganda.—The protectorate over the native kingdom of Uganda was declared on June 19, 1894, the British East Africa Company having abandoned the country in March, 1893, when the provisional administration was committed to a British officer. In June, 1896, the protectorate was extended beyond Uganda proper so as to include Unyoro and other countries in the west up to the boundary of the Congo State, and in the east the district of Usoga. King Mwanga still nominally rules in Uganda, but the administration is really conducted by the British Commissioner and consul general, E. J. L. Berkeley, under instructions from the Foreign Office in London. The armed force is composed of Soudanese soldiers, commanded by Englishmen. The soil is fertile and suitable for growing coffee. The natives are skillful in working iron and making pottery.

Revolt of Mwanga.—The King left Uganda secretly on July 6 to head a revolt in the Buddu district against the British. This district is the portion of Uganda reserved for the French or Roman Catholic party, which was predominant before the occupation of the country by the East Africa Company's forces. The Roman Catholic natives resisted the English, who formed an alliance with the Protestant natives, and finally conquered the Mohammedan, heathen, and Roman Catholic factions. In the subsequent partition of the country the Roman Catholics, who were the last to submit, received the least desirable section, which was, moreover, insufficient in area. In June Mugwanya, the Roman Catholic Prime Minister, one of the few loyal members of the Roman Catholic party, was dispatched with an army to Toru to guard the frontier against the mutinous Congolese troops. The people of Buddu availed themselves of the opportunity afforded by the absence of the Prime

Minister and the other supporters of the Government who accompanied him to rise against the British. Mwanga, who felt aggrieved on account of the prevention of his people from exporting ivory and other produce into German East Africa, and other restrictive measures of the Government, was willing to make common cause with the Buddu party in the attempt to throw off the British yoke. On arriving in the Buddu district he organized a large army and marched out to meet the British forces. A battle took place on July 20, when Major Ternan, the deputy commissioner, by means of his Maxim guns and trained soldiery easily defeated the King's forces. Order was soon restored, since throughout Uganda there was no other insurrectionary movement. Mwanga escaped to German territory and surrendered to the German authorities, by whom he was detained. The British authorities, declaring the throne vacant, proclaimed as his successor the infant son of Mwanga, born in July, 1896, and established a regency.

Zanzibar is becoming more and more the chief center of commerce for East Africa, both for the transshipment of goods for the coast and the interior and for the trade with the southern ports. The port is being improved by the construction of a wharf and a pier and dry dock will be made. The imports for 1896, including produce from the islands of Zanzibar and Pemba, amounted to more than £1,250,000, and the exports to somewhat less. British India stands first among the importing countries, followed by German East Africa, with Great Britain third. In addition to the imports and exports large quantities of goods are transhipped direct in the port of Zanzibar from the line steamers to coasting steamers and dhows. The chief articles of trade are piece goods, ivory, cloves, rice, and coins.

British Central Africa Protectorate.—The protectorate of British Central Africa was constituted on May 14, 1891. It is administered by an Imperial Commissioner under the direction of the British Foreign Office. The Commissioner from the beginning has been Sir Henry H. Johnston. The population in 1895 was 289 Europeans, 263 British Indians, and 844,995 natives, counting 3 persons to every hut paying a tax. Blantyre, the chief town, has a population of 100 Europeans and 6,000 natives. In the Shire highlands, where the Europeans live, good roads have been made and an efficient police service is maintained. Here rice is cultivated and wheat, oats, and barley have been introduced. The imports in 1896 were valued at £82,760, consisting of cottons, machinery, provisions, hardware, and agricultural implements. The chief exports are ivory of the value of £11,530, coffee of the value of £7,136, tobacco, and strophanthus. The Portuguese Government has granted land at Chinde, on the navigable mouth of the Zambesi, for a British free port, where goods can be landed and reshipped on the Zambesi without paying the Portuguese custom duties. A naval force of 5 gunboats is maintained on the Zambesi, the Shire, and Lake Nyassa. The military force consists of 250 Sikh soldiers and 500 native police. A telegraph has been built to connect Zomba, the seat of government, and Blantyre with Tete, on the Zambesi, and the Cape system at Salisbury, and it is being continued to Lake Tanganyika with the view of reaching Uganda and eventually joining the European telegraph system in Egypt.

Sir Henry Johnston has organized an administration in Central Africa that stands in marked contrast to the system of governing natives organized in most parts of Africa by European officials who seek to uphold slavery or, under various disguises, to reintroduce it. Under his administration, sec-

onded by the missionaries and traders in Nyassaland, the natives are educated and encouraged to become free laborers and independent producers, and treated as if destined to become the equals and rivals of the whites in intelligence and wealth. Mpesini, the only one of the unconquered Angoni chiefs who continued to raid the country round the British settlements, gave up the struggle against civilization in 1897 and removed his people to the Bua river, within the protectorate.

British Central Africa.—The British sphere of influence in Central Africa wrested from Portugal was committed to the care of the British South Africa Company, with the exception of the district lying between the southern and western shores of Lake Nyassa and the Zambesi, where Scottish missionaries had labored for fifteen years. This was made a separate protectorate. The area of the sphere of influence is about 500,000 square miles, and the population is estimated at 4,000,000. The European population is over 350. The Barotse country, east of the upper Zambesi, is populous. In other parts slave-raiders have exterminated the people. A few Indian traders have settled on the lower Zambesi, and settlements have been begun on Lake Mweru, Lake Tanganyika, and the upper Luapula river in the neighborhood of Bangweolo. About 40 Arab chiefs are recognized by the British Government. They have their seats near the lakes of Tanganyika and Nyassa. The representative of the British South Africa Company is Major P. Forbes.

The Barotse are the ruling tribe, each member of which is accounted a chief by birth. They are of fine physique, dignified and courteous in demeanor, and skillful in wood carving, while the Mabunda are clever in making mats and baskets, the Matutela supply their neighbors with assegais, knives, and other iron implements, and build all the canoes, which are paddled mostly by the Masubia, a hunting tribe of strong physique. The Matoka cultivate cereals and furnish porters. The Mankoaia, a small race, hunt with poisoned arrows, which are used also by the indolent and treacherous Mashikolombwe in their predatory warfare. The Barotse country is an alluvial plain, supporting large herds of cattle. Lewanika is the paramount chief. His eldest sister, Mokwai, exercises great power and is at liberty to wed or depose a husband at will, which she has made use of by having six successive husbands put to death.

German East Africa.—The German protectorate is administered by a Governor. Major H. von Wissmann held this office at the beginning of 1897, but Lieut.-Col. von Trotha acted in his absence as deputy Governor and commander of the imperial troops. The native population consists of Bantu negroes mainly, much intermixed with Arabs near the coast. There are forests of mangroves, coconut palms, baobab, tamarind, etc., in the coast districts, and of acacias, cotton trees, sycamores, banyans, etc., in the higher regions of the interior. In the more settled districts the natives have large banana plantations and cultivate pulse and corn. They rear large numbers of goats and some sheep and cattle. The Government has established experimental stations for raising cattle and planting coffee and other tropical produce, and grants subsidies to steamers and railroads. The railroad from Tanga to Pongwe, 10 miles, is being carried through to Karagwe. A telegraph line joins the coast towns and is extended by cable to Zanzibar. Coal, iron, malachite, salt, and gold have been found. The chief article of export is ivory. The total value of the imports in 1895 was 6,725,098 rupees, and of the exports 2,879,368 rupees. The value of ivory export in 1894 was \$873,467; caoutchouc, \$247,470; sesame, \$80,100; cocoanuts, \$44,140; copra, \$24,-

862. The expense of administration in 1898 is estimated at 6,069,000 marks, toward which the Imperial Government contributes 4,369,900 marks.

Italian Somaliland.—The Sultan of Obbia accepted an Italian protectorate in February, 1889, and in April of that year the protectorate was extended to the country between 5° 33' and 8° 3' of north latitude belonging to the Sultan of Mijertain, who agreed to make no treaty with another power regarding the rest of his dominions. After an agreement was reached with Great Britain and the boundary between the respective spheres of influence settled, on March 24, 1891, the Somali coast from Obbia to the Juba river was ceded to Italy by the Sultan of Zanzibar in August, 1892, and in September of the following year Italian officials assumed the administration of the seaports. The administration of the Benadir district was granted in May, 1893, to V. Filonardi & Co. for three years. A supplementary Anglo-Italian agreement, made on May 5, 1894, defines the bounds of the protectorate of British Somaliland.

ECUADOR, a republic in South America. The Congress consists of a Senate and a Chamber of Deputies. There are 30 Senators, 2 from each province, elected for four years, one half retiring every two years. The Deputies, elected for two years by Roman Catholic adult males able to read and write, in the ratio of 1 to 35,000 of the population, number 33. The President, whose term is four years, is Gen. Eloy Alfaro. The ministers in the beginning of 1897 were the following: Interior, A. Ribadeneira; Foreign affairs, J. Robles; Finance, C. P. Quiñones; War, Gen. Morales; Public Works, D. Morla; Public Instruction, V. Govgotena; Public Worship, R. Barba Jijon.

Area and Population.—Ecuador has an area of about 120,000 square miles. The boundary on the side of Peru is unsettled, a treaty made in 1890 for the adjustment of the difficulty having been amended by Peru in 1893, after it was sanctioned by the Ecuadorian Congress, which consequently canceled it in 1894. The population of the republic is estimated at 1,271,861, of whom only about 100,000 are white, while 300,000 are of mixed blood and 870,000 are pure Indians. Quito, the capital, has about 80,000 inhabitants; Guayaquil, 50,000; Cuenca, 25,000; and Riobamba, 12,000. Education is free and compulsory. There are 1,088 primary schools, with 1,498 teachers and 68,380 pupils.

Finances.—The revenue for 1893 was 4,325,702 sucres, and expenditure 4,433,450 sucres (1 sucre = 68 cents). Since then no complete statement of the finances has been published. The receipts from customs in 1894 were 3,102,340 sucres; in 1895 they were 2,840,000 sucres. About 70 per cent. of the public income comes from this source, 15 per cent. from duties on cacao, rum, and tobacco and the land tax, 6 per cent. from monopolies of salt and powder, and 9 per cent. from railroads, the post office, and excise duties.

The foreign debt was scaled down to £750,000 in 1892, and a further reduction and compromise was made in 1894, but it was upset in 1896, when the Government, after the bondholders had given their consent, suspended payments pending a more advantageous arrangement. The foreign bonds outstanding amounted to £693,160, and internal bonds to £264,000.

The Army and Navy.—The regular army of Ecuador has a fixed strength of 3,341 officers and men, organized in 1 brigade of fortress artillery, 1 of field artillery, 4 battalions of infantry, 2 columns of light infantry, and 1 regiment of cavalry. The National Guard is estimated to number 30,000 men. The naval force consists of 1 torpedo launch and 1 transport, manned by 128 men.

Commerce and Production.—The most important commercial product of the country is cacao. Other products are coffee, rice, vegetable ivory, and rubber. Mines at Cachavi, Playa de Oro, and Uimbi are operated by American corporations. Besides gold, which is widely distributed, silver, copper, iron, lead, petroleum, and coal are found. The imports at the port of Guayaquil for 1895 amounted to 8,520,000 sucres, and exports to 11,562,740 sucres. The imports consist mainly of cotton goods and provisions. Among the exports the chief articles exported in 1895 from the port of Guayaquil were cacao for £768,283 sterling, coffee for £198,212, and rubber for £30,583.

Navigation.—There were 955 sailing vessels, of 22,238 tons, entered at Guayaquil in 1895, of which 942, of 14,200 tons, were Ecuadorian and 13, of 8,038 tons, foreign; and 950, of 20,963 tons, cleared, of which 938, of 13,900 tons, were Ecuadorian and 12, of 7,063 tons, foreign; and 158 steamers, of 266,474 tons, entered, of which 86, of 138,330 tons, were British and 72, of 128,144 tons, of other nationalities, and cleared 159 steamers, of 267,840 tons, of which 87, of 139,696 tons, were British and 72, of 128,144 tons, belonged to other foreign nationalities.

Communications.—There are 17 American and Ecuadorian steamboats plying on the rivers. The only railroad is one from Duran to Chimbo, 58 miles, the continuation of which to Sibambe has been approved by Congress, special freight charges being imposed to provide the means.

The telegraphs have a length of 1,242 miles. The post office in 1893 carried 1,808,806 external letters and 6,346,595 papers, etc. The internal traffic amounts to about 820,000 letters a year.

Politics and Legislation.—Since the advent of Gen. Eloy Alfaro to the presidency he has been obliged to maintain an attitude of constant vigilance toward the Conservatives and their ecclesiastical supporters of the Jesuit and other religious orders which have exercised a dominant influence in politics for thirty years or more. The Indians, who have been held in practical bondage, and who aided Gen. Alfaro in the revolution of 1895, were relieved of the obligation of paying tribute and admitted to citizenship. A presidential election was held in January, 1897, when Gen. Alfaro was elected Supreme Chief. At that time a formidable revolution for the overthrow of the existing Government was apprehended. All revolutionary attempts of the Conservatives rely on the financial support of the wealthy and influential religious bodies. Arms were imported from France and collected at a point in Colombia near the frontier. The revolutionists established their headquarters at Pasto, in the Colombian department of Cauca. Gen. Plutarco Bowen, who was aid-de-camp to Gen. Eloy Alfaro during the revolution of 1895 and was condemned to death for treason, his sentence being subsequently commuted to exile, arrived in Colombia in the beginning of April with the intention of invading Ecuador at the head of a revolutionary army. The Colombian Government, being apprised of his coming, at once expelled him from the country. Some prominent politicians, Liberals as well as Conservatives, were exiled from Ecuador. Bishop Andrade, of Riobamba, was arrested and taken on board of a gunboat, where he was offered the alternative of going abroad or remaining in Guayaquil under police surveillance.

The Congress authorized the Executive to raise a loan of \$5,000,000 to advance the construction of the Southern Railway, which an American syndicate undertook to build. A loan of \$1,250,000 was authorized for the purpose of paying off the internal debt.

EGYPT, a principality in northern Africa, tributary to Turkey. The Government is an absolute monarchy, hereditary in the order of primogeniture in the dynasty founded by Mehemet Ali in 1811. The monarch bears the title of Khedive, or Viceroy, conferred by the Sultan in 1867. The reigning Khedive is Abbas Hilmi, born July 14, 1874, son of Mehemet Tewfik, whom he succeeded on Jan. 7, 1892, receiving the firman of investiture from the suzerain on March 26, 1892. Since the suppression of the military revolt of 1882 Egypt has been occupied by a British army. The Khedive appoints an English financial adviser, who has a seat in the Council of Ministers and power to veto any financial measure. Two popular legislative bodies were established at the beginning of the British control, viz., a Legislative Council, half elected and half nominated, which has the right to examine all proposed general laws and offer advice to the Khedive regarding them, and the Legislative Assembly, which meets once in two years and has the right to veto any new direct personal or land tax. The Cabinet in office at the beginning of 1897 was composed as follows: Prime Minister and Minister of the Interior, Mustapha Fehmi Pasha; Minister of War and Marine, Mohammed Abani Pasha; Minister of Public Works and Education, Hussein Fakhr Pasha; Minister of Foreign Affairs, Butros Ghali Pasha; Minister of Finance, Ahmet Mazlum Pasha; Minister of Justice, Ibrahim Fuad Pasha.

Area and Population.—Previous to the evacuation of the Soudan, in January, 1885, Egypt had an area of 1,420,520 square miles, containing 17,500,000 inhabitants. Within its present limits the area is 400,000 square miles, not counting the reconquered province of Dongola. The Nile valley and delta, constituting the inhabited portion of Egypt proper, have an area of only 12,976 square miles, of which 3,750 are covered by canals, roads, lakes, marshes, and desert. The estimated population of Egypt in 1894 was 7,739,000, of whom 7,366,400 were Egyptians and Nubians, 25,300 sedentary Arabs, 236,900 Bedouin Arabs, and 110,400 foreigners. In respect of religion the population was divided into 7,069,200 Mohammedans, 475,000 Copts, 164,000 other Christians, and 30,800 Jews and others. The estimated population of Cairo, the capital, was 430,000; of Alexandria the chief part, 250,000. There were about 9,000 schools in 1895, with 11,000 teachers and 170,000 pupils.

A census taken on June 1, 1897, shows the present population of Egypt to number 9,700,000, an increase of 42 per cent. as compared with the inaccurate census of 1882. The population is believed to have grown threefold since 1845 and now surpasses the figures given by the ancients for the palmy period of Rameses. European nationalities have greatly increased, with the exception of the Greeks, whose diminished numbers in the provinces is regarded with satisfaction, they being the chief usurers and liquor-sellers.

Finances.—The international commission of liquidation invited by the late Khedive Ismail to reconstruct the Egyptian finances in 1880 estimated the future revenue at £ E. 8,411,622 a year (1 Egyptian pound = \$4.94), of which £ E. 3,513,734 was assigned to the service of the debt, and £ E. 4,897,888 to the Government. The annual charge of the privileged and unified debts was £3,421,404 sterling. A new guaranteed loan of £9,000,000 was issued in 1885, requiring a fixed annual payment of £315,000. The privileged debt and the loans guaranteed on the Daira Sanieh estate and the khedivial domains were converted into a new privileged loan in 1890, issued at 91 for 100 of the old debt, and paying 3½ instead of 5 per cent. The Moukabalah, or internal debt, was scaled down by the

debt commissioners to a fixed annuity of £150,000, to be paid until 1930, and then to cease. This and the Turkish tribute of £681,486, the interest on the Suez Canal shares held by the English Government, and £34,000 for the Daira Khassa were to be paid out of revenue assigned to the Government.

The actual revenue of the Egyptian Government in 1896 was £ E. 10,693,000, and the total expenditure £ E. 10,377,000, leaving a surplus of £ E. 316,000. In 1895 the surplus amounted to £ E. 1,088,077, of which £ E. 354,193 went to the reserve fund of the Caisse de la Dette, £ E. 332,240 to the special reserve fund of the Government, and £ E. 401,644 were deposited in the Caisse de la Dette as the amount of the economy from conversions of loans. The fund of economies from conversions amounted to £1,883,070 at the beginning of 1896; the general reserve fund to £ E. 2,717,196; and the special reserve fund to £ E. 471,411. The budget for 1897 makes the total revenue £ E. 10,497,435, of which £ E. 5,002,461 are derived from the land tax, £ E. 136,000 from other direct taxes, £ E. 789,744 from customs, £ E. 1,000,000 from tobacco, £ E. 205,128 from *octrois*, £ E. 177,436 from the salt duty, £ E. 87,179 from fisheries, £ E. 71,795 from navigation dues, £ E. 38,974 from various duties, £ E. 1,800,000 from railroads, £ E. 44,102 from telegraphs, £ E. 128,205 from the port of Alexandria, £ E. 2,052 from other ports, £ E. 191,795 from the post office and postal packets, £ E. 71,795 from lighthouses, £ E. 6,154 from the gold assay office, £ E. 405,128 from the law courts, £ E. 20,513 from various administrative departments, £ E. 97,436 from exemption from military service, £ E. 25,641 from interest on deposits, £ E. 92,308 from Government property, £ E. 13,333 from Suakin, and £ E. 59,487 from deduction from salaries for the Pension fund.

The total expenditure for the financial year 1897 was estimated at £ E. 10,492,307, of which £ E. 260,370 is for the Khedive's civil list, £ E. 4,074 for the Council of Ministers, £ E. 8,482 for the Legislative Council, £ E. 11,401 for the Ministry of Foreign Affairs, £ E. 87,380 for the Ministry of Finance, £ E. 107,877 for the Ministry of Public Instruction, £ E. 396,693 for the Ministry of the Interior, £ E. 400,630 for the Ministry of Justice, £ E. 748,789 for the Ministry of Public Works, £ E. 115,248 for general expenses of the ministries, £ E. 333,950 for provincial administrations, £ E. 76,918 for collection of customs, £ E. 89,524 for the coast guard, £ E. 35,795 for the collection of *octrois*, £ E. 45,762 for collecting the salt duty, etc., £ E. 10,367 for collecting fishery dues, £ E. 3,210 for collection of navigation dues, £ E. 897,617 for expenses of the railroads, £ E. 43,077 for operating the telegraphs, £ E. 28,718 for the port of Alexandria, £ E. 3,794 for other ports, £ E. 100,026 for the post office, £ E. 81,485 for the khedivial packet boats, £ E. 27,625 for lighthouses, £ E. 2,663 for the assay office, £ E. 406,308 for the Ministry of War, £ E. 87,000 for the expenses of the British army of occupation, £ E. 123,607 for the administration of Suakin, £ E. 102,564 for the Dongola province, £ E. 441,026 for pensions, etc., £ E. 682,093 for the Turkish tribute, £ E. 34,872 for the Daira Khassa, £ E. 153,846 for the Moukabalah debt, £ E. 2,044 for interest and exchange, £ E. 82,051 for the domains deficit, £ E. 34,872 for expenses of the Caisse de la Dette, £ E. 315,000 for the service of the guaranteed loan, £1,028,775 for the preference debt, £2,238,878 for the unified debt, £ E. 256,410 for suppression of the *corvée*, £ E. 32,821 for unforeseen expenses, £ E. 271,833 economy from conversion of the privileged debt, and £276,832 for the Government share of receipts in excess of expenditure.

The ordinary revenue of the Government in 1896

reached £ E. 10,693,000, and the expenditure £ E. 10,377,000, leaving, despite exceptional expenditure incurred on account of the cholera, a surplus of £ E. 316,000 where one of £ E. 17,000 only was expected. These figures do not include the extraordinary expenditure on the Dongola expedition, which came to £ E. 715,000, of which over £ E. 172,000 was spent on railroad extension, and £ E. 65,600 on gunboats. In the estimates for 1897 the sum of £ E. 100,000 was provided for the province of Dongola, of which £ E. 60,000 was for the army, £ E. 25,000 for railroad expenses, and £ E. 15,000 for civil purposes. The Caisse de la Dette held £ E. 5,590,000 at the end of 1896. The special reserve fund showed a deficit of £ E. 780,000, taking all liabilities into account.

The amount of the Egyptian debt on Jan. 1, 1896, was £104,636,900 sterling, made up as follows: 3 per cent. guaranteed loan, £8,699,300; 3½ per cent. privileged debt, £29,393,580; 4 per cent. unified debt, £55,974,820; Daira Sanieh loan, paying 4 per cent., £6,644,360; domains loan, paying 4½ per cent., £3,924,840. The domains and Daira Sanieh loans are guaranteed by the estates, which are administered by commissioners for the bondholders; in case the revenue of the lands proves insufficient to pay the interest the Government must make good the deficiency. An annual payment of £34,871 is made to the Daira Sanieh Commissioners. The revenues available for the service of the debt are paid over to the Caisse de la Dette, an international committee. The large sums of money that remain in the hands of the Commissioners of the Debt at the close of each year they invest in Egyptian bonds, thus forming a large and constantly increasing sinking fund. The average amount of debt either paid off or withdrawn in this way from the market has been £850,000 a year for three years past, at which rate the whole debt would be redeemed in forty-four years. Owing to these operations the amount of bonds in the hands of the public on Jan. 1, 1897, was only £3,455,000 more than on Jan. 1, 1883, notwithstanding fresh loans made during the British occupation to the amount of £13,000,000, and a nominal addition of £2,000,000 to the capital of the debt by conversion operations. The interest charge on the £99,912,000 of bonds outstanding is £3,776,000, which is £387,000 less than in 1883. The charges for the various debts in 1897 were £315,000 sterling for the guaranteed loan, £1,029,000 for the privileged debt, £2,239,000 for the unified debt, £265,264 for the Daira Sanieh loan, £160,990 for the domains loan, £34,871 for the Daira Khassa, and £154,000 for the Moukabalah; total, £4,198,125.

The Army.—The Egyptian army, commanded by the sirdar, Sir Herbert Kitchener, and about 100 English officers, has a strength of 17,000 men. The English army of occupation, for which the Egyptian Government pays £87,000 a year, averages more than 4,000 men.

Commerce and Production.—The fellahin who cultivate the land make 61 per cent. of the total population. Over three fifths of the area cultivated is divided into holdings of less than 50 feddans, or acres. About three fourths of the land belongs really to the Government, and the life tenants must pay a tax that amounts to the agricultural rent equal to \$5.35 on the average. The rest is privileged land, which is taxed at the rate of \$1.60 a year. The Wakf lands, which were originally assigned to the mosques for religious and charitable purposes, are rented to life tenants at low rates. The fellahin, in addition to their tax or rent, pay about \$1 a year for the material used in repairing the dikes and canals. The *corvée*, or forced labor, which has otherwise been abolished, is still exacted

for the purpose of guarding or repairing the Nile banks in time of flood or for any sudden emergency. The lands owned by the fellahin are heavily mortgaged. The registered mortgage indebtedness, which does not include the debts of a large proportion of the small proprietors, amounted in 1894 to the sum of £ E. 7,323,300. The chief crops are cotton, sugar, rice, corn, wheat, barley, clover, sorghum, cucumbers, and vegetables in the delta and the canal tracts of upper Egypt; and millet, wheat, beans, clover, and vegetables where the land is irrigated in flood only. Wheat, maize and durra, clover, cotton, beans, and barley occupy nine tenths of the cultivated lands. The area under cultivation is 4,961,462 feddans, one fifth of which bears double crops. There are 3,452,674 bearing date trees. The number of cattle, horses, and camels is 1,668,860.

The imports of merchandise in 1895 amounted to £ E. 8,389,933; exports, £ E. 12,632,450. The imports of specie were £ E. 4,319,265, and exports £ E. 2,322,190. The chief imports were: Cottons, £ E. 1,333,946; silk, woolen, and other textiles, £ E. 939,425; tobacco, £ E. 510,822; timber, £ E. 496,319; coal, £ E. 404,578; iron and steel manufactures, £ E. 344,800; machinery, £ E. 309,722; apparel and hosiery, £ E. 309,646; wheat and flour, £ E. 285,667; wine, beer, and spirits, £ E. 268,009; coffee, £ E. 265,350; petroleum and oils, £ E. 250,842; fruits, £ E. 220,525; indigo, £ E. 192,676; live animals, £ E. 166,322; rice, £ E. 106,803; refined sugar, £ E. 23,122. The chief exports in 1895 were: Cotton, £ E. 9,463,498; cotton seed, £ E. 1,200,364; sugar, £ E. 472,953; beans, £ E. 469,482; onions, £ E. 159,244; corn, £ E. 113,245; hides and skins, £ E. 95,357; wheat, £ E. 89,465; wool, £ E. 52,525; lentils, £ E. 13,199; gum arabic, £ E. 5,856.

The shares of the various countries in the foreign trade of Egypt for 1895 are as follow:

COUNTRIES.	Imports.	Exports.
Great Britain	£ E. 2,641,773	£ E. 7,312,610
Turkey.....	1,672,915	344,450
France.....	934,165	1,027,786
Russia.....	360,607	1,252,854
Austria-Hungary	635,331	527,519
Italy.....	303,034	437,599
Germany.....	216,391	394,916
British colonies in the East....	496,549	91,852
America.....	46,133	469,365
Belgium.....	339,629	46,194
Spain.....	1,401	249,684
British Mediterranean colonies.	128,685	8,815
Greece.....	58,008	9,326
China and the far East.....	56,046	10,432
French Mediterranean colonies	23,879	10,526
Morocco.....	23,909	1,661
All other countries.....	378,474	436,861
Total.....	£ E. 8,389,933	£ E. 12,632,450

For 1896 the imports were valued at £9,550,000, not including tobacco worth £524,000 and £578,000 for goods in transit. The exports amounted to £24,630,000, besides £415,000 for re-exports. The specie imports were £3,813,000, and exports £1,872,000. Including specie, the exports exceeded the imports by £1,547,000. The receipts of customs were £761,000 from imports, £131,000 from exports, £19,000 from sundries, and £1,032,000 from tobacco; total, £1,943,000, collected at a cost of \$70,500, or 3.63 per cent., not including £88,000 for the coast-guard service. Of the increase of £1,474,000 over the imports of 1895 more than a third was in flour, 69,000 tons against 37,600 in 1895, coming chiefly from France and Russia, and by its cheapness driving native wheat and maize out of cultivation. The rest of the increase was due to iron imports for railroads and sugar works, and to the demand for textiles, especially woolen fabrics, and various luxuries. Though wheat, beans, maize, lentils, and dates declined in quantity and onions in price, the exports

exceeded those of 1895 by £615,000. The sugar crop was 30 per cent. larger than any preceding one, and shipments were valued at £784,000, of which over 57 per cent. went to the United States, and 27 per cent. to England. Cotton exports were smaller in quantity, but £536,000 more in value than the preceding year. The crop of 1897 largely exceeded that of 1895. Cotton seed, wool, and henna showed increases, while rags and hides fell off, owing to quarantine measures against cholera. The tobacco and cigarette trade has increased steadily since 1892, and in 1896 there were 185,780 thousands of cigarettes exported, weighing 258 tons, of which 109 went to Great Britain and 90 to Germany. Of the total imports, amounting to £10,074,000, Great Britain and British possessions furnished £3,781,000, Turkey £2,039,000, France £1,358,000, and Austria, Belgium, Russia, Italy, Germany, etc., came far behind. Of the exports, valued at £13,563,000, Great Britain and British possessions took £7,226,000, Russia £1,510,000, France and French colonies £1,246,000, the United States £951,000, and Austria, Switzerland, Turkey, Italy, Germany, Spain, etc., the remainder. Of the total foreign trade, 47.45 per cent. was with England, 10.64 per cent. with France, 10.29 per cent. with Turkey, 7.67 per cent. with Russia, 4.21 per cent. with the United States, and the remaining 19.74 per cent. was divided among a dozen countries. The trade with the United States, owing to the sugar shipments, was double that of the previous year.

Navigation.—During 1895 there arrived at Alexandria 2,393 vessels, of 2,206,667 tons, and cleared 2,339 vessels, of 2,194,964 tons. Of the arrivals, 620, of 899,015 tons, were British; 137, of 286,009 tons, French; 999, of 255,333 tons, Turkish; 150, of 235,829 tons, Austrian; 133, of 223,843 tons, Italian; 79, of 156,984 tons, Russian; 40, of 49,280 tons, Norwegian and Swedish; 26, of 42,263 tons, German; 167, of 30,810 tons, Greek; 5, of 10,411 tons, Danish; 1, of 5,016 tons, Belgian; 3, of 2,703 tons, Spanish; and 33, of 4,171 tons, of other nationalities.

Communications.—The Egyptian state railroads had a total length at the end of 1896 of 1,143 miles. There were 9,854,000 passengers and 2,498,000 tons of goods transported during that year. The gross receipts were £ E. 1,820,970, and the working expenses £ E. 787,930, leaving as net receipts £ E. 1,033,040, equal to 57 per cent. of the total receipts.

The state telegraphs had at the end of 1896 a total length of 2,269 miles, with 8,450 miles of wire. The number of messages sent in 1896 was 2,392,036.

The Egyptian post office in 1895 carried 10,470,000 internal and 4,234,000 international letters and postal cards, 4,800,000 internal and 2,942,000 international newspapers, etc., and 456,000 orders and remittances, of the amount of £ E. 16,400,000.

Suez Canal.—The number of vessels that passed through the canal in 1895 was 3,434, of 11,833,637 tons, of which 2,318, of 8,382,075 tons, were British; 278, of 1,005,051 tons, were French; 314, of 977,029 tons, were German; 192, of 497,903 tons, were Dutch; 72, of 248,985 tons, were Austrian; 78, of 224,358 tons, were Italian; 57, of 145,877 tons, were Norwegian; 33, of 140,007 tons, were Spanish; 39, of 137,288 tons, were Russian; 36, of 51,954 tons, were Turkish; 3, of 6,090 tons, were Portuguese; 5, of 4,606 tons, were American; 2, of 3,562 tons, were Egyptian; 2, of 3,401 tons, were Japanese; 2, of 3,168 tons, were Swedish; 1, of 1,208 tons, was Danish; and 2, of 1,075 tons, were Chinese. The receipts amounted to £3,124,149. The number of passengers who went through the canal was 216,936. The share and loan capital and surplus expended on the improvement of the canal amounted to 610,298,770 francs at the end of 1895. The net profits in 1895 were 41,969,014 francs.

Internal Affairs.—The English have made progress in assimilating the judicial system of the country, as well as the administrative services, to European models. However much the Egyptians resent the rule of the foreigners and the exploitation of their country by Europeans whose commercial methods have deprived a large proportion of fellahin of their hereditary acres, they would not return to the old system of arbitrary tyranny, under which the *mamours* could insult, flog, and imprison their *omdehs* with impunity, the officials from the Khedive down despoiled the fellahin at will, palace favorites and public functionaries turned all the Nile water upon their own lands and forced the fellahin to dig canals and make roads and embankments for the benefit of their large estates under the *corvée* system, justice was purchasable, public offices were given to the highest bidders, the mudirs exacted ransom from the village notables under threat of punishing them on trumped-up charges, and the lives of private persons were at the mercy of the administrative authorities, who put them to death or exiled them without any form of law. Under the expensive British control, taxation is felt to be severe, yet the rate per feddan is only a third of the multifarious taxes formerly imposed—£ E. 14 instead of £ E. 42. Corporal punishment is so thoroughly abolished that the highest Government official can not arbitrarily molest a field laborer. The inviolability of property is so secure that the Khedive himself can not take a feddan of land unless he buys it with the owner's consent and pays for it in full. The poorest fellah enjoys the same right of water as any state dignitary. Offices are bestowed on the ground of capacity. The professional tax paid by merchants and manufacturers has been removed. No one is above the law, and as to the administrative forced labor, which formerly existed all the year round, it is demanded only in cases of public danger. Moreover, the irrigation works have been greatly improved, the area of cultivation extended proportionately, and the growth of cotton doubled since the British occupation.

The improvement in the administration of justice was begun before the British occupation by the institution of the Mixed Tribunals in 1876 after eight years of negotiations between the European powers, who surrendered to these courts the rights of consular jurisdiction enjoyed under the capitulations. The Egyptian Government was desirous of having independent courts administer some uniform system of jurisprudence for its own protection, as some of the consuls had enforced all sorts of imaginary and exaggerated claims in behalf of foreigners against the Khedive and the Government. Nubar Pasha, the originator of the idea, proposed to have these courts, to be composed of equal numbers of foreign and native judges, adjudicate upon all questions, civil and criminal, international and native, in the hope of educating an enlightened native magistracy, trained in the principles of French law. But the consenting powers insisted that mixed civil cases alone should be tried, and that a majority of the judges should be Europeans. The six great powers also insisted on appointing all the foreign judges in the Court of Appeals, and each two judges in the courts of first instance. The other European judges were chosen from the secondary powers, mostly from northern Europe. A full bench in the Appellate Court was fixed at five Europeans and three natives, in the lower court at three Europeans and two natives. The emoluments were placed at a high figure, to attract able jurists. The judges appointed were men of the highest legal science, who worked laboriously and organized a system of jurisprudence that was admired in all countries, and served to instill

ideas of justice from which have developed the codes and procedure of the present native tribunals. The outstanding claims against the Khedive they disposed of rapidly, reducing millions to thousands, and throwing out innumerable fictitious cases. The mixed tribunals were established for the purpose of deciding civil and commercial disputes between natives and foreigners, and between foreigners of different nationality, but they extended their jurisdiction to cases by which foreigners were in any way affected, or in which they were introduced by a fiction in order to bring the matter before them, and until the English came both Egypt and the powers were willing that all important questions should be adjudicated by tribunals applying the most enlightened principles of civilized law with the purest impartiality and fearless independence. As there was no court above them, they could interpret their charter as they saw fit. They have declared their competency in suits against the railways, Daira, domains, and other public administrations, against corporations any of whose shares are held by foreigners, against the city of Alexandria, etc. In the matter of taxes they have declared themselves competent to examine whether a tax is illegal, excessive in amount, or oppressively collected. Judgments concerning land or mortgages registered in the native tribunals are not recognized by the mixed tribunals, so that the people in all parts of Egypt, in order to protect themselves, must register their titles and liens in the mixed tribunal at Cairo. The British found the mixed tribunals the only institution that they could not bend to their purposes. As these courts followed established rights and precedents based on French or Continental rather than on English law, the Khedive's English advisers conceived that they were actuated in their decisions by hostility to British methods and a desire to preserve French influence and institutions in Egypt that the French had introduced. In trying to recast the legal institutions of the country, in order to establish British influence on a lasting basis, the English and Anglo-Indian officials were disturbed by finding French jurisprudence so firmly implanted in the native courts as well as in the mixed tribunals. When the mixed court in 1896 decided, to the chagrin and confusion of the British Government, that the reserve of the Caisse de la Dette could not be used to defray the expenses of the Soudan expedition, the English declared war against the mixed tribunals. They would not abolish them at once, for insuperable political obstacles stand in the way, and besides they have nothing to take their place, and can not expect to create a set of tribunals that would enjoy such authority and respect, even if they could abolish the capitulations. But they desire to curtail their jurisdiction, which would allow more scope to the native tribunals under their own tutelage. The powers of the mixed courts are renewed every five years. Their present period of existence expires on Feb. 1, 1899, and the English authorities in Egypt wish at that time thoroughly to revise the charter, if it can be accomplished by negotiation with the fourteen powers interested. Meanwhile they are trenching wherever possible on the functions assumed by these courts before the occupation. In accordance with the unanimous vote of the Legislative Council on April 16, the Government decided to establish a single land registry office under the direction of the Minister of Justice in Cairo, with branches attached to the native tribunals throughout the country. This system, taking the place of dual registration in the mixed courts and the Mekemmeh tribunals, met the approval of the judges of the mixed courts when suggested four years previous. The Mekemmeh, or native religious courts, dealing with the personal status of Moham-

medans, with *wakfs*, marriage, inheritance, and minors, have been the subject of much criticism and complaint. In April the Government issued a decree placing them under the Ministry of Justice, and reforming their organization and procedure, which is conformed to that of the native tribunals. The reform, which followed a measure that was carried out in Turkey some years before, secures speedy judgment and execution, and the nomination of honest and capable judges. Cases come before a single judge, from whose decision there is only one appeal, and who shall admit written evidence, whereas only oral evidence has heretofore been accepted. There being ten European judges in the native Court of Appeals, it was decided to make two of them presidents in two of the six chambers. The ministry, all of whose members but one are Mohammedans, roused considerable opposition by appointing a representative of the Coptic community on the Legislative Council, which was founded on the suggestion of Lord Dufferin to give an opinion on all important Government measures, and, being partly elective and partly nominated, is intended to represent all the people, of whom a tenth are Christians.

The newspapers enjoying European protection are accustomed to print unrestrained attacks on foreign governments, but when a petty native paper published a silly slander about the German Emperor the consul general of Germany complained, with the result that the editor was subjected by the native court of Cairo to a severe sentence, which was reduced on appeal. Some rioters made an attack on a British detachment at Qualioub in September, and in consequence of this British troops, which had been garrisoned only at Cairo and Alexandria, were marched through the country and stationed at various towns to impress the Egyptians. There were 22 arrests made in connection with the riot, and the arrested persons were tried and sentenced by a special tribunal for the trial, without appeal, of cases of assault on the British troops. This tribunal had not before been constituted, but was authorized by the law of February, 1895, and was composed of native and English judges. This disturbance was the result of an excited state of Mohammedan feeling against Christians, growing out of the Greco-Turkish war. In Zagazig and Suez rioters had plundered Greek shops. The English police officials, however, had effectually prevented any serious public demonstration. One planned at Alexandria they promptly checked. The Greek reservists and volunteers in April embarked demonstratively at Alexandria, and those who remained collected subscriptions for the Greek cause, which prompted the Turks, including Cretan Mohammedans and sympathizing Egyptians, to contribute £200,000 in aid of the Sultan. The Khedive took the opportunity to fit out secretly, without the knowledge of his ministers, an expedition of 100 men, with munitions, for the purpose of occupying the Turkish island of Thasos, which had belonged to his ancestor Mehemet Ali, who bequeathed the revenues to the islanders. The expedition did not reach its destination, the Turkish vessel that carried it being captured by a Greek war ship. The command of the British army of occupation was vacated by Gen. Knowles in August, and on Oct. 7 Sir Francis Grenfell took command.

Foreign Affairs.—When the Mixed Court of Appeals decided, on Dec. 2, 1896, that the money advanced by the Caisse de la Dette to defray the expenses of the Dongola expedition would have to be refunded by the Egyptian Government, the British Government promptly announced that it would hold itself prepared to advance, on conditions to be decided thereafter, such a sum as it felt satisfied

that the Egyptian treasury was powerless to provide. The Egyptian Government at once accepted, with expressions of lively satisfaction, this arrangement, and on the same day the sum in dispute, which was about £ E. 515,600, was paid back to the Caisse de la Dette by the Egyptian Minister of Finance. The French and Russian diplomatic representatives protested against the Government's intention of borrowing the money from Great Britain, and the Egyptian minister explained that it would be done under a law authorizing the Government to obtain advances and was not considered to be in any way an infringement of international engagements. Sir Michael Hicks-Beach, speaking in Parliament, said that when the position of the mixed tribunals had again to be reconsidered it would be necessary, from the point of view of international policy, to decide how far they should be permitted to interfere in political affairs. He gave notice to France and Russia that England proposed to remain in occupation of Egypt. M. Hanotaux, in the French Chamber, said that, whatever might take place in parliamentary debates, the international situation would remain unchanged, and the French Government would not modify its determination not to consent to any infringement of rights based on public acts or repeated promises, and, above all, on the accord of the powers established by international agreements.

The Soudan Expedition.—English officers were ordered to be at their posts in readiness for a fresh Soudan advance before the end of June. The Egyptian troops were echeloned along the left bank of the Nile so as to command the approaches from Omdurman, Metammeh, and Berber. The advance was planned to be made from Merawi about the middle of July, as soon as the railroad across the desert from Wady Halfa to Abu Hamed should be completed halfway. The Khalifa was expected to strengthen the garrison at Abu Hamed for the purpose of arresting the completion of the railroad, and the plan of the British commander was to capture Abu Hamed so as to prevent the dervishes from interfering with the railroad construction or from attacking the steamers in the difficult channels below that town. From Abu Hamed it would be easy to reconnoiter in the direction of Berber, and a farther advance to that place was contemplated. The advantage of carrying a railroad 230 miles across the Koroosko desert, and so avoiding the great loop of 700 miles in the Nile, was recognized for future commercial as well as for present strategical purposes. The line was first started from Koroosko, but this route, winding through rocky defiles swept by torrents after a rain, was abandoned, and a new start made from Wady Halfa across the perfectly level desert. There were 2,000 men, and afterward 3,000, employed in the construction, many of them Soudanese dervishes taken prisoners in Dongola. The work, designed and superintended by English engineer officers, with Lieut. Gorringe at their head, is a permanent railroad, of 3-feet-6-inch gauge, not a light military line, as first intended. It advanced at the rate of a mile at first and subsequently two miles a day. As far as curves and grades are concerned, it would rank as a first-class railroad in any country. It traverses an utterly desert tract, a flat waste of hard yellow sand, ribbed in places with black crags, and in spots sprinkled with clumps of camel thorn.

The province of Dongola, which was pictured as the granary of Egypt before its reoccupation in 1896, was found to be a poor country. The cultivated area, never more than 90,000 feddans, had shrunk to 30,000 feddans. The famine resulting from a low Nile and cattle disease in 1888 and the

disastrous dervish expedition of the following year, which took away many of the able-bodied male population and the cattle, left the province impoverished. There were few people left but women, old men, and children. The Khalifa had abolished male slavery, and hence there were few cultivators, so that the only hope for an increase of production was in a supply of labor from Egypt. The number of cattle had fallen from 36,000 to 12,000. The abandoned farms were grown up to woods. Population had fallen from 75,000 in 1885 to 56,426, of whom about 47,000 were natives of the province and the rest Soudanese and Arabs. About 6,000 men were absent in the Soudan and in Egypt, half of them living in Wady Halfa and not at all disposed to return. A decree was issued requiring owners of land to establish their rights before Jan. 1, 1899, under pain of forfeiture. Following the example of the Khalifa, the Egyptian Government abolished the minor taxes exacted before 1885, retaining only the land tax and the date-tree tax. Previous to the advance from Dongola a khedivial decree was issued creating a Government monopoly of the trade in ivory, feathers, and gum in the country south of Wady Halfa. The collection of these products was placed under the regulation of the Government, which purposed establishing depots to which they should be brought for subsequent sale to traders. This measure, reintroducing the system enforced by Gen. Gordon, was considered necessary not only for revenue purposes, but also in order to foster a revival of the trade by preventing the extermination by hunters and traders of the elephants, ostriches, and gum trees, which were already vanishing under dervish rule. The Khalifa Abdullahi was known to be concentrating his forces at Omdurman, and there was every indication that he would fight to the death, but whether he would oppose the Egyptian advance on the way or await attack at Omdurman remained in doubt and could not be determined until after the council of war was held, which he had appointed for the middle of June. The dervish army withdrawn from Darfur was ordered to move on from El Obeid to Omdurman as soon as the river should rise early in June. The railroad between Kerman and Wady Halfa was in operation, and of the one from Wady Halfa to Abu Hamed 58 miles were built, making together 263 miles completed since the Dongola expedition was decided upon in March, 1896. It was reported in June that the Khalifa had withdrawn most of the troops garrisoned at Abu Hamed and Berber, intending to make a stand at Omdurman, where he then had 30,000 men, including 6,000 cavalry. If defeated there, he had a great number of camels ready to transport his treasure to Kordofan. A rising in that province disappointed him greatly, and he dispatched Mohammed Mahmoud to the spot to put down the disturbance.

The dervishes under Osman Digna were raiding in the vicinity of Suakin in May and June, but later withdrew when the Khalifa collected his forces together. The trade of that port almost ceased after the Egyptian Government placed an embargo on Soudanese products in 1896. Subsequently a large quantity of gum arabic, the chief export of Suakin, was allowed to be brought down to save it from spoiling, but it was detained in the Government storehouses. The first skirmish with the dervishes at Abu Hamed occurred when a reconnoitering force of 600 mounted men in the beginning of June proceeded from Merawi up the left bank of the Nile to Salamat, which was being fortified. The Jaalin tribesmen were ordered to supply Mahmound's army with provisions at Metammeh, but, fearing that they would be stripped bare, they collected there to oppose him. In the fighting that ensued the Jaalin

were defeated. The few Jaalin armed with rifles repelled an attack, but the dervishes effected an entrance on the opposite side and, encountering only spearmen, hemmed in the garrison and killed 2,000, and Mahmoud occupied Metamneh on July 1. Of the Khalifa's forces left at Abu Hamed and Berber many deserted, and certain of the riverain tribes near Berber embraced the Egyptian cause. The remnant of the Jaalin joined with the Hassanieh tribe in forming an armed post at Gakdul. The Hawawir also rose against the dervishes, killing a large number with their Emir in an attack on Gabra, and all the Bayuda Arabs sided with the Egyptian Government. After the capture of Metamneh large re-enforcements of dervishes were sent to Abu Hamed.

The sirdar, Sir Herbert Kitchener, established his headquarters at Merawi and organized the frontier field force in the middle of July. On July 29 the advance was made from Merawi by a column consisting of 4 battalions, a field battery, and a small detachment of cavalry. Major-Gen. Hunter, the commander of the column, kept his preparations secret in order to surprise the dervishes. The last 18 miles of the 50 were made in a night march, and on the morning of Aug. 7 the Anglo-Egyptian troops attacked the town. They were assisted by the friendly Ababdeh Arabs from Murat. After carrying the high ground overlooking the place, they attempted to carry it by storm, but the houses were defended by 1,000 dervishes, of whom 150 were horsemen and 500 riflemen, and they fought so stubbornly that it was necessary to bring up the artillery before the position could be carried. The dervishes charged repeatedly through the narrow streets and fought till they were almost annihilated, only 100 infantry and about half their cavalry finally taking flight after the commander, Mohammed Zein, was captured and the other chief Emir killed. The Nile was filled with floating corpses. The Egyptians lost 21 killed, including 2 British officers, and 61 wounded. They fought with great steadiness and vigorous dash throughout the attack, when most of the fighting was at the point of the bayonet. Many prisoners and arms were taken, with standards, camels and horses, and other property. The inhabitants, as at Dongola, showed signs of rejoicing at deliverance from the dervishes.

After the loss of Abu Hamed the Khalifa sent re-enforcements to Mahmoud at Metamneh, and the latter strengthened the garrison at Berber and threatened to advance on the position of the revolting Arab tribes at Gakdul. The Baggara dervishes took terrible vengeance on the Jaalin dwelling on the left bank of the Nile between Berber and Metamneh, butchering every male, throwing women and children into the river, and taking the handsome wives and maidens into their harems. The Khalifa was too well advised to offer a strong resistance to the Egyptian advance at any point north of Berber, and it was doubtful whether, for political as well as military reasons, he would care to hold even Berber. The tribes through whose territory the expedition had so far advanced were ill affected by the tyranny exercised from Omdurman. The cultivators on the banks of the Nile, even south of Berber, were certain to welcome the expedition; while, if he detached a large force to the north, the Khalifa's authority would be weakened in the neighborhood of his capital and in his line of retreat. He succeeded in assembling 60,000 men at Omdurman, badly armed, lacking proper ammunition, and undisciplined, but representing the best fighting elements in the Soudan. The English commander, not deceived by the unexpectedly feeble resistance offered thus far, was equally cautious. The Egyptian battalion had behaved well at Abu Hamed, but the

dervishes, though outnumbered 5 to 1, had given a stiff battle and stood their ground before the black battalions, of which 3 were employed, formed of the same material as themselves and armed and trained in the European manner, so that after the first attempt at assault the place had to be reduced by bombardment. When facing superior numbers of these terrific fighters the *morale* of the Egyptian troops were liable to break down, as it had on former occasions, the memory of which was extremely demoralizing; and the Soudanese troops of the Egyptian army were likely, when opposing superior forces of their own race, to forget their training and discipline and relapse into their natural instincts for irregular fighting. As to the disaffected tribesmen, no effective military aid could be expected against their oppressors from people so crushed and cowed. It was hopeless to attempt to take Khartoum without the support of British troops. The British Government, which was responsible for the whole enterprise and with which rested the decision at every stage, being precluded, for the present at least, from obtaining the funds for the campaign from the Egyptian treasury, and thus compelled to apply to Parliament, had suddenly to face, in addition to the political difficulty, the new military danger of the risings on the Indian frontier, and therefore would not venture to detach any troops for service in the Soudan. The railroad was pushed forward, and rails were laid for a distance of 138 miles from Wady Halfa before the end of August. At different places water was obtained in abundance by boring. Gunboats and war material were taken up the river past the fourth cataract to Abu Hamed. When the gunboats appeared the dervishes evacuated Berber and retired to Metamneh. They also withdrew all their eastern outposts, leaving the route from Berber to Suakin free so that communications could be opened between this port and the Nile force. Osman Digna remained for some time on the Atbara, whence he was called to Omdurman in the middle of August. All the tribes of the eastern Soudan renounced Mahdism, and trade began to revive there, as it had on the Nile. The pretensions of Abdullahi to a divine mission were not credited by any of the people of the Soudan. The Khalifa Abdullahi had determined on Metamneh as the northernmost point to be held. This was the place on which the garrisons of Berber and Kassala were ordered to fall back years before if the British advanced farther after routing Osman Digna at Tokar. The loss of the river and eastern tribes did not greatly weaken the military power of the Khalifa. His main reliance was the powerful Baggara tribe, to which he himself belongs, who were linked to his fortunes by complicity in all his oppressions and would incur by his overthrow not only the loss of their political ascendancy and material wealth, but sanguinary retaliation at the hands of their victims. The oppressed and plundered tribes, whose fidelity the Khalifa suspected, he was accustomed to place in the front of the battle, where, if they wavered, they would be shot down by their oppressors. The wives and children of suspected individuals he retained as hostages. In such soldiers he could place no trust in a conflict with equal forces, but on the Baggara he could depend for resistance to the death, and they had abundantly proved their splendid fighting qualities. Berber was occupied by friendly Arabs on Sept. 7. Gen. Hunter arrived with Egyptian troops, brought by 4 gunboats, and took possession a few days later. Two of the gunboats sailed in pursuit of the retreating dervishes, and captured 14 barges laden with grain at Dameh, where the Atbara joins the Nile, 30 miles above Berber. The dervishes fortified Metamneh on both sides of the river and Shabluka, on the right bank,

just below the sixth cataract. At Omdurman they constructed a large intrenched camp. They held the post of Gabbra in the desert, but all the desert tribes were friendly to the Egyptians, who supplied them with arms, and, in addition to the Gakdul wells, held by Jaalin tribesmen, there were posts of friendlies established to screen the fortified stations on the river, extending entirely across the Bayuda desert. The Egyptians established armed posts along the river at Dongola, Debbah, Korti, Merawi, Abu Hamed, and Berber. At the mouth of the Atbara a gunboat was permanently stationed. Lieut.-Col. Parsons, Governor of Suakin, went to Massowah, and thence with an Italian officer to Kassala to make arrangements for the reoccupation of that place, which the Italians were ready to restore to Egypt at any time.

EVANGELICAL ASSOCIATION. The statistical reports of this Church for 1897 give it 1,645 itinerant and 482 local preachers, 115,465 members, 2,140 Sunday schools, with 23,288 officers and teachers and 143,216 pupils, 855 catechetical classes, with 10,033 catechumens, 974 Young People's Alliances, with 32,911 members, 1,792 churches, and 689 parsonages. During the year covered by the report 1,524 adults and 6,706 infants had been baptized. Of the year's collections only those for missions and the aggregate amount were completely summarized. The missionary contributions footed up to \$146,645, of which \$15,000 had been contributed in the form of bequests and special gifts. The total amount of collections was given as \$871,311, showing the average contribution per member to be \$7, this being 40 cents less than in 1896.

The publishing department returned a net increase of profits during the year of nearly \$34,000, or \$400 larger than the increase of the preceding year. After deducting \$24,070 to be applied to annual appropriations and benevolences, \$9,398 were added to the assets. More than 200,000 copies of books had been published. The branch publishing house in Germany was represented as being in a prosperous condition.

The total receipts of the Missionary Society for the year had been \$152,485, and the expenditures \$137,615. The permanent fund amounted to \$78,003; the annuity fund to \$66,561; and real estate belonging to the current fund was valued at \$12,000. The debt of the society was being gradually reduced. The home missions comprised 524 stations, of which 25 were new ones, with 521 missionaries and 42,437 members. Six missions had become self-supporting churches. The foreign missions returned 99 stations (of which 2 were new stations) 129 missionaries, and 13,233 members. The churches in Germany reported a net gain of 417 and a total of 7,699 members, and those of Switzerland 5,190 members. The 19 stations in Japan were managed by 17 missionaries, who had the charge of about 50 preaching places, and returned 807 members, while 67 persons had united with the Church. The contributions of the Woman's Missionary Society amounted to \$4,076, or \$288 more than those of the previous year, and averaged \$1.72 per member.

EVENTS OF 1897. January 1. New York: Frank S. Black inaugurated Governor. Michigan: Hazen S. Pingree inaugurated Governor.

2. Philippine Islands: Alleged victory of the Spaniards over the insurgent forces. Germany: A new bill presented to the Reichstag proposing an addition of 177,000,000 marks to the military budget.

3. France: Elections to replace a large proportion of Senators—64 Republicans, 21 Radicals, and 12 Reactionaries chosen.

4. Wisconsin: Inauguration of Major Edward Scofield as Governor.

5. Delaware: Meeting of the Legislature.

6. Opening of the Legislatures in Connecticut, Illinois, Maine, Michigan, New Hampshire, New York, and North Carolina. Connecticut: Inauguration of Lorrin A. Cooke as Governor. Baltimore: Launch of torpedo boat No. 5. Nebraska: Opening of the Bimetallic Conference at Lincoln.

7. Inauguration of governors in Maine, Massachusetts, Minnesota, Nebraska, and New Hampshire. Transvaal Republic: The Government files its complaint against Great Britain, demanding an indemnity of £2,000,000 for the Jameson raid.

8. Illinois: Riots among the striking miners at Rutland. South Carolina: Simon Cooper, a negro murderer, lynched in Sumter County. England: Installation of Dr. Frederick Temple as Archbishop of Canterbury.

9. Chicago: Conference of the leaders of the National Democracy. Gen. Simon B. Buckner, of Kentucky, chairman. Russia: Prof. Simon Newcomb, of the United States Naval Observatory, elected an honorary member of the Russian Academy of Sciences. London: The Royal Astronomical Society awards a gold medal to Prof. Edward Emerson Barnard, of the Yerkes Observatory.

10. Palestine: Rioting in Jerusalem between Roman Catholics and members of the Orthodox Greek Church.

11. Meeting of the presidential electors in the several States to cast formal ballots for President and Vice-President. Washington: Signing of the general Anglo-American arbitration treaty at the State Department by Secretary-of-State Olney and Sir Julian Pauncefote, the British ambassador. Governors inaugurated in Illinois, Kansas, Indiana, and Missouri. South America: Massacre of a peaceable British expedition reported in upper Guiana.

12. Indianapolis: Meeting of the National Monetary Conference. California: George C. Perkins re-elected United States Senator. Colorado: Alva Adams inaugurated Governor. Africa: Reports of the massacre of a British expedition in the Niger Coast Protectorate, all but 3 of the whites and nearly 250 native carriers killed.

13. Indianapolis: Adjournment of the National Monetary Conference after adopting a plan for currency reform. Washington (State): Inauguration of John R. Rogers as Governor.

14. New York: Election of Thomas C. Platt as United States Senator. Arrest of Gen. Charles Roloff, Secretary of War of the Cuban Republic, on a charge of aiding filibusters.

15. Canada: Election of Hugh John McDonald to the House of Commons declared void because he hired vehicles to take voters to the poles.

16. United States gunboat *Machias* ordered to Siam to support a demand for the punishment of the assailants of the vice consul general.

17. Canada: Bishop Begin issues a mandament regarding the Manitoba school question.

18. Decision by the Supreme Court that the South Carolina dispensary law is in part unconstitutional. Cuba: Sinking of a Spanish gunboat in the Canton river by insurgents. South America: A British syndicate receives a concession of a million acres of gold lands in Dutch Guiana.

19. Delaware: Installation of Gov. Tunnell. Washington: Meeting of the National Marine Engineers' Association, the American Association of Inventors and Manufacturers, and the American Colonization Society. Installation of the Rev. Dr. Thomas J. Conaty as rector of the Roman Catholic University. Russia: The Imperial Government informs the nations of the world that for the first time in her history Russia is taking a census. London: Opening of the British Parliament, the

Queen's speech referring to the arbitration treaty between Great Britain and the United States.

20. Washington: The Secretary of State is called upon to explain the arbitration treaty before the Committee on Foreign Relations. Florida: Meeting of the Atlantic and Gulf States Harbor Defense and Improvement Convention at Tampa. California: A mass meeting in San Francisco urges Congress to pass the Nicaragua Canal bill. New York: Senator Lexow's resolution passes the Senate, providing for a committee to investigate trusts. London: The public prosecutor withdraws charges of conspiracy against Edward J. Ivory, of New York, who was arrested in Glasgow on suspicion of being concerned in a dynamite plot. Lord Salisbury consents to a Venezuelan representative on the Board of Arbitration.

22. Washington: Foreclosure proceedings announced against the Pacific Railroad on the part of the United States Government. Florida: The Coast and Harbor Defense Convention at Tampa elects Gen. Horace Porter for president. Boston: Launch of a new revenue cutter. Austria: Dissolution of the Austrian Reichsrath; new elections ordered. India: The authorities order the stoppage of all pilgrim traffic from Bombay on account of the plague.

23. Chicago: 1,200 of his admirers present ex-Gov. Altgeld with a testimonial. Indiana and Nebraska: Bills introduced looking to the prohibition of football. Washington: Arrival of the late Queen of Hawaii. Cuba: The insurgents capture and destroy another Spanish gunboat. France: Ex-Capt. Guillott, of the French army, sentenced to five years' imprisonment and ten years' exile for giving information to a foreign government. Mexico: Fight between the Yaquis Indians and Mexican troops at Rosalis; 12 Indians and 5 soldiers killed.

24. Washington: A large party of congressmen begin a tour of inspection of river and harbor improvements.

26. Wisconsin, South Carolina, Kansas, and Nevada elect United States Senators.

27. Germany: A lieutenant in the army sentenced to imprisonment for three years for killing a citizen who accidentally ran against him.

28. Washington: Meeting of the National Board of Trade. Massachusetts: The General Court adopts resolutions approving the arbitration treaty by a vote of 141 to 11. Nevada: Both branches of the Legislature pass a bill licensing glove contests.

29. New York: Semicentennial of the Academy of Medicine. England: On motion of Mr. Chamberlain a parliamentary committee of investigation is appointed to investigate the administration of South Africa, including the Jameson raid.

30. Washington: A treaty signed for the settlement of the Alaskan boundary by the Secretary of State and the British ambassador.

31. Canada: The Dominion Cabinet appoints a delegation to visit Washington and discuss the question of reciprocity and alien labor.

February 1. Washington: The Attorney-General orders proceedings against the steamer *Three Friends* as a pirate.

2. Washington: The ambassadors of Great Britain and Venezuela sign the treaty for arbitration of the boundary question.

3. The Government effects the purchase of two large islands at the eastern end of Long Island Sound, for purposes of fortification. Nevada: A bill establishing woman suffrage passes the Senate. Florida: Election of General Roy Stone as President of National Good-Roads Congress in session at Orlando. England: Passage to its second reading of the women's parliamentary franchise bill in the House of Commons by a vote of 228 to 157.

4. Washington: Col. J. M. Wilson appointed chief engineer United States army. Virginia: Admiral Bunce's squadron sails from Hampton Roads for blockade drill off Charleston. Spain: The Queen Regent signs a scheme for Cuban reform. Cuba: The insurgents destroy a suburb within six miles of Havana.

5. Washington: The Canadian Ministers of trade and of Marine and Fisheries visit the Capitol in the interest of closer trade relations with the United States.

6. Washington: The President orders the reduction by one half of the number of pension agencies. England: The speech of Sir Michael Hicks-Beach causes great excitement in France. Spain: Much dissatisfaction in Madrid over what are regarded as excessive concessions to the Cuban insurgents.

7. Alabama: Passage of an anti-trust law. Germany: A challenge passes between a prominent member of the Reichstag and the German Minister for Foreign Affairs.

8. Charleston, S. C.: Arrival of the North Atlantic squadron after having weathered a very severe storm; 4 lives were lost, and all the vessels were damaged by the violence of the sea. Crete: 2,000 refugees embark on board the British war ships to escape Turkish persecution. Reception given to Dr. Nansen by the Royal Geographical Society of London; the Prince of Wales presents a gold medal to him.

9. Washington: Meeting of the National Wool-Growers' Association; demands for increased duty on wool. New York: Election of the Rev. Charles Cuthbert Hall, of Brooklyn, to be President of Union Theological Seminary. Ohio: Annual meeting of the Order of Foresters in Columbus. Germany: Fight between police and discontented workmen in Hamburg; 2 killed and 19 wounded. England: A motion in Parliament to disestablish and disendow the Church of England rejected by 204 to 86. Canada: A delegation of farmers visits the Dominion Tariff Commission, advocating reciprocity with the United States. South Carolina: A bill providing separate railway cars for whites and negroes passes the House of Representatives. Greece: Prince George sails from Athens with a torpedo flotilla to prevent the landing of Turkish troops in Crete. Germany: Arrival of the Austrian Crown Prince in Berlin: he is received in state by the Emperor. Africa: The punitive expedition of the Royal Niger Company captures the palace of the king by whose orders a peaceful expedition was massacred.

11. Greece notifies the European powers of her intention to intervene in behalf of Christians in Crete. England: Dinner to Mr. Bayard of the Royal Society's Club, of London.

12. Crete: Fighting between Christians and Moslems; the latter are driven into Canea.

13. Turkey: The Porte declares its intention to attack Greece unless the European powers restrain hostile action in Crete. A Turkish transport with munitions of war is blockaded by a Greek gunboat.

14. Boston: Arrest of the Turkish consul on a charge of embezzlement.

15. A Greek force lands in Crete, and the war ships of the European powers land strong detachments to preserve order.

23. Texas: Judge Swain, of the United States court for the northern district, declares the anti-trust law unconstitutional.

24. Oklahoma: Both branches of the Legislature pass a law making all contracts payable in gold noncollectible and void.

25. Alabama: Sixth annual conference of negroes at Tuskegee. England: Lord Salisbury an-

nounces in the House of Lords that Great Britain has proposed autonomy for Crete.

26. Washington: Meeting of the Venezuelan Boundary Commission; arrangements made for printing the results of its investigations.

27. Washington: The Venezuela Boundary Commission makes its formal report to the President.

March 1. Washington: The Supreme Court reverses the decision of the Florida court in the case of the Three Friends. The United States marshals are ordered to resume custody of the vessel. The Supreme Court sustains the constitutionality of the oleomargarine act. England: It is announced in the House of Commons that the Government will not interfere in Cuba. Japan adopts the gold standard at a ratio of 32½ to 1. England: The University of Cambridge, through a syndicate appointed for the purpose, recommends that degrees be granted to women.

2. Washington: Arrival of the President-elect. Siam: The reigning Government agrees to arbitrate the United States claim for damages. South Carolina: An income-tax bill passed by the Legislature. Diplomatic relations restored between Great Britain and Venezuela. A collective note of the European powers is presented to the Greek and Turkish Governments. England: The Lord Mayor of London gives a state dinner in honor of the United States ambassador.

3. Washington: Mr. McKinley pays a visit of ceremony to the President at the White House, and the President at noon returns the call.

4. Inauguration of William McKinley, of Ohio, as President. Greece: The military reserves of four years have been summoned to join their colors, and fighting is reported in the vicinity of all the coast towns in Crete.

5. The President sends his Cabinet nominations to the Senate, where they are promptly confirmed. Kentucky: Gov. Bradley appoints Major A. T. Wood United States Senator, to succeed J. C. S. Blackburn.

6. The President issues a proclamation conveying the Fifty-fifth Congress on March 15. The members of the new Cabinet are sworn in. Florida: Gov. Bloxham appoints Col. John A. Henderson to succeed Wilkinson Call in the United States Senate. Oregon: Gov. Lord appoints H. W. Corbett to the United States Senate, in place of John H. Mitchell. Germany: The Socialist newspapers and representatives are greatly excited by the Emperor's declaration that socialism must be exterminated.

7. Kansas: The Methodist Episcopal Conference refuses to admit women as delegates. London: A mass meeting in Hyde Park brought out about 15,000 people, in spite of unfavorable weather, to express sympathy with Greece and Crete. Cuba: Insurgents have raided more towns in the immediate vicinity of Havana.

8. Philadelphia: Capt. John B. Hart sentenced to imprisonment and fine for engaging in a filibustering expedition to Cuba. Cleveland, Ohio: Settlement of strike at the Globe shipyard, the company agreeing in general terms to the demands of the workmen.

9. South America: A serious outbreak led by fanatics is announced in Brazil. Africa: A French force under white officers occupies British territory on the west coast. Crete: Sharp fighting between Turks and Christians. London: Meeting of the associated Chambers of Commerce of the United Kingdom.

10. Leadville, Col.: Termination of the strike of miners, which has been in force since June, 1896.

11. Washington: Appointment of Henry Clay Evans, of Tennessee, to be Commissioner of Pensions.

13. Germany: The Reichstag refuses to grant the naval credits demanded by the German Government. Samoa: War breaks out among the native tribes, and the foreign consuls ask the presence of war vessels.

14. Alabama: An encounter between whites and negroes; 1 negro killed. Denver, Col.: A stormy political meeting under the auspices of the Middle-of-the-Road Populists. London: Another enormous mass meeting to express sympathy with the Greeks.

15. Nebraska: A new charter provided for the city of Omaha, the old government being abolished altogether and a new election ordered. Crete: The Greek squadron leaves the immediate vicinity of the island, but the commander of the Greek troops, Col. Vassos, refuses to withdraw his command.

17. Iowa: In the House of Representatives sweeping charges of corruption are made, and the Speaker resigned, pending an investigation.

18. Crete: A Greek schooner sunk by an Austrian gunboat. Africa: It is alleged that a union has taken place between the Transvaal and the Orange Free State. England: Publication of a letter from Mr. Gladstone severely criticising the so-called concert of the European powers.

19. Michigan: The State Supreme Court decides that the office of Mayor of Detroit has been vacant since Jan. 1, and a new election must be held.

21. Notice of the blockade of Crete by the fleets of the European powers is served on all the maritime nations of the world. Germany: Commemorative services in honor of Kaiser Wilhelm I. Austria: The late elections show a vigorous growth of the Christian Socialist party.

22. Germany: A monument unveiled at Berlin to commemorate the hundredth anniversary of the birth of Wilhelm I. The day was observed as a national holiday.

23. Africa: The treaties between the Transvaal Republic and the Orange Free State give the citizens of each the right of franchise in either republic, and a defensive alliance is agreed upon.

24. New York: Acceptance of the new dry dock in Brooklyn by the Secretary of the Navy in behalf of the Government. Crete: Fighting renewed between Christians and Turks.

25. Albany: Passage of the Greater New York Charter bill in the Senate; it had already passed the House. Crete: The European fleet shell the Christian forces engaged in an attack upon the Turks. Germany prepares to increase her military forces in Southwest Africa.

26. Germany: The Reichstag passes a bill providing for payment of Delegates, who have heretofore served without state compensation.

27. England: Secretary Chamberlain, in a public speech, takes occasion to warn the South African republics against being too ambitious.

28. Ohio: Sale of the coal fields in Jackson County to a London syndicate for \$4,000,000. Morocco: The Sultan forbids his subjects to take part in the pilgrimage to Mecca because of the plague.

29. Baltimore: Sentence of Dr. Joseph J. Louis to eighteen months' imprisonment and a heavy fine for filibustering. France: Several members of the Chamber of Deputies placed under charges for participation in the Panama scandal.

30. Chicago: Strike of 1,500 tanners to enforce a demand for an eight-hour day. Crete: The Greeks attack Fort Azzedin, and the foreign war ships bombard them in support of the Turkish garrison.

31. Crete: A general blockade decided upon with the consent of the European powers. South Africa: President Krüger, of the Transvaal, suspends his grandson from office for making an insulting speech about Queen Victoria and Great Britain.

April 1. Washington: The President nominates Andrew D. White, of New York, to be ambassador to Germany, and William F. Draper, of Massachusetts, to be ambassador to Italy. Benjamin Butterworth, of Ohio, nominated Commissioner of Patents.

2. Austria: Resignation of the Cabinet owing to disagreement with the party of progress. Germany: A motion adopted in the Reichstag favoring the repeal of the Jesuit-exclusion law.

3. England: Boat race between the Oxford and Cambridge University crews. Oxford wins by two lengths.

4. Capture of filibustering tug off Fernandina by the torpedo boat Vesuvius. Several Cuban leaders were on board.

5. Washington: The President appoints A. E. Buek to be minister to Japan. England: In the House of Commons Sir William Hareourt asked if British forces were to be employed in the blockade of Greece, and the Government declines to give a satisfactory answer.

6. Greece: Celebration at Athens of independence day; great enthusiasm shown by the Greeks in antagonism to Turkish rule. England: Sir William Hareourt renews his motion in the House of Commons protesting against the use of English forces against the Greeks; Mr. Balfour, for the Government, declines to appoint a time for discussion. A decree abolishing slavery is issued by the Sultan of Zanzibar.

7. Washington: The President makes many appointments of postmasters. Siam: The King leaves Bangkok on a general tour of the European capitals.

8. Tennessee: The United States Grand Jury indicts six manufacturing companies for violation of the antitrust law.

9. Greece: Bands of Greek irregulars advance across the Turkish frontier and have a sharp engagement with the Sultan's troops; their action is repudiated by the Greek Government, but it really proves the outbreak of war.

11. Minnesota: Organization of a beet-sugar company at Minneapolis, with a capital of \$2,000,000, to fight the sugar trust.

12. The President appoints Senator Wolcott, Charles J. Payne, and ex-Vice-President Stevenson to be delegates to an International Monetary Conference. New York: The State Assembly passes the Greater New York charter over Mayor Strong's veto.

14. Col. John Hay, ambassador to the court of St. James, sails for England.

15. Indianapolis: The 3-cent carefare law goes into effect. South America: Martial law proclaimed in the Republic of Honduras in consequence of a revolution. France and Brazil agree to arbitrate their boundary disputes.

16. Chicago: Inauguration of Carter H. Harrison as mayor. Greece: The detachment of irregulars that crossed the frontier are driven back by the Turks.

17. Constantinople: The Turkish Council of Ministers declares that a state of war exists on the Greek frontier, and orders the Turkish troops to take the offensive.

18. Greece: It is officially announced that diplomatic relations with Turkey are severed. Fighting has become general between the two powers on land and sea.

20. Washington: The President appoints 93 postmasters, most of them to fill vacancies caused by resignation.

21. Mobile, Ala.: Convention of the International Young Men's Christian Association. Austria: Arrival of Kaiser Wilhelm of Germany in Vienna for a brief visit to the Emperor of Austria.

22. The President nominates Harold M. Sewall to be minister to Hawaii. New York: Frank Moss appointed Police Commissioner to succeed Theodore Roosevelt. Italy: King Humbert is attacked by a fanatic in the streets of Rome, but the assailant is arrested. Arrest of five anarchists in France.

23. Chicago: A new agreement signed by railway companies to take the place of the Western Passenger Association. Alexandria, Va.: Joseph McCoy, a negro, lynched by a mob. Greece: The fleet captures a large amount of Turkish military stores in the Gulf of Salonica.

24. Washington: Leave of absence is granted to Gen. Miles to visit the seat of war between Greece and Turkey.

25. New York: Third annual Convention of the Theosophical Society.

26. Washington: Information received from Minister Terrell that the Turkish Government has promised to reconsider the Lenz case; Lenz was an American wheelman who was murdered in Turkish territory.

27. New York: Birthday of Ulysses S. Grant: dedication of the Grant Mausoleum in Riverside Park.

29. Texas: Unveiling of a Confederate monument at Dallas. Greece: The King demands the resignation of the Prime Minister. A new Cabinet formed with M. Demetrius Ralli as Premier. London: The Bishop of London delivers an ancient manuscript, known as the Log of the Mayflower, to Mr. Thomas F. Bayard, for conveyance to the State of Massachusetts.

30. Washington: The President refuses to pardon Joseph Dunlap, proprietor of the "Chicago Despatch," under sentence of two years' imprisonment for sending obscene matter through the mails. Cleveland, Ohio: Meeting of the Society of the Sons of the American Revolution; Edward S. Barrett, of Massachusetts, chosen president.

May 1. Nashville, Tenn.: Opening of the Centennial Exposition, President McKinley setting the machinery in motion by telegraph. Massachusetts: Failure of three large cotton mills, the business being placed in the hands of a receiver. Washington: The new Chinese minister received by the President. The seat of war: Informal proposals for an armistice made to the European powers by Greece, the Turks having continued to gain victories in Epirus. England: Representatives of Canadian and American seal-fishing interests are in London. Spain: Twenty-six anarchists sentenced to death in Barcelona. The day passes without serious disturbance in Europe.

2. New York: Celebration of the two hundredth anniversary of Trinity Church.

3. New York: Strikes inaugurated among carpenters and wood workers. Strikes of considerable magnitude are also in progress in Newark, Chicago, and Milwaukee. The seat of war: Col. Vassos relieved of his command in Crete.

4. Washington: Meeting of the triennial Congress of American Physicians and Surgeons; sale of the Atlantic and Pacific Railway to an official of the Atchison, Topeka and Santa Fé Railway for \$12,000,000. Spain: Execution at Barcelona of five anarchists.

5. New York: Gov. Black signs the Greater New York Charter. Washington: Meeting of the Universal Postal Congress. England: Rejection of the miners' eight-hour bill in the House of Commons.

6. Acceptance by the Secretary of the Navy of the armored cruiser Brooklyn, the board appointed for final inspection having reported favorably upon her sea trial. The seat of war: The Greeks suffer a disastrous defeat at Pharsalos, and consternation prevails at Athens.

7. Washington: John W. Foster is appointed to negotiate with Russia and Japan for the protection of the sealing interests; Great Britain has refused to participate. New York: The Governor signs the antitrust bills. North Carolina: Opening of the Southern Baptist Convention at Wilmington, Judge Jonathan Haralson elected president. London: The American Society gives a farewell dinner to Mr. Bayard, the retiring ambassador of the United States.

8. W. J. Calhoun, a special commissioner appointed by the President, sails for Cuba to investigate the death of Dr. Ruiz.

9. The Secretary of the Navy orders the cruiser *Marblehead* to Honduras to protect American interests. Spain: The Queen Regent authorizes a loan of \$40,000,000 to defray war expenses in Cuba and the Philippine Islands.

10. Washington: The Supreme Court decides in favor of the Berliner patent in the Bell telephone case, thereby continuing the patent for nearly twelve years. Appointment of President Jordan, of Leland Stanford University, commissioner to investigate the condition of the Bering Sea seal herd during the present season. Corea joins the Universal Postal Union. Belgium: Opening of the Exposition at Brussels. Turkey demands \$15,000,000 from Greece as a peace indemnity, with the cession of the Greek fleet to Turkey.

11. Washington: Annual meeting of the American Protective Association as represented by its Supreme Council. Appointment of Albion W. Tourgee to be consul at Bordeaux, France. Greece accepts the terms of submission proposed by the European powers. Canada: Elections in the province of Quebec result in the complete defeat of the Conservatives.

12. Washington: The President nominates Brig.-Gen. James W. Forsyth to be major general. New York: Indictment of Booth-Tucker, of the Salvation Army, for disturbing the peace by meetings at the "barracks," so called. Pittsburg, Pa.: Convention of police chiefs; a favorable report made upon the Bertillon system of identifying criminals. Germany: Socialist members of the Reichstag criticize the Emperor, and are called to order by the chairman.

13. Toledo, Ohio: General Conference of the United Brethren Church. California: Discovery of natural gas in Sacramento.

14. Trial trip of the new gunboat *Nashville*; she averages 16.7 knots. Florida: Election of Stephen R. Mallory to be United States Senator, in place of Mr. Call.

15. Philadelphia: Unveiling in Fairmount Park of the Washington monument, erected by the Society of the Cincinnati. New York: Gov. Black signs a civil-service bill which is unacceptable to the friends of civil service reform. Chicago: Decision of Judge Gibbons declaring the American Tobacco Company an illegal corporation. Hungary: The Emperor, Francis Joseph, unveils the monument to Maria Theresa at Pressburg.

16. A new extradition treaty between the United States and Brazil signed at Rio. California: A tribal war among the Piute Indians is announced. Toronto, Canada: Street cars begin running for the first time on Sundays, the question having been decided by popular vote, after long discussion.

17. Washington: The President nominates Brig.-Gen. Zenas R. Bliss to be major general; the special ambassador from the Shah of Persia is received by the President.

18. Official notification of the British Government by the Secretary of State that the arbitration treaty is defeated. The State Department is officially notified by the Government of Nicaragua

that the metric system of weights and measures will be required for importations into the port of Bluefields.

19. Germany: Passage of the emigration and oleomargarine bills by the Reichstag.

20. The seat of war: An armistice of seventeen days agreed to between Turkey and Greece.

21. New York: Gov. Black refuses to sign the graduated inheritance tax bill. Washington: The Solicitor of the Treasury decides that Americans who become subject to a foreign government are aliens within the meaning of the laws of the United States. England: Cambridge University refuses to render women eligible for degrees by a vote of 1,713 to 662. London: A memorial bust of Sir Walter Scott unveiled in Westminster Abbey by the Duke of Buccleuch.

22. New York: A Confederate monument dedicated at Mount Hope Cemetery. London: Opening of a new tunnel under the Thames by the Prince of Wales. Gen. Miles ordered to London to represent the army of the United States at the Queen's jubilee, the war in the East having ended before he could reach the scene of hostilities.

23. Wisconsin: It is announced that the Yerkes telescope, at Williams Bay, is ready for use.

24. Adjournment of the United States Supreme Court until October. Austria: The disorderly proceedings in the Reichsrath ended in a scene of complete disorder, members coming to blows and breaking furniture in their excitement. England: Observance of the seventy-eighth birthday of the Queen.

25. East Africa: Hostilities between the Portuguese and the neighboring natives; the home Government is asked for re-enforcements.

26. Washington: Commander Robert E. Peary, U. S. N., is granted five years' leave of absence to prosecute arctic exploration.

27. Washington: The President nominates Cols. J. F. Wade, J. K. Mizner, and W. M. Graham to be brigadier generals, United States army, and Commander C. O'Neil to be Chief of the Bureau of Ordnance of the Navy, with the rank of commodore.

28. Paris: Annual meeting of the National Bimetallic League, 400 delegates present.

29. Satisfactory trials of the new gunboats *Wheeling* and *Newport*; they average a little less than 13 knots an hour. Dedication of a monument by the survivors of the *Hawkins Zouaves* on the battlefield of Antietam.

31. The President attends Memorial Day exercises at Arlington Cemetery. Unveiling of the Battle Monument at West Point.

June 1. Opening of the International Art Exhibition in Munich.

2. Spain: Resignation of the Cabinet, owing to parliamentary dissensions. England: Annual Union of the Bimetallic League in Manchester.

3. Launch of the United States gunboat *Princeton* at Camden, N. J. Constantinople: Peace conference of the ambassadors of the European powers and the Turkish Minister of Foreign Affairs.

4. Delegates to the Universal Postal Congress set out on a general tour of the country, to last several days.

5. Washington: Andrew D. Barlow, of Missouri, nominated to be consul general in Mexico. The seat of war: An armistice signed between Greece and Turkey and memoranda of peace proposals submitted. Great Britain: The Irish National League calls on Irishmen to refrain from taking part in the Queen's jubilee.

7. Washington: G. Creighton Webb and Erskine Hewitt appointed additional secretaries to repre-

sent the United States at the Queen's jubilee. Cleveland, Ohio: The Standard Oil Works shut down for an indefinite time.

8. Washington: Appointment of 127 postmasters.

9. Washington: The President nominates Henry L. Wilson to be minister to Chili, William F. Howell to Hayti, and John G. A. Leishman to Switzerland. Maryland: William Andrews, a negro, lynched at the door of the courthouse in Princess Anne County.

11. End of the Indian troubles in Montana. British India: Several white officers and native soldiers killed on the northern frontier.

13. Paris: An attempt made upon the life of President Faure. No one hurt by the explosion.

14. New York city: Strike of the union plasterers on all buildings in course of construction, contractors refusing to permit foremen to be elected by the union. London: Great Masonic meeting in Royal Albert Hall, in commemoration of the diamond jubilee.

16. Washington: The President nominates Stewart L. Woodford to be minister to Spain. Ohio: Incorporation of a National Antinob and Lynch Law Association at Columbus. Paris: A bomb explodes in front of the Strasburg statue on the Place de la Concorde.

17. France: President Faure consents to arbitrate in the boundary dispute between Costa Rica and Colombia. Chicago: Dissolution of the American Railway Union, and the Social Democracy of America organized in its place; the first-named association is the one over which Mr. Debs presided.

19. Sixtieth anniversary of the accession of Victoria to the British throne. Commemorative services held in many churches in this country and in England.

21. End of the great tailors' strike in New York, the strikers gaining most of their demands. England: Beginning of the ceremonies of jubilee week.

22. London: The day devoted to a magnificent civil and military procession.

23. Japan protests against the annexation of Hawaii by the United States. Nashville, Tenn.: Gen. John B. Gordon unanimously re-elected Commander in Chief of the United Confederate Veterans.

24. Celebration of the four hundredth anniversary of the discovery of Newfoundland; appropriate ceremonies at St. John's and at Bristol, England, where a tower is to be erected in honor of Cabot, the discoverer.

25. Fort Gibson, Indian Territory: Disturbances between United States marshals and half-breed Indians and negroes. Lynching of John Moses, a negro, at Crystal Springs, Miss.

26. Washington: Nomination of Col. Caleb H. Carlton to be brigadier general. England: The ceremonies of jubilee week end with a naval review at Spithead, undoubtedly the greatest display of sea power ever made.

28. Massacre of another party of Europeans in New Guinea.

29. Idaho: Some of the Indian tribes are ghost dancing, and the Governor has requested protection from the United States troops.

30. Washington: John Russell Young appointed to be Librarian of Congress. Canada: Parliament prorogued by the Governor General.

July 1. Washington: The official name of the Bureau of Statistics in the State Department is changed to Bureau of Foreign Commerce.

2. Washington: An arrangement effected between the United States and Mexico for an interchange of weather reports. Salt Lake City: Corner stone laid

of a monument in honor of Brigham Young and the Utah pioneers.

6. Pittsburg coal district: About 1,500 miners obey the order of the National Executive Board. Washington: Recall of the German ambassador, who has been appointed Minister of the Treasury for the new Government. England: In the House of Lords, Lord Salisbury announces that Turkey has carried deliberation to such an extreme that it can be no longer endured by the European powers.

7. Denver, Col.: Meeting of the National Gold Mining Convention. London: Lord Salisbury receives the United States Monetary Commissioners. Montreal, Canada: Eighth annual meeting of the Central Conference of American Rabbis.

8. Toronto, Canada: Twenty-fourth annual meeting of the Conference of Charities and Corrections. Portugal: Celebration of the four hundredth anniversary of the departure of Vasco da Gama for the Indies at Lisbon.

9. San Francisco: Convention of the Christian Endeavor Society; 20,000 delegates present.

10. Italy: Strikes are becoming so general that troops are ordered out. Oklahoma: A large number of Cheyenne and Arapahoe Indians hold a council and dance at Darlington; they are dissatisfied with certain recent laws and threaten migration to Mexico.

11. Herr Andree, the aeronaut, leaves Tromsøe in his balloon and disappears in the direction of the north pole. Conclusion of an agreement between France and Germany as to their boundary disputes in Africa. Political riots in Hungary; troops called out.

12. Pennsylvania: The price of coal is steadily advancing in the Pittsburg district in consequence of the strikes.

13. Detroit, Mich.: Convention of the National League of Republican Clubs. Asia Minor: Turkey demands the withdrawal of Persian troops from the frontier, where disturbances have occurred. London: Inauguration of an engineers' strike, which threatens to be protracted and widespread.

15. Salt Lake, Utah: Meeting of the Trans-Mississippi Congress.

16. Minneapolis: Meeting of the Association of Agricultural Colleges and Experiment Stations. It is decided to make an exhibition at the World's Fair in Paris. Russia: Arrest of students on the charge of association with nihilists.

17. Arrival of the steamship Portland at Port Townsend, Wash., with the first large shipment of gold from the Klondike region in Alaska. A gold-hunting craze at once develops, exceeding anything known since the early days of California gold mining. Washington: The President nominates Terence V. Powderly, formerly General Master Workman of the Knights of Labor, to be Commissioner General of Emigration.

18. Omaha: Fourth annual meeting of the National Indian Teachers' Association. Resolutions favoring a compulsory education law for the reservation. Washington: Appointment of Thorvald Solberg, of Boston, to be register of copyrights in the Library of Congress.

20. France: Adjournment of the Chamber of Deputies. London: Celebration by the Salvation Army of its thirty-second anniversary.

21. Washington: Six new military *attachés* are added to the list of those already detailed for service abroad.

22. Washington: The President appoints Capt. Norman H. Farquhar to be commodore of the navy. Brown University: Resignation of President Andrews because of a disagreement with the trustees in regard to currency questions. Chicago: Unveiling of a monument to Gen. John A. Logan.

London: Whitelaw Reid, special envoy of the United States, gives a dinner at which many English statesmen are present as well as many foreign ambassadors.

25. St. Louis: Arrival of the Bicycle Corps of the Twenty-fifth United States Infantry after riding from Fort Missoula, Mont., 1,900 miles, in forty days.

27. Washington: The President appoints Major Moses P. Handy to be special commissioner to the International Exposition at Paris. Wheeling, W. Va.: Meeting of the labor leaders to consider the existing coal strike.

28. Canada decides to impose a royalty on the gold taken from the Klondike mines.

29. Omaha: Decrees entered for the sale of the Union Pacific Railway under foreclosure proceedings. Pennsylvania: Several thousand strikers in the coal regions march to the De Armit mines near Pittsburg. They are addressed by E. V. Debs and others.

30. England: Arrival of the King of Siam at Portsmouth, where he is received with royal honors.

August 1. Egypt: News received of heavy fighting on the upper Nile between the dervishes and various tribes.

2. India: One of the beleaguered forts in the Chitral district relieved by the British.

4. England: In the House of Commons an attack is made upon the South African policy of the Government. The seat of war: Arrival of the Turkish squadron, which had sailed under sealed orders, at the island of Mitylene.

5. France: Seizure of a large quantity of explosives at Marseilles in houses occupied by anarchists.

6. England; Adjournment of Parliament until Oct. 23. Canada: The Dominion Government takes steps to enforce the alien labor law against the United States. Belgium: Opening of the International Arbitration Conference in Brussels; representatives present from nearly all the nations of Christendom.

8. Spain: Assassination of Señor Canovas, Prime Minister, by an anarchist.

10. Washington: A warning issued by the Secretary of the Interior intended to check the rush of gold hunters into the Klondike region. Chicago: Meeting of the Sound-Money Committee, appointed at Indianapolis in January to formulate national financial legislation.

11. Washington: Decision by the Attorney-General that goods imported into Canada and exported into the United States must pay a discriminating duty of 10 per cent. Portugal: Martial law proclaimed at Oporto; 18 army officers arrested, charged with insubordination.

12. Pennsylvania: An injunction granted by Judge Collier in the United States court at Pittsburg restraining the striking miners from assembling, marching, or encamping with intention to intimidate. Halifax, Nova Scotia: By courtesy of the British naval authorities the United States battle ship *Indiana* is permitted to use the great Government dry dock. Conclusion of a treaty of arbitration between Spain and Peru.

13. Detroit, Mich.: Meeting of the American Association for the Advancement of Science. Prof. Frederick Ward Putnam, of Harvard, elected president. Chicago: Strike of the workmen on the public-school buildings, because of the refusal of the Board of Education to employ only union men. Pennsylvania: The strikers in the mining regions are interfered with by the sheriff and his deputies.

14. San Francisco: Destruction of 40 chests of adulterated tea by the Treasury inspectors under

the provisions of the new law. British India: Great activity in the military departments in anticipation of a frontier war.

15. The British Government informs the President that the naval force on the North American station will be increased. Paris: Duel between the Italian Count of Turin and Prince Henri of Orléans; swords are used, and both parties are slightly wounded. Nearly 1,000 gold seekers sail from Victoria, British Columbia, bound for the Klondike region.

17. Detroit, Mich.: Twenty-third annual meeting of the American Bankers' Association. England: Fifty men-of-war's men desert the British battle ship *Sovereign*, and many are under punishment for alleged insubordination.

18. Indianapolis: Convention of the Young People's Christian Union of the United Presbyterian Church; about 10,000 delegates present. Turkey: A dynamite bomb exploded by supposed Armenian revolutionists in Constantinople. France: President Faure leaves Paris for St. Petersburg; a bomb explodes just after he passed, but no one is hurt. British India: Dispatches from Simla indicate a widespread uprising on the northern frontier.

19. New York: Meeting of the National Temperance Society at Saratoga.

21. West Africa: Submission of the King of Benin to the British authorities, who captured his capital city in revenge for the massacre of Consul Phillips and his companions.

22. France: Bread riots threatened on account of the rise in the price of flour. London: Anarchists hold a meeting in Trafalgar Square, and incipient riots are suppressed by the police. Bohemia: Anti-Jewish outbreaks at Pilsen; troops called out. Uruguay: Negotiations between the Government and the insurgents having failed, a state of war will continue.

23. Buffalo, N. Y.: Opening of the encampment of the Grand Army of the Republic. Russia: Arrival of M. Faure, President of the French Republic, at the palace of the Emperor.

24. South Carolina: A large number of negroes become worked up to a high pitch of religious excitement, so much so that the authorities are alarmed. Denver, Col.: Meeting of the Supreme Court of the Order of Foresters. British India: News received that the tribesmen have captured the forts in the Khyber pass. Hungary: A strike occurs in the building trades of Buda-Pesth; more than 20,000 workmen are involved, and incipient riots take place.

25. Washington: The President appoints W. R. Halloway, of Indiana, consul general at St. Petersburg. Cleveland, Ohio: Annual meeting of the Cleveland Bar Association. Mystic, Conn.: Session of the Universal Peace Union; Alfred H. Love, of Philadelphia, is elected president. St. Louis, Mo.: First national convention of a new political party calling itself the American party; 50 delegates present, representing 9 States. New York city: General strike of cloakmakers ordered; several thousand stop work. Uruguay: Assassination of President Borda. South Africa: President Krüger, in a speech at Pretoria, declares that the Transvaal Republic can not recognize the suzerainty of Great Britain.

26. Buffalo, N. Y.: J. P. S. Gobin, of Lebanon, Pa., elected Commander in Chief of the Grand Army. Washington State: Other vessels reach Puget Sound from Alaska, bringing gold and miners from the Klondike country and increasing the gold fever on the Pacific coast. British India: The hostile tribesmen capture the remaining fortifications in the Khyber pass, and are in full possession.

27. Africa: King Menelek and the Italian authorities have agreed upon the Erythrean frontier as the recognized boundary. South America: A force of 600 Bolivians has invaded Peru.

28. England: Return of the Jackson-Harmsworth polar expedition after an absence of three years.

29. Switzerland: Meeting of the Zionist Congress at Basel. Discussion of a plan for the purchase of Palestine by the Jews.

30. St. Louis, Mo.: Opening of the Congress of Labor leaders. Japan and Portugal agree upon a commercial treaty.

31. France: President Faure returns to Paris from his visit to Russia. Montreal: First session of the British Medical Association held in Canada. British India: The month closes with the situation extremely critical on the northern frontier. The tribesmen have gained many victories over local British posts, but powerful re-enforcements are hurrying to the front.

September 1. New York: Nomination of Seth Low, President of Columbia College, to be Mayor of Greater New York.

2. Washington: It is announced that the postal authorities of the United States and Canada have made arrangements for the transmission of mails to and from the Klondike region. St. Paul, Minn.: Declaration by the Farmers' Congress against Government ownership of railroads. Russia: Appointment of a special commission to consider the introduction of compulsory education in the empire. Germany: The King of Siam visits Prince Bismarck at his home.

3. New York: Strike of 5,000 vestmakers for higher wages. Washington: The appointment is announced of Rifaat Bey to be Turkish minister resident, in place of Mustapha Tachsin Bey.

4. Washington: The War Department orders 4 troops of cavalry to the Mexican frontier, to assist the authorities in the arrest of the Zúñi Indians.

5. New Mexico: A train is held up and robbed by 4 masked men, who make their escape. British India: It is estimated that 17,000 tribesmen are under arms in the vicinity of the Khyber pass.

7. England: Trades-Union Congress in Birmingham pledges aid to the striking miners.

8. New York: Arrival of Gen. Fitzhugh Lee, consul general of the United States at Havana, on leave of absence. A German war ship has been sent to New Guinea to avenge the murder of Capt. von Hagen, slain by natives. Bolivia: It is reported that hostile forces from Peru have seized some of the principal towns along the border.

9. Indianapolis: Opening of the National Encampment of the Sons of Veterans. England: The Trades-Union Congress at Birmingham demands the abolition of child labor under the age of fifteen, and of all night labor under the age of eighteen. Brazil: A considerable engagement is announced with the insurgent fanatics at Canudos; the Government troops suffered severely.

10. Cuba: Capture by the insurgents of Victoria de las Tunas, the most important post that has yet fallen into their hands.

11. Pittsburg coal region: A large party of miners fired upon by deputy sheriffs near Latimer; 21 dead and 40 wounded. Paris: Arrival of the King of Siam, who is welcomed in state by the President and members of the Cabinet.

13. Spain: Gen. Stewart L. Woodford, the new United States minister, presents his credentials to the Queen Regent at San Sebastian.

14. Brown University: President Andrews withdraws his resignation. England: Celebration at Ramsgate by the Roman Catholic authorities of Great Britain of the thirteen hundredth anniversary of the landing of St. Augustine.

15. Lexington, Va.: Installment of Hon. William L. Wilson as President of Washington and Lee University. Versailles, Ind.: Five members of a gang of robbers lynched in the public square. Mexico: Attempted assassination of President Diaz; no harm done. England: The Bank of England announces that it is prepared to hold in silver one fifth of the bullion required to guarantee its note issue.

18. Consul-General Lee has a long interview with the President, and consents to return to Havana. Turkey and Greece sign a treaty of peace.

19. Waterford, Me.: A large body of Italian workmen seize a foreman and two of his assistants, and hold them as hostages for unpaid wages.

20. Return from Greenland of Lieut. Robert E. Peary, U. S. N. Pennsylvania: End of the miners' strike in the Hazelton district, more than 5,000 men returning to work.

22. Greece: Great indignation over the terms accorded by the treaty of peace.

23. London: The action of the Bank of England in regard to silver arouses widespread indignation and protest throughout business circles, and the bank reconsiders its action.

24. Pennsylvania: It is deemed safe to withdraw State troops from the lately disturbed mining district. New Orleans: A mob attempts to burn a schoolhouse used as a hospital for yellow-fever patients. British India: An engagement of considerable importance between the insurgent tribesmen and the British; the British have the best of the encounter.

25. Washington: Exchange of ratifications of the new treaty between Japan and Chili. London: It is officially announced that England will take no part in the Bering Sea Conference at Washington if Russia and Japan are to participate. Austria: Duel between Count Badeni, the Premier, and Dr. Wolff, the German Nationalist.

26. Springfield, Ill.: Adjournment of the Sovereign Grand Lodge of Odd Fellows, which has been in session. Hawesville, Ky.: Lynching of Raymond Buskrod, a negro.

28. New York: Republican Convention of the Greater New York. Ex-Secretary-of-the-Navy Benjamin F. Tracy nominated for Mayor. Massachusetts: Democrats nominate George Frederick Williams for Governor, and approve the Chicago platform. Washington: It is announced that the Creek Indians have agreed to allotment of their lands and to a reform government. Warsaw: A conspiracy discovered to assassinate the Emperor Nicholas; the roadway was undermined; 130 arrests followed.

29. Spain: Resignation of the Cabinet. London: Horatio David Davies, Conservative member of Parliament, chosen lord mayor.

30. New York: Democratic Convention of Greater New York nominates Robert A. Van Wyck for mayor.

October 1. New York: Henry George nominated by the Jeffersonian Democracy for mayor. South America: Boundary dispute between Nicaragua and Costa Rica decided in favor of Nicaragua by Gen. Alexander, the United States commissioner.

3. East Africa: Members of the English Cavenish sporting expedition are reported to have been murdered by natives.

5. Washington: The President appoints Loretz V. Swenzen minister to Denmark and ex-Congressman Hunter, of Kentucky, minister to Guatemala.

6. Carnivals are celebrated at St. Louis, Kansas City, and Denver, attracting large numbers of visitors. British India: The Government notifies the British Cabinet that it will not consent to reopening its mints for the free coinage of silver.

7. London: Final meeting of the Indian Famine Commissioners; subscriptions from Great Britain, her colonies, and the United States amounted to about £1,500,000. Switzerland: The National Council decides to purchase the five principal railroads in the country for about \$200,000,000.

8. Washington: The Post Office Department adopts a largely extended money-order system.

9. Germany: Sentence of a Socialist member of the Reichstag to ten months' imprisonment for publicly criticising high state officials. The Socialist Congress at Hamburg decides to take part in national elections. London: Sharp decline of South African securities on a report of the illness of Cecil Rhodes.

12. Washington: Failing to secure a representative of Great Britain in a seal conference in which Russia and Japan should be represented, Secretary Sherman invites her to a conference with the United States alone. Indianapolis: Democrats carry the municipal election, re-electing Mayor Taggart. Washington: A board of naval experts sets out for the South, with a view to selecting a location for the proposed national armor-plate works.

13. New York: Opening of the Fifteenth Conference of Friends of the Indian at Lake Mohonk. New Haven, Conn.: Meeting of the American Board of Commissioners for Foreign Missions. London: Leading men of all parties are signing petitions objecting to Government action favoring bimetallicism.

14. Washington: Resignation of Justice Stephen J. Field of the Supreme Court because of advanced years. Appointment of the Hon. John A. Kasson, of Iowa, special commissioner regarding the reciprocity arrangements under the tariff act. New Jersey: A Holman friction-gear locomotive runs a mile in forty-two seconds on the South Jersey Railroad. Indianapolis: National gathering of the Church of the Disciples. Paris: A banquet given to President Faure in commemoration of his visit to Russia. Cuba: Amnesty granted by Gen. Weyler to 46 political prisoners. Additional re-enforcements hurrying from Spain.

15. The old United States man-of-war Yantic sails for Detroit to serve as a training ship for the Michigan naval reserve on the lakes.

17. Washington: It is officially reported that clerks of the Railway Mail Service during the last fiscal year handled 11,571,540,680 pieces.

18. Washington: The Secretary of the Navy orders the cruiser Detroit to Guatemala to protect American interests.

20. Washington: A military reservation ordered on St. Michael island, Alaska, to preserve order in the gold fields. British India: Continued fighting between the tribesmen and Government forces on the frontier. Madagascar: A French military post attacked by a band of natives, and many of its garrison killed.

21. Washington: The President appoints Medical Director W. K. Van Reypen to be surgeon general of the navy, in place of the late Newton L. Bates. Boston: Celebration of the centennial anniversary of the launching of the frigate Constitution, the old ship being present to take part in the ceremony. London: Celebration of the anniversary of the battle of Trafalgar.

22. Egypt: News reaches Cairo that the Abyssinians are devastating Somaliland and are committing terrible atrocities.

23. Washington: Meeting of the delegates representing the United States, Russia, and Japan to act on the sealing question. Harvard defeated Brown University and Princeton beat Cornell at football. Paris: An exciting debate in the French

Chamber of Deputies regarding the threatened bread riot.

24. Turkey: The Porte demands the recall of two American missionaries from Aleppo.

25. Princeton: Prof. Charles W. Shields announces his decision to resign from the Presbyterian Church, in view of adverse criticism by various governing bodies of the Church. Rome: The Pope declines to interfere in the case of Prof. Schroeder, of the Catholic University in Washington. Cairo: A column of troops, commanded by Gen. Hunter, has started to drive Osman Digma from the Atbara river.

26. Madrid: Señor Gullen, the Spanish Minister for Foreign Affairs, hands to United States Minister Woodford a note containing the reply of his Government to the communication which Minister Woodford had given to the Duke of Tetuan early in September.

27. Milwaukee: Twenty-ninth annual meeting of the Army of the Tennessee convenes. Denver: Trouble is reported from the vicinity of Fort Duchesne with Indians who have left their reservations. Buda-Pesth: The possibility of absolutist government for Austria foreshadowed in a speech by the Hungarian Premier. India: The insurgent tribesmen have returned a defiant answer to the British commander's proclamation, and are preparing to attack the British.

28. New York: Thomas A. Edison announces the successful operation, at Dover, N. J., of his new process for recovering the iron in low-grade ores. New Haven: Semi-centennial celebration of the founding of the Yale Sheffield Scientific School. Tangier: The Sultan of Morocco has won a victory over the Benanier tribe at Tadia. Madrid: A number of important reforms for Cuba passed upon and approved by the Spanish Cabinet.

29. Washington: The President appointed Gen. James Longstreet Commissioner of Railroads and Prof. Henry S. Pritchett Superintendent of the Coast and Geodetic Survey. The delegates representing the United States, Russia, and Japan reach an agreement in regard to the suspension of pelagic sealing. Constantinople: Turkish consuls ordered to resume their duties in Greece. India: The British forces, under Gen. Sir William Lockhart, capture Sempagha pass.

30. Cincinnati: President McKinley is entertained by the Cincinnati Chamber of Commerce and other societies. San Francisco: The cruiser Baltimore sails for Honolulu. Havana: Capt.-Gen. Blanco arrives and takes over the command of the island from Gen. Weyler, the retiring Governor General.

November 1. Omaha: The Union Pacific Railroad sold to the Reorganization Committee for the sum of \$53,528,532.76. Washington: The new Congressional Library is opened to the public. Newfoundland: Sir William Whiteway, Premier of Newfoundland, is defeated in the general election, and his party reduced to a minority in the Assembly.

2. New York: Robert A. Van Wyck elected the first mayor of the greater city of New York, carrying with him the entire Tammany ticket. Buffalo: Miss Frances E. Willard is re-elected President of the National Woman's Christian Temperance Union.

3. Pittsburg: President McKinley attends the Founder's Day exercises at the Carnegie Library. Madrid: Reports of Carlist activity in Spain.

4. London: The Liberals win a parliamentary election in Lancashire. Vienna: Scenes of confusion and violence repeated in the lower house of the Reichsrath.

5. Rio Janeiro: Attempted assassination of President Moraes, of Brazil, by a soldier of the garrison. Dr. Moraes was not injured.

6. Washington: The sealing treaty between the United States, Russia, and Japan is signed at Washington.

7. St. Augustine: The Hotel San Marco is destroyed by fire; loss, \$250,000. Madrid: The Cabinet Council approves the proposal of political amnesty for Cuba and the Philippines.

8. Washington: The United States Supreme Court denies the appeal of Durrant, convicted of murdering Blanche Lamont, in San Francisco. President McKinley appoints Dr. W. Godfrey Hunter, of Kentucky, minister to Guatemala and Honduras. Havana: Marshal Blanco issues an edict granting full pardon to all Cuban rebels who have been prosecuted for rebellion. Rome: Charges in connection with bank scandals against Ex-Premier Crispi, of Italy, are quashed. London: Horatio David Davies installed Lord Mayor of London.

9. Washington: The Spanish reply to Minister Woodford's note, read at the Cabinet meeting, is considered as allaying any fear of hostilities. Premier Laurier and Minister Davies of Canada arrive, with the purpose of negotiating for a settlement of matters in dispute between the United States and the Dominion. Philadelphia: Annual meeting of the National Baseball League begun. Paris: The French ministry declines to open the case of Captain Dreyfus in the absence of fresh evidence. Japan: Count Nishi has been appointed Foreign Minister in place of Count Okuma, resigned.

10. Washington: Conference between the sealing experts of the United States, Great Britain, and Canada begun. Secretary Sherman insists on the prompt settlement of the McCord claim by Peru. India: British forces under General Westmacott repulsed by rebels on the Afghan frontier.

11. Washington: Premier Laurier and Secretary Sherman hold a conference in regard to harmonizing differences between the United States and Canada. Greece: The Turks have repulsed bands of Greek irregulars who crossed the Thessalian frontier.

12. Washington: General George S. Batcheller, of New York, is commissioned by President McKinley to represent the United States as a judge on the mixed tribunal at Cairo. The President issues a proclamation suspending discriminating tonnage dues on Mexican vessels. Austria: Dr. Abrahamovics elected President of the Austrian Reichsrath. Havana: The prisoners captured on board the American schooner Competitor are included in the general amnesty. Russia: M. de Kotzebue, Russian minister to the United States, has been relieved of his post, at his own request, on account of his wife's health.

13. St. Louis: The United States Circuit Court of Appeals decides that boycotting is illegal. Cuba: The Cuban insurgents blow up a railroad train with dynamite. Berlin: German war ships ordered to the scene of the recent outrages on missionaries in China. Famine conditions reported as threatening a large part of the German population.

14. North Dakota: Three Indian murderers are taken from the jail of Emmons County and hanged. Washington: Lieutenant Stoney, United States Navy, recommends the sending of a naval expedition to the Yukon country to suppress lawlessness. Australia: Rich strikes reported in the gold fields of New South Wales. China: German marines and sailors land in force at Kiaochau Bay and hoist the German flag in token of occupation.

15. Africa: A British force has been sent against the slave-raiding Prince of Idau, on the West Coast. Athens: Capt. Rastopoulo is cashiered for culpable negligence in the matter of the torpedo scandal during the late war with Turkey.

16. Washington: The Sealing Conference closes without final results. President McKinley signs

the treaty adopted by the recent Universal Postal Congress. Paris: Count Esterhazy, implicated in the Dreyfus scandal, has demanded an investigation. India: Gen. Kempster repulses a night attack of the tribesmen by the aid of star shells.

17. Havana: Spanish residents of Cuba from the ages of fourteen to forty are requested to enlist as volunteers in the Government army.

18. Havana: The Competitor prisoners are released from Cabanas fortress. Paris: The friends of Capt. Dreyfus declare that he is the victim of a conspiracy. Madrid: Capt.-Gen. Primo de Rivera has announced the complete pacification of the Philippine Islands. Ottawa: The Canadian Cabinet decides to send a commission to Washington for the settlement of disputed questions.

19. St. Petersburg: The appointment of Prof. F. de Maartens as arbitrator in the Anglo-Venezuelan boundary dispute has been formally approved by the Czar.

20. Washington: Lieut. D. H. Jarvis, executive officer of the Bear, is selected to lead the overland expedition for the relief of the ice-imprisoned whalers in the Arctic. Paris: Premier Meline promises to introduce a bill for the relief of agricultural distress in France. Constantinople: Russia, in view of proposed Turkish expenditures for armaments, renews her demand for payment of war-indemnity arrears.

21. Vienna: Social Democrats attack a meeting of Christian Socialists at Grätz; the riot is suppressed by the police, many persons being injured. Norway: The steamer Victoria sent to Spitzbergen to search for Andrée, the missing aeronaut, returns without news of the explorer.

22. Madrid: The Spanish Cabinet approves the scheme of autonomy for Cuba.

23. Buffalo: The Buffalo City Gas Company incorporated with a capital of \$7,000,000. Madrid: Gen. Weyler arrives in Barcelona, and the demonstration in his behalf does not equal expectations.

24. Pittsburg: A syndicate of capitalists has purchased all the stock of the United Traction Company, amounting to \$20,000,000. Vienna: Another riotous demonstration takes place at the sitting of the Austrian Reichsrath. India: Continuance of the spread of the bubonic plague.

25. London: Three hundred Americans observe Thanksgiving Day by dining at the Hotel Cecil; Ambassador Hay is among the speakers. Havana: Rear-Admiral Vicente Manterola arrives from Spain and takes charge of the Admiralty Office.

26. Madrid: Royal decrees have been issued, extending the Universal Suffrage law to the Antilles. Rio Janeiro: The Chamber of Deputies approves the Franco-Brazilian treaty involving the settlement of boundary disputes. Shanghai: Germany makes demands upon China in compensation for the murder of German missionaries and destruction of German property, which include the maintenance of the German force at Kiaochau Bay.

27. Rome: The Pope appoints Archbishop Chappelle, of Sante Fé, to the archbishopric of New Orleans. Madrid: The royal decrees granting autonomy to Cuba and Porto Rico are published. Ottawa: The Canadian Government declines the proposition of the United States to suspend sealing for one year; the Canadian reply proposes the immediate appointment and meeting of a joint commission.

28. Seattle: Returning miners from the Klondike region report a shortage of provisions at Dawson City. Austria: Resignations of the Badeni ministry accepted by the Emperor. Paris: "Figaro" publishes letters alleged to have been written by Count Esterhazy, which express sentiments reflecting on the French army.

30. Vienna: Announcement of the new Austrian Cabinet, with Baron von Gautsch as Premier. Berlin: Emperor William opens the Reichstag in person.

December 1. Washington: Associate-Justice Stephen J. Field retires from the United States Supreme Court, his term of office having continued five days less than forty-four years. Austria: Anti-German riots in Prague; the city is declared under martial law. Constantinople: United States Minister Angell renews the demand for an indemnity for the pillage of American missions in Armenia.

2. Ohio: Mrs. Nancy Allison McKinley, mother of President McKinley, is stricken with paralysis at Canton. Washington: President McKinley appoints Blanche K. Bruce, of Mississippi, Register of the Treasury. Berlin: Re-enforcements are being hastened forward to Kiaochau Bay.

3. Brussels: The Belgian Government has decided that Americans living in Belgium will hereafter be exempt from service in the Civil Guard. Cuba: The special commissioner of Spain, Señor Canalejas, reports the presence of 15,000 orphans in the province of Pinar del Rio.

4. Constantinople: The definite treaty of peace between the Sublime Porte and Greece is signed. Bombay: Departure of a British military expedition for the island of Mombaza, off the coast of Zanzibar.

5. Berlin: Monsignor Schroeder, formerly professor in the Catholic University at Washington, receives an appointment to the faculty of the Catholic Academy at Münster. Imperial-Chancellor Hohenlohe declines to recommend that the Emperor declare Capt. Dreyfus innocent. Rome: Resignation of the entire Rudini Cabinet.

6. Washington: Meeting of Congress. Hayti: Two German war ships arrive at Port au Prince and demand satisfaction in the case of Herr Lueders; the demand is complied with.

7. Washington: The President transmits the report of Major Handy, Special Commissioner to the Paris Exposition, and recommends a liberal appropriation. Paris: The French Senate accepts the Government's declaration regarding the Dreyfus case. China insists that the German claim for reparation is merely a pretext for the occupation of Kiaochau Bay.

8. Chicago: The price of wheat rises above \$1 a bushel. Fall River, Mass.: The Cotton Manufacturers' Association votes to reduce wages in all mills of the city. Paris: The French and German governments reach an agreement as to the upper Nile territory in Africa. Germany: Prince Henry, brother of the German Emperor, departs for Kiel to command the second German squadron *en route* for China. Cape Breton island: New extensive discoveries of coal deposits reported.

9. Atlanta, Ga.: Strike and riotous demonstrations on the part of cotton operatives. Cuba: Capture of Caimanara, the port of Guantanamo, by the insurgents reported. Madrid: At a Cabinet council Premier Sagasta declares that, in the event of intervention in Cuban affairs by the United States, the Government is prepared to defend the rights and honor of Spain.

11. Washington: The Japanese minister to the United States announces that Japan is not opposed to the annexation of Hawaii. Colorado: Discovery of the rare metal uratrium reported at Black Hawk. Peking: China yields to the German occupation of Kiaochau Bay and vicinity.

12. Canton, Ohio: Death of Mrs. McKinley, the mother of President McKinley. Hayti: The entire Haytian ministry resigns, as the outcome of the recent German demonstration.

13. Hayti: The new Haytian ministry is proclaimed at Port au Prince.

14. Chili: Resignation of the Chilean ministry,

the third in six months. Rome: The Marquis di Rudini has succeeded in reconstituting the Italian Cabinet. Havana: Gov.-Gen. Blanco grants amnesty to Cuban political exiles.

15. Washington: The Senate passes the bill prohibiting pelagic sealing and the importation of unregistered seal skins. India: The British troops under Gen. Westmacott experience desperate fighting with the Afridis. Cuba: A bomb is discovered at the American consulate in Havana. The Hague: The Dutch Chamber of Deputies declines to increase the navy of Holland.

16. Washington: The bill prohibiting pelagic sealing passed by the House of Representatives. President McKinley appointed Attorney-General Joseph McKenna, of California, an Associate Justice of the Supreme Court, and Charles T. Dawes, of Illinois, to be Controller of the Currency. Constantinople: The treaty of peace between Greece and Turkey is ratified by the Sultan and the King of Greece.

17. Indian Territory: Signature of the treaty between the United States and the Seminole Indians. Washington: Nathan B. Scott, of West Virginia, appointed Commissioner of Internal Revenue, and William W. Thomas, Jr., to be United States minister to Sweden and Norway. London: Alfred Harmsworth has presented to Lieut. Peary the arctic steamer *Windward*. Cuba: The Spanish Col. Joaquin Ruiz, commissioned to approach the insurgent leader Aranguren, is arrested and shot by the insurgents.

18. Washington: Joint resolution for the relief to the Klondike miners finally agreed to. Paris: Trial of the French Deputies accused of complicity in the Panama scandals. St. Petersburg: Announcement that a Russian squadron has entered and will winter at Port Arthur, on the Chinese coast.

20. Memphis, Tenn.: Meeting of the American Cotton-Growers' Protective Association. Paris: The French Chamber of Deputies passes a bill providing for higher duties on hogs and hog products.

21. Massachusetts: Josiah Quincy re-elected Mayor of Boston.

22. Ottawa: The Bering Sea arbitrators have awarded \$464,000 to the Canadian sealers.

23. Philadelphia: Failure of the Chestnut Street National Bank and the Allied Trust and Saving Fund Company. The Hague: The Holland Chamber votes to abolish the export duty on Java sugar.

24. Washington: Secretary Sherman, by direction of the President, issues an appeal on behalf of the Cuban *reconcentrados*. Rome: The Pope issues an encyclical on the Manitoba school question.

25. Indiana: Fifteen thousand window-glass workers in the gas belt return to work, their strike having been settled. Berlin: The German Government refuses the request of the United States for lower duties on animal products.

26. Madrid: Local newspapers call for an increase of the Spanish fleet in view of the latest note presented by United States Minister Woodford. Yokohama: The Japanese Diet has been dissolved. Premier Matsukata has resigned.

27. London: Lord Salisbury declines to enter into an agreement with the United States, Russia, and Japan, to stop sealing.

29. President McKinley signs the pelagic sealing bill. India: Renewal of the bubonic plague. Havana: Gov.-Gen. Blanco issues a decree announcing the lines on which the home-rule Government is established.

31. Havana: Gov.-Gen. Blanco issues an edict permitting the exportation of tobacco from Cuba. Paris: The French Deputies, tried for complicity in the Panama scandals, have been acquitted. Vienna: Emperor Francis Joseph orders the session of the Reichsrath to be closed.

F

FARMERS' CONGRESS. Nearly 500 delegates and many visitors, composing the seventeenth annual session of the Farmers' National Congress of the United States, convened in the hall of the House of Representatives, in St. Paul, Minn., Aug. 31, 1897. The convention was called to order by the president, Hon. Benjamin F. Clayton, of Indianapolis, Iowa, at ten o'clock, with Hon. J. M. Stahl, of Illinois, Col. D. O. Lively, of Texas, and Prof. George A. Stockwell, of Rhode Island, as secretaries. Mayor Doran, of St. Paul, extended a welcome to the city, as did also Vice-President McGinis, in behalf of the State Agricultural Society, which was responded to by Secretary Stahl. Gov. Clough extended a welcome to the North Star State, which brought a response from President Clayton.

The president, in his annual address, said, in part: "From the crude method of sowing the seed in slime deposited by the overflow of the Nile and having it trampled in by the swine, when all agricultural labor was performed by the lowest menial and the common slave, we have advanced to a point where agriculture is one of the first sciences. The farm is the foundation of wealth and the main source of national and State prosperity; but to the due and adequate success of the farm and the farmers there are issues pregnant with profound thought. Changes in the laws of common carriers, and especially in the more just and equitable interpretation of such laws, are not only demanded as due to the common rights of the people, but are of vital concern in making for your labor and the products of your labor a market and a corresponding reward.

"It is doubtful if there is a proper appreciation of the vocation of farming. Only within a few years has agriculture taken its place on a par with other professions, although, like Atlas, it bears the world upon its shoulders. Our fathers looked upon the profession with pride and pleasure, and most of the great men of the past generation were farmers or sons of farmers. No fabrics or warehouses show so beautiful results as spring from the farmer's hand. Fields white and yellow with their more than silver and golden harvests and orchards bending under their weight of fruit. It is not a business in which great fortunes can be made and riches quickly and easily accumulated, but the majority of the farmers are better off than the army of employees in factories or mines.

"The farmer of this generation is confronted by problems more serious, and requiring a more trained mind to solve, than were presented to the generation which cut off the primeval forests and planted the virgin soil; but he holds in his hands a key to these problems and the power to redress his wrongs. He should therefore educate himself to a full understanding of his grievances and to a sufficient knowledge of the principles which should be employed to remedy them.

"The outlook is promising. The real crystallization is apparent in the unity of action. Until the organization of the Farmers' National Congress and its kindred institutions a few years ago each farmer was as isolated as Robinson Crusoe on his island. The benefits which these societies have conferred on agricultural communities can not be estimated in dollars and cents. They have taught the virtues of systematic organization, installed the precept that the greatest good to the greatest number is a good state of mind, good thoughts and good feelings, and established the tenets of a higher measure

of general intelligence and culture. The special mission and work of these gatherings is to prepare the seed for the sowing, to do the planting and plowing and fostering which must precede a harvest of intelligent votes; not to invent imposing theories, but to apply more effective and judicious measures.

"History teaches me that a government that will not protect the interests of the great masses of her people can not become perpetual. Under four hundred years of democracy Rome became the commercial center of the world's civilization; but when plutocracy and aristocracy seized upon that magnificent republic in the forgotten interest of the great masses of her people, the beautiful valleys of fair Italy were devastated and the proud city of Rome was made to tremble for her very existence. As long as the Carthaginian republic was governed by just and equitable laws she was prosperous. Every sea was white with the sails of her vessels, her commerce was upon every ocean, her flag floated in every civilized port. It was the boast of Carthaginian statesmen that no man dare wash his hands in the great Mediterranean sea without the consent of the Carthaginian republic. But when the interests of the people were discarded and their substance absorbed by the regal grandeur of those in authority, that splendid republic in turn became an easy prey to the Roman Empire. One by one, Spanish dependencies have been disposed of to secure gold to support a royal household, until about all there is left of that once proud kingdom is her pride of royal blood. For four hundred years Spanish authorities have been crushing the life blood out of the inhabitants of that little gem of an island of Cuba, until they have become hopeless and desperate. Those people have been forced to choose between starvation and revolution.

The session of this congress held at Indianapolis in November of last year was at the end of three years of the most fearful commercial depression known to our country during any peaceful period of its history. While every interest and industry felt the shock, and while the merchant, the manufacturer, and the great financial institutions were driven to desperation to avoid bankruptcy, it fell with double force upon the farmer and upon agricultural pursuits. The cause of this sudden calamity is a debatable question upon which I do not care to enter. That the world's overproduction with the perfect facilities for transportation that makes the nations of the earth neighbors largely contributed to it I have no doubt; and that mistaken legislation on the part of the Congress of the United States has plunged the agricultural interests of America still deeper in the unfortunate calamity is an indisputable fact. For the last four years, notwithstanding the price of transportation has been reduced, much of farm produce has been sold below the cost of production. The farmer is confronted with investments and obligations contracted under a high tide of prosperity. These obligations, together with undiminished taxation for the support of the Government, must be met from the meager revenues secured from reduced prices of farm products.

"When we consider that in so short a time we have stepped to the front as the wealthiest nation on the earth, that our increase of wealth under normal conditions is at the rate of \$2,500,000 a day; when we consider the rapid mechanical and scien-

tive development of the last quarter of a century, it is not strange that we should see the combination of capital and the formation of trusts. They are the logical outgrowth of a most wonderful progress. During the past twenty-five years we have been engaged in settling the great questions involving the right to control these vast corporations. As far as law is concerned, we have the right to check the rapacious greed of aggregated capital. Through legislative enactments and through the courts the contest has been long and bitter, but the principle has been established and is now recognized by the two great contending forces. I am not an alarmist; I take no pride in making war on any organization or institution that has for its object the greatest good to the greatest number of people. I bid them Godspeed and a magnificent success in all legitimate enterprises; but I hope and believe there will never come an hour when the Congress of the United States will purposely give their consent to the building up of trusts and combinations for the control of the prices of the necessities of human existence. You, gentlemen, hailing from all parts of the country, know much better than I can tell you the importance of urging prompt action regarding every obstacle preventing the success of the farmer. The Congress of the United States, when placed in possession of facts, have been quick to eradicate existing evils. We should seek to do no damage to other legitimate enterprises, but we should insist upon the recognition of our interests, and we should be satisfied with nothing less."

The Hon. Benjamin F. Clayton, after serving eight years as secretary and four years as president of the congress, was voted a life member. The following-named officers were elected for the ensuing term of two years: President, ex-Gov. William D. Hoard, of Wisconsin; First Vice-President, F. L. Maxwell, of Louisiana; Second Vice-President, C. A. Wieting, of New Jersey; Secretary, J. M. Stahl, of Illinois; Assistant Secretary, D. O. Lively, of Texas.

Many valuable addresses were delivered, among which was that of James J. Hill, President of the Great Northern Railway, his subject being "Farming from a Business Standpoint."

Fort Worth, Texas, was selected as the place of meeting for 1898. After an excursion through the Red River valley and the wheat fields of Minnesota and North Dakota for three days, the congress adjourned.

For a copy of the constitution, see the "Annual Cyclopædia" for 1886.

FEDERATION OF FREE CHURCHES. National Council.—The National Council of the Federation of the Evangelical Free Churches in England met in London, March 9. A reception had been given the delegates the previous evening by the lord mayor at the Mansion House. The meeting was opened with a sermon by the Rev. Hugh Price Hughes, Wesleyan, ex-president of the council. The address of the president of the present meeting, the Rev. Dr. Monro Gibson, was begun with an affirmation of the perfect loyalty of the ministers and members of the free churches as subjects of the Queen. The president laid down as the great doctrines for which the free churches stood: spirituality—"the spirituality of the New Testament teaching as distinguished from the formality of sacerdotalism"; the ascription of the function of the presbyter rather than that of the priest in the sacerdotal sense to the office of minister; and the ministry of the Spirit. The object of the association of the free churches was not, however, to attack sacerdotalism, but "to show the truth in full operation." In a paper on "The Old and the Present Nonconformity," the Rev. Dr. J. Guinness Rogers, Congregationalist, described

the difference between the objects sought by the nonconformists at the beginning of the Queen's reign and their attitude then and now. The feeling between the nonconformists, then one of separation and rendering united action impossible, had changed for the better, and now permitted harmonious co-operation. The Rev. Dr. Clifford, Baptist, defined as being among the present aims of the free churches: "To realize in the Church the ideal which Jesus Christ himself has given us as his own society; to carry to perfect fullness and maturity the individual and collective spiritual life; the churches were charged with a mission to the millions at their gates and to the regions beyond; for both these ends the churches aim at the fullest use and perfect consecration of all their members' gifts and opportunities; and the mission of the churches was to save men." The report of the Executive Committee showed that while the number of churches represented at the Birmingham Congress of 1895 was 130 and had increased at the Nottingham Congress of 1896 to 209, it was now 384. More than 300 conferences and meetings had been held during the year, and, almost without exception, the largest hall in the place was crowded with leaders and workers of all the evangelical denominations. A county federation had been established in Hampshire, and the idea, not a year old, was being taken up in all parts of the country. Seventy London councils were united in the metropolitan federation. Councils already formed included 11,000 associated churches with a membership of about 1,400,000, sitting accommodation for at least 4,000,000, and not less than 1,800,000 Sunday-school scholars. A circulating library established during the year included 3,000 volumes, sent out in boxes of about 50 each. Four thousand more volumes were required to meet applications, now registered. Foreible expression of the feeling of the free churches in respect to Armenia and the education bill had been given. The local work had included house-to-house visitation, waiting upon newcomers to the town in respect to their attendance upon some church; promotion of the adoption of the nonconformist parochial scheme; united missions; formation of unions of lay preachers; social, philanthropic, and civic work, and work in behalf of public morals; and lectures on free-church history and principles. Hampshire Federation had started a movement for building federation mission chapels in neglected or growing districts. If the mission should become self-supporting, the members, by a five-sixths vote, may resolve what denomination it shall belong to, and then purchase the chapel from the federation. Sermons were preached to the council by the Rev. Joseph Parker, the Rev. Dr. C. A. Berry, and the Rev. Dr. G. S. Barrett. Among the subjects discussed were "Women as Missionaries," "Moravian Missions," "Missions and Lay Preaching," "The State of London," "The Claims of London," "Wicked West London," "Poverty and Church Going," "What is to be Done?" "Christian Endeavor," "Secondary Education," "The Puritan Type of Spiritual Life," "The Methodist Type of Spiritual Life," "Sunday-School Reform," and, at a special meeting for young men and women, "Our Young People and the Free Churches," "Our Young People and Christian Citizenship," and "Our Young People and Home Missions." A resolution expressing sympathy with the Cretan people was passed.

The following comparative view of the growth of the nonconformist churches and of the Church of England has been prepared by the Rev. John Clifford, of London: In 1801 there were 4,289,883 sittings in the houses of worship of the Church of England, and 881,240 sittings in those of the free churches. In 1851 the figures stood—Church of Eng-

land, 5,317,915; free churches, 4,894,648. In 1896, the 10 leading free churches being represented—Church of England, 6,778,288; free churches, 7,610,003. Thus the free churches have steadily gained on the Established Church, till they surpass it in the number of sittings. The same is the case with the number of communicants, thus—free churches, 1,807,723; Church of England, 1,778,351. For the Sunday schools the following figures are given: Teachers—free churches 373,685, Church of England 200,596; pupils—free churches 3,103,285, Church of England 2,329,813.

FINANCIAL REVIEW OF 1897. The most important political event in Europe this year was the Greco-Turkish war. Early in February Greece intervened in behalf of the Cretans against the Mussulmans at Canea, and on the 5th there was an outbreak of hostilities in which the Cretans were defeated. This news created intense excitement at Athens, and the Greek Government dispatched two war ships to Canea, at the same time occupying the island with an infantry force, under Col. Vassos, and it was announced that it was the intention of the Government to annex the island to Greece. Turkey at once began to re-enforce the Mussulman garrison in Crete, and on the 14th the Turkish transport "Fuad," while leaving the port of Candia for Canea, was fired upon by a Greek war ship and compelled to return. While this act of war greatly encouraged the Greeks, it aroused the European powers, an allied fleet was sent to Cretan waters and a force of marines and sailors was landed to take possession of the principal seaport cities of the island. The Greeks re-enforced the army of occupation and prepared to oppose intervention by the powers. On the 21st an advance of Cretans upon a Mussulman force at Canea, despite the warnings of the commander of the fleet, was checked by shells from the combined naval forces of England, Italy, Germany, and Russia, and the Cretans retired. The explanations made in the English Parliament and in the French Chamber of Deputies regarding this act of forcible intervention by the powers were that the pacification of Crete had been prevented by the precipitate action of Greece, and, moreover, that the Greeks had violated international law by seeking to annex Crete. The excitement in the European financial centers caused by these events was soon allayed, and at the close of the month the situation grew more peaceful. On March 1 the foreign admirals notified Greece that she would be required to evacuate Crete, and in the event of refusal coercion would be applied. Greece refused to obey the mandate of the powers and made active preparations for war, massing all available troops upon the Thessalian frontier, and on the 30th Crown-Prince Constantine took command of this army. On March 21 a pacific blockade of Cretan ports went into effect; the fleets of the powers sought to protect the principal ports of the island, and at the same time to prevent the re-enforcement or provisioning of the Greek army of occupation. On April 9, a band of a few hundred Greeks, members of the Ethnike Hetairia, or Greek National Society, invaded Turkish territory, first attacking Balıno, and then, being re-enforced by Macedonians and mountaineers, they moved rapidly upon other Turkish positions, with the object of severing the enemy's lines of communication between the headquarters at Elassona and the Gulf of Arta. The Turks were greatly enraged by this movement, but they were restrained by the powers until the 18th, when the Turkish Council of Ministers officially declared that a state of war existed between Greece and Turkey, the Porte insisting, despite the denials of the Greek Government, that Greek soldiers participated in the inva-

sion of Turkish territory. The Turks promptly moved upon the passes of the Chessias mountains, capturing, in turn, Milouna, Reveni, and Mati, and advancing upon the Greek headquarters at Larissa, which was taken April 23, after being evacuated by the Greeks. Meanwhile the Greek fleet operated against Preveza, on the Gulf of Arta, and also against seaport cities near Salonica, destroying Turkish military stores, but the enemy's fleet remained inactive in the Dardanelles, the admiral commanding declaring that it was in an ineffective condition. After the fall of Larissa the Greeks sought to defend Volo, but they were unsuccessful. While the army was in retreat political dissensions arose in Athens, and the Government was arraigned for intrusting unskillful leaders with the management of the forces in the field. The ministry was dismissed on the 29th. The Turkish army gradually moved upon Dhomoko early in May, the Greeks feebly opposing the advance, and after capturing that position, a truce was arranged on the 19th and the war ended, one hundred and four days elapsing after the preliminary movement of intervention in Crete, Feb. 5, and forty days after the invasion of Turkish territory by the Greek National Society. The ending of the war caused a marked advance in international securities on the European market, but at no time during the progress of the contest was there very serious financial disturbance, the fact being recognized that the result must be the defeat of the Greeks, who were in every way unable successfully to cope with their opponents. After the close of the war the powers began negotiations for peace, June 3. These were prolonged until Sept. 18, when the treaty was arranged, Greece being required to pay an indemnity of £4,000,000 and Turkey retaining possession of the important passes in the mountains on the Thessalian frontier. The treaty was not finally signed by representatives of Greece and Turkey until Dec. 4.

With the exception of the revolt of the tribesmen in India during August and September, calling for vigorous repressive measures by the Indian Government, occasional political disturbances in France, and a ministerial crisis in December in Austria-Hungary, there was nothing of a greatly unsettling character in Europe.

On Nov. 15 the commander of the German Asiatic squadron took possession of three Chinese forts in Kiao-Chou Bay, on the Shan-Tung coast, to obtain satisfaction for the murder of two German missionaries. This movement caused some excitement in European political circles, and later the German Asiatic squadron was re-enforced. There was nothing more than simple protest on the part of China at this action of Germany. Early in December a Russian naval force took possession of Port Arthur, but it was asserted that this occupation was intended to be only temporary, Russia desiring a winter refuge for her fleet. On Dec. 16 Prince Henry, brother of Emperor Wilhelm of Germany, was ostentatiously put in command of an expedition at Kiel with orders to proceed to re-enforce the Asiatic squadron presumably for further operations against China, and on Dec. 21 it was announced that a British fleet had left Hong-Kong bound, it was supposed, for the Gulf of Pechili for the protection of British interests. On the 23d a French cruiser left Toulon for China, and the Italian Cabinet took measures for adequate naval representation in the far East. On the 26th it was reported that the English fleet had arrived off Chemulpo, Korea, supporting the British consul general, who had protested against the removal of the English financial adviser to the Korean Government, and also against the Russian monopolization of the Korean customs service. These movements were regarded with

much concern by Japan, and at the close of the year there were indications of her co-operation with England. It is claimed that the occupation by Russia and Germany of Chinese territory was in pursuance of the provisions of a secret treaty between Russia and China, made during the summer of 1895, after the treaty of Shimonoseki had been modified, at the demand of Russia, Germany, and France, which modification compelled Japan to re-cede to China the Liao-tung peninsula and other portions of the Chinese mainland, receiving in return a further indemnity. One of the terms of this secret treaty was said to be the acquisition by Russia of privileges in Chinese Manchuria, together with the right to occupy an ice-free port, presumed to be Port Arthur. Subsequent to the execution of this treaty Russia aided China in the negotiation of a loan with which to pay the first installment of the indemnity to Japan. Russia did not immediately take advantage of this treaty, preferring to await the completion of the Trans-Siberian Railway, but it is claimed that during the visits of the Emperor Wilhelm and of President Faure to St. Petersburg, in the summer of 1897, an understanding was reached regarding the course which Germany and France should pursue to acquire their share of the provisions of the secret treaty. That the English Government was informed of the terms of this treaty appears probable from the fact that no steps were taken for the protection of British interests until the King of Korea had removed the English consul general. Then England protested, and at the same time sought to prevent China from appointing a Russian controller of the customs after the expiration of the term of Sir Robert Hart. At the end of the year it was reported that Viceroy Li-Hung-Chang had been recalled to power at Peking and that the Chinese Government was actively making preparations for defense. The indications then seemed to point to the eventual partition of the greater portion of northern China between Russia, Germany, and France; and also that Russia would, by negotiating another loan for China, secure control of the customs revenues to the exclusion of England, while Germany and France would obtain important commercial as well as territorial advantages. But early in January, 1898, it was semi-officially announced that China had declined the offer of Russia for a loan and that the British Government would guarantee a Chinese loan of £16,000,000. Concurrently it was stated that the political situation in the far East was more harmonious. It was also announced that Germany had obtained from China a lease of Kiao-Chu Bay and the surrounding territory for fifty years.

In March the Japanese Parliament passed a measure providing for a gold standard and the suspension of the free coinage of silver. The weight of the gold yen was reduced one half, leaving the silver yen unchanged, and thus the ratio of 1 to 32 was established. This action of the Government was one reason assigned for the fall in the market price of silver in London to $28\frac{1}{8}$ pence per ounce in March. Purchases of silver for the East were limited thereafter, and the plague and famine in India so greatly unsettled the finances of that country that India Council bills could not be sold, and on Sept. 1 the sale of these bills was temporarily suspended, and it was not resumed until Dec. 15. The suspension caused a further fall in the price of bar silver in London to $23\frac{1}{2}$ pence per ounce, and it did not react until Sept. 21, when, partly influenced by the issue of a rupee loan by the India Council and partly by the report below referred to regarding the intentions of the English Government with respect to silver in the Bank of England, there was a recovery to $27\frac{1}{2}$ pence. This was followed by a decline to

25 pence by the end of September, but early in October the price reacted to $27\frac{3}{8}$ pence, and the announcement on Oct. 16 that the English Government would not entertain any proposition favoring bimetalism appeared to have no influence upon the price. Thereafter silver fluctuated between $27\frac{1}{2}$ and $25\frac{1}{8}$ pence per ounce, and the price at the close of the year was $26\frac{1}{2}$ pence. The new currency law of Japan went into effect Oct. 1, and in the following week the applications for gold in exchange for silver yen amounted to only about 950,000 yen, or 2 per cent. of the outstanding bank circulation, and applications for Bank of Japan notes in exchange for silver yen amounted to about 2,600,000 yen. The currency plan of the empire was therefore regarded as a success.

The most important domestic event was the passage of the Dingley tariff bill by Congress. Immediately upon the inauguration of President McKinley the Committee of Ways and Means of the House began to formulate the new bill preparatory to its presentation at the extra session. The measure was passed by the House May 3, and it was at once reported to the Senate. The Finance Committee of that body proceeded to amend it in several important particulars, and consideration of the bill began in open session May 25, but it was not passed until June 24. Pending its consideration imports of raw and manufactured goods were very large, those of wool alone amounting in March to \$4,676,832, and in April to \$5,550,933 pounds, and the excess of imports over exports of all articles for April was \$23,673,620, for May \$1,486,871, and for June \$11,989,987. The following month showed an excess of \$17,420,639 exports over imports, and in August the excess of exports was \$40,976,738, the movement in the last-named month being largely due to the European demand for breadstuffs in consequence of the short foreign supplies. The export movement of cereals continued large in September and in October, while imports were small, and the excess of exports in the first-named month was \$62,133,510, and in October it was \$61,822,636.

Another event was the appointment by President McKinley of Senator Wolcott, of Colorado, Gen. Charles J. Paine, of Massachusetts, and ex-Vice-President Stevenson, of Illinois, commissioners to European nations for the promotion of an international agreement for bimetalism, the appointment being made under authority of an act of the last Congress which became a law March 3. The commissioners entered upon their duties during the summer and held several conferences with the representatives of foreign governments, but it was not until near the close of September that their mission seemed to be bearing the least fruit. Then it was announced that, for political reasons, the English Government had proposed to the governors of the Bank of England that one fifth of the reserve of the bank be held in silver and that the bank increase the legal tender of silver coins from £2 to £5. It was also reported that a plan for the reopening of the Indian mints to the free coinage of silver was in contemplation. These propositions elicited vigorous protests from the principal bankers of London, and on Oct. 16 it was unofficially stated that the Government had definitely decided not to recommend any change in the Bank of England's holdings of silver and not to reopen the Indian mints. The official correspondence, published on Oct. 22, disclosed the fact that on July 27 the United States commissioners proposed to the English Government the opening of the Indian mints to the free coinage of silver; the repeal of the order making the sovereign the legal tender in India; the placing of one fifth of the bullion in the issue de-

partment of the Bank of England in silver; the raising of the silver legal tender from £5 to £10; the issue of £1 notes based upon silver; the retirement of the half sovereign of gold and the substitution therefor of paper based upon silver; an agreement to coin or to purchase annually a sum—not named—in silver; the opening of the English mints to the coinage of rupees and the British dollar, which shall be a legal tender in the Straits Settlements and other silver colonies and in Great Britain up to the limit of the silver and legal-tender action by the colonies, and the coinage of silver in Egypt. Conferences were held at the English Foreign Office at which France announced her willingness to open her mints to unlimited free coinage of silver at a ratio of 15½ to 1 if Great Britain would co-operate with her as in the plan stated. The heads of the English Government were unanimous in their refusal to open the English mints to the free coinage of silver, and the Indian Government refused to entertain the suggestion of the reopening of the Indian mints. Lord Salisbury regarded it as unnecessary to discuss the remaining proposals until he knew whether the views of the United States and France had been modified by the refusal to reopen the Indian mints. This was regarded as putting an end to further consideration of the matter, and late in October the American commissioners returned to the United States.

The following tabular survey of the economical conditions and results of 1897, contrasted with those of the preceding year, is from the "Commercial and Financial Chronicle":

ECONOMICAL CONDITIONS AND RESULTS.	1896.	1897.
Coin and currency in the United States, Dec. 31.....	\$1,905,590,736	\$1,948,665,430
Bank clearings in the United States.....	\$51,183,004,950	\$57,316,000,000
Business failures.....	\$226,096,834	\$154,800,000
Imports of merchandise (year).....	\$681,579,556	\$742,631,350
Exports of merchandise (year).....	\$1,005,837,241	\$1,099,743,554
Gross earnings 205 roads (year).....	\$924,359,561	\$1,037,502,518
Railroad construction, miles.....	1,750	1,850
Wheat raised, bushels.....	412,000,000	530,000,000
Corn raised, bushels.....	2,211,000,000	1,850,000,000
Cotton raised, bales.....	8,500,000	10,257,030
Pig iron produced (tons of 2,240 pounds).....	8,623,127	9,500,000
Steel rails, Bessemer (tons of 2,240 pounds).....	1,102,892	1,614,399
Anthracite coal (tons of 2,240 pounds).....	43,177,485	41,500,000
Petroleum (runs) production, barrels.....	30,406,398	34,125,386
Immigration into the United States (fiscal year).....	258,538	194,860

The prices of leading staples on or about Jan. 1, 1898, compared with prices at the same date in 1897 and 1896 were as follow:

STAPLES.	1896.	1897.	1898.
Cotton, middling uplands, per pound.....	8 ⁵ / ₁₆	7 ¹ / ₁₆	5 ¹ / ₁₆
Standard sheetings, per square yard.....	6	5 ¹ / ₁₆	4 ¹ / ₁₆
Wool, Ohio XX, per pound.....	18 to 19	16	29 to 30
Iron, American pig No. 1, per ton.....	\$12 to \$14 50	\$11 to \$13	\$10 to \$12 25
Steel rails at mills, per ton.....	\$28 00	\$25 to \$28	\$19
Wheat, No. 2 red winter, per bushel.....	66 ¹ / ₄	90 ¹ / ₄	\$1 02 ¹ / ₄
Corn, Western mixed No. 2, per bushel.....	34 ¹ / ₄	29 ¹ / ₄	32 ¹ / ₄
Pork, mess, per barrel.....	\$8 75 to \$9 25	\$8 25 to \$8 75	\$8 50 to \$9

Money.—The feature of the money market early in the year was a concentration of silver certificates at this center, which was largely due to the policy of the Treasury Department of reissuing these certificates in small and legal-tender notes in large denominations, with the object of forcing the former

into circulation, and toward the end of January the amount of \$5 silver certificates outstanding was \$102,617,270 and \$114,177,971 of the denomination of \$10, while United States \$5 notes in circulation were \$58,448,979 and \$10 notes \$82,261,645. Only about \$7,000,000 in United States \$1 and \$2 were outstanding, while the \$1 silver certificates were \$33,412,800 and the \$2 notes \$18,956,127. The expenditures of the Government were \$5,952,395 in excess of revenues during January and \$4,395,050 in February, and therefore the silver notes continued to accumulate in the banks and in the Treasury until March, when the receipts of the Government, principally from duties on goods withdrawn from warehouse in anticipation of the new tariff, were in excess of expenditures, and this aided in partially relieving the congestion of silver notes. The net gold in the Treasury gradually increased through the exchange of gold for legal-tender notes, and by April 28 it had reached \$155,639,773, falling to \$143,976,196 by June 4, and then rising to \$160,726,563 by Dec. 31. Toward the end of September the Treasury refused offers of gold in exchange for legal tenders, receiving it only for transfers of currency to interior points, and consequently the specie holdings of the banks at this center were in excess of those of legal tenders. When the period arrived for the movement of the grain crops to the distributing centers, the institutions in the interior were well supplied, and not only at the chief Western centers, but in localities remote therefrom the banks had a surplus of money, and one bank in Nebraska closed its doors, assigning as the reason that it could not employ its surplus money; and it was stated that Nebraska banks had over 70 per cent. of their deposits in their vaults. Even by the middle of October Chicago banks bought paper in New York, being unable advantageously to employ their money at home. When the movement of currency from this center to the West actually began only comparatively small amounts were withdrawn, mainly for the reason that there was an urgent inquiry for cash wheat for export which prevented the accumulation of the grain in Western elevators, and consequently the money used to move the wheat was promptly returned to the banks in the form of drafts. The outbreak of the yellow fever in the vicinity of New Orleans toward the middle of September effectually stopped the movement of money, except by telegraphic transfer, to localities embraced within the quarantined districts, and it was not resumed until the epidemic had disappeared, and even then the movement was quite moderate.

As early as the week ending July 3 the loans of the New York banks were \$10,009,000 and the deposits \$9,878,800 above the highest on record, and the latter continued to increase until Sept. 11, when they stood at \$642,149,900. Then they began to fall off, while loans were augmented, reaching

\$579,313,700 in the following week. By Oct. 23 loans had been reduced to \$562,175,400 and deposits to \$616,079,600, but then came an increase to \$597,744,000 loans and \$666,278,600 deposits by Dec. 4, influenced in November by preparations for the payment by the Union Pacific syndi-

cate of the purchase money due the Government for the road, the Treasury arranging for placing the greater part of this money in specially designated depository banks in this city. On Dec. 11 the banks reported \$675,169,900 deposits—the maximum for the year. Preparations for the payment of the remaining installments of Union Pacific purchase money into the Treasury instead of the banks—it being necessary for the department to make provision for paying off \$29,904,952 currency 6s, due January 1, 1898, issued in aid of the Pacific railroads—more or less unsettled bank conditions for the remainder of the year. The loans were augmented, standing at \$610,606,300 Dec. 25, the highest on record, while deposits and legal tenders were reduced. The specie in the New York associated banks showed almost an uninterrupted gain from the beginning of the year, reaching the maximum Dec. 31. Legal tenders were at the highest, \$120,-

days and 3½ to 4 for sixty days to six months. Commercial paper was in comparatively limited supply during the entire year. Merchants were not large borrowers, and the improvement in business which resulted from the passage of the tariff made collections good, and therefore but little paper was made. The inquiry was somewhat urgent in the fall months, and rates fell off to about the lowest of the year for choice names during November, when indorsements were 3 per cent., and the best four to six months single names were 3 to 3½ per cent. In the last month rates were firmly held at 3½ to 4 per cent. for indorsements and 4 to 5 for choice single names.

The condition of the New York Clearing House banks, the rates of interest, exchange and silver, and the prices of United States bonds on Jan. 3, 1898, compared with the same items for the preceding two years are given in the following table.

ITEMS.	1896.	1897.	1898.
NEW YORK CITY BANKS :			
Loans and discounts.....	\$465,580,700	\$491,375,900	\$607,781,600
Specie.....	68,954,700	76,342,300	104,730,700
Circulation.....	13,952,900	19,600,100	15,507,200
Net deposits.....	491,614,900	530,785,000	675,064,200
Legal tenders.....	73,728,700	89,640,900	79,824,100
Required reserve.....	122,903,725	132,696,250	168,766,050
Reserve held.....	142,683,400	165,983,200	184,554,800
Surplus reserve.....	\$19,779,675	\$33,286,950	\$15,788,750
MONEY, EXCHANGE, SILVER :			
Call loans.....	4 to 5	2	3½
Prime paper, 60 days.....	6	3½ to 4	4 to 5
Silver in London, per ounce.....	30¼d.	29½d.	26¼d.
Prime sterling bills, 60 days.....	\$4 88½ to \$4 89	\$4 84 to \$4 84½	\$4 83
UNITED STATES BONDS :			
Currency 6s, 1899.....	104 bid	102½ bid	103½ bid
4½s coupon, 1891*.....	96 bid	95½ bid	99½ bid
4s coupon, 1907.....	109 bid	111 to 111½	114½ bid

* Extended 2 per cents.

296,600, Jan. 30. They fell to \$99,115,600 by May 8, rose to \$111,615,100 by July 24, declined to \$73,-721,300, the lowest of the year, Oct. 9, reflecting the

The following is the New York Clearing House statement of totals at the beginning of each quarter of 1897 and at the end of the year.

DATE.	Loans.	Specie.	Circulation.	Deposits.	Legal tenders.
January 2.....	\$491,375,900	\$76,342,300	\$19,600,100	\$530,785,000	\$89,640,900
April 3.....	502,732,700	85,983,300	15,701,800	569,226,500	103,984,900
July 3.....	532,707,900	90,496,600	13,781,200	604,983,700	102,134,200
October 2.....	571,993,400	92,365,100	15,790,400	619,353,200	78,023,600
December 31.....	607,781,600	104,730,700	15,507,200	675,064,200	79,824,100

movement of currency for crop purposes, and then advanced to \$84,202,800 Dec. 4. The surplus reserve of the banks was at the highest, \$59,148,250, Jan. 30, and at the lowest, \$11,523,450, Dec. 25.

Money on call at the Stock Exchange loaned at 5½ and at 1 per cent. during the year, but there was an abundant supply in the summer and in the fall, and loans were made at an average of about 2 per cent., later falling to 1½. Toward the end of October there were free offerings of money on call and on short time on sterling collateral, and some banks in the interior competed with city institutions for these loans. In December the market was de-ranked by calling of loans in connection with the Union Pacific settlements, and the rate advanced to 5½ per cent., fluctuating thereafter between 5 and 2 per cent. Time contracts were quoted at 2 per cent. for thirty days, 2½ for sixty days, and from 3 to 3½ for longer dates until after the middle of the year, when there was a firmer feeling in this branch of the market, but no material advance in rates for short periods. Those for from four to six months were quoted at 3½ to 4 per cent. In October the rates fell to the lowest of the year, owing to a light demand. In December there was a good inquiry, especially for short dates, and the quotations at the close of the year were 3 per cent. for thirty

The Crops.—The grain crops of Europe and the Argentine Republic were deficient this year, and there was a shortage in India due to bubonic plague and drought, and there was also a deficiency in Australia, while conditions in this country were favorable at least for small grains. Though the yield of corn was below that of last year, the unsold stocks were abundant. The wheat crops of Kansas and of Nebraska were enormous, and nearly all the great wheat-producing States had large yields of this cereal, which was marketed at comparatively high prices, these being influenced by the urgent European demand and also by an inquiry from the domestic mills. One feature in August, and again in December, was a speculative movement in wheat at Chicago. This carried the price in August to \$1.09, the best figures of the year, and the advance to \$1.02½ in December induced the marketing by producers of a large proportion of their unsold stocks. The cotton crop was large, estimated at 10,257,030 bales, but its marketing during the fall was greatly retarded by the yellow-fever epidemic at New Orleans and other Gulf ports. At the same time the overland movement from districts outside those quarantined was liberal. On the removal of the quarantine restrictions exports of the staple were large, but then

depression in the Eastern manufacturing centers tended to check overland shipments. The price was unfavorably influenced by the check to exports caused by the fall in silver. The Bureau of Statistics reports the export movement of wheat for the year at 108,664,977 bushels, of corn at 186,470,601, and of oats at 52,263,174 bushels. The shipments of cotton were 6,455,319 bales.

The following shows the yield and the value of the crops for the years 1896 and 1897 on the basis of the price at New York at the beginning of the years 1897 and 1898:

PRODUCTS.	CROP OF 1896.			CROP OF 1897.		
	Yield.	Price, Jan. 2, 1897.	Value.	Yield.	Price, Jan. 3, 1898.	Value.
Wheat, bushels.....	427,684,347	\$0 90½	\$387,054,334 03	530,149,168	\$1 02½	\$542,077,524 28
Corn, bushels.....	2,283,875,165	29½	673,743,173 67	1,902,967,933	33½	642,251,678 48
Cotton, bales.....	8,250,710	7½	316,445,668 66	10,257,030	5½	304,605,579 00
Total values.....			\$1,377,243,176 36			\$1,488,934,781 76

Stocks.—The stock market was generally strong in January. The important features early in the month were a fall in Delaware and Hudson, due to the reduction of the dividend; a rise in Reading, caused by the decision of the Attorney-General of Pennsylvania not to attack the charter; an advance in Manhattan; and a general improvement in the whole list, influenced by the neglect of Senator Cameron to press his resolution for the recognition of the independence of the “republic” of Cuba. Later, there was an irregular movement, with Wheeling and Lake Erie weak, on the financial embarrassments of the company, and the bituminous and the anthracite coal stocks were depressed by the unfavorable trade conditions. By the middle of the month the tone grew stronger, but later the Grangers were raided on reports of cutting rates. Long Island was freely sold, and the whole market was lower until toward the end of the month, when there was a recovery in the leading stocks, and the tone was quite strong at the close. Sugar, Chicago Gas, Consolidated Gas, the Northern Pacifics, Pullman, and the Grangers recording the most important advances. The market was strong early in February, influenced by European purchases of the Northern Pacifics, by an improvement in the dry-goods trade and in iron and steel, but later the industrial stocks were unfavorably affected by the State Senate investigation into the management of trusts. The bears vigorously raided these properties, and the market was more or less unsettled until the last week, when there was a recovery due to rebuying of stocks, and the market was strong at the close of the month, with Consolidated Gas and Lake Shore showing the greatest improvement. The feature early in March was the announcement of an issue of \$50,000,000 3½-per-cent. one-hundred-year bonds by the Lake Shore and Michigan Southern road, for the purpose of retiring maturing issues. This news caused an immediate advance in all the Vanderbilt properties, which stimulated an improvement in the whole market, and the tone was quite strong until the last week in the month, when it was unfavorably affected by the announcement that the United States Supreme Court had decided, in the Trans-Missouri case, that railroad combinations and agreements for the maintenance of rates were in violation of the act of July, 1890, known as the Sherman antitrust law. The United States Circuit Court of Appeals, sitting in New York, had affirmed Judge Wheeler’s decision, that the Joint Traffic Association was not operated in violation of the interstate commerce act, but in view of the decision, above noted, in the Trans-

Missouri case, it was deemed advisable that the Government should appeal to the United States Supreme Court, and an unsuccessful effort was made to secure an early argument. The Western roads promptly withdrew from the traffic associations of which they were members. It was feared that demoralization of rates would follow, and this fear caused free selling of railroad properties, keeping the market in an unsettled condition until the close, when there was a recovery due to a more confident feeling regarding the railroad situation and the absence of cutting of rates. The market

was irregular early in April, with the stocks of Western roads and of the Vanderbilts strongest, and there was also some improvement in Sugar and Chicago Gas. News of the outbreak of the Greco-Turkish war had a partially disturbing effect after the middle of the month, but later there was a recovery, led by Sugar and the Grangers, and though irregular, the market was generally strong to the close. Indications of a speedy ending of the Greco-Turkish war and the reporting of the tariff bill in the Senate had a favorable influence upon the market early in May, but subsequently the anthracite coal shares were raided, there was free selling of Sugar and of the other industrial stocks, and the tone was unsettled until the last week, when there was a recovery influenced by the rapid progress of the tariff bill in the Senate, and by a speech by Secretary Gage at Cincinnati declaring the intentions of the Administration regarding currency reform. This speech and the views informally expressed by the President upon this subject had a stimulating effect upon the market in June, and indications of the prompt passage of the tariff bill encouraged an improvement in business, which was reflected in the stock market. After the middle of the month there was an active and a higher market, the speculation grew broader, and nearly everything on the list advanced. The Vanderbilts were exceptionally strong under the lead of Chicago and Northwestern, which was affected by the announcement of the intended issue of refunding bonds, and there was good buying of the Grangers, of Sugar, and the local gas stocks. The market was generally strong to the close of the month. There was an irregular decline early in July, due to realizing sales, but toward the middle of the month the market again became active and the tendency upward, and the transactions were quite large, especially in the industrials, the Grangers, the Vanderbilts, the local gas stocks, and the Northern Pacifics. The improvement continued to the close of the month, though the tone was then a little irregular. One feature was a large business in railroad mortgages. Realizing sales and some bearish pressure brought about a partial reaction early in August, but the transactions continued large, not only in stocks, but in bonds. Assurance of abundant cereal crops gave an impetus to the stocks of the Granger roads, and increasing earnings stimulated buying of the trunk line and of other railroad properties. After the middle of the month a rise in wheat and an active demand for this grain for export encouraged a further advance in the Grangers, and the whole market grew strong, so continuing to the close.

The tone was buoyant in September until the third week, and the buying was general, embracing the railroad stocks, the industrials, the gas properties, and mortgages of all kinds. The market showed indications of being largely overbought after the middle of the month, there was some evidence that large bloeks of stock had been marketed during the rise in prices, and nonprofessional speculators had apparently unwisely extended their operations, relying upon stop orders to protect them from loss. The bears took advantage of the situation to raid those properties which had been most rapidly advanced, including Consolidated Gas, Sugar, Manhattan, the Grangers, Missouri Pacific, Chicago Gas, and the Readings, and the market was more or less unsettled for the remainder of the month to the close. The movement was irregular in October, with more or less liquidation of speculative accounts and frequent raids by the bears, accompanied by disquieting reports of strained relations existing between this country and Spain regarding Cuba, and the tendency was generally downward. Early in November bearish demonstrations were frequent and vigorous, and on the 5th advantage was taken of a number of disquieting rumors to force important declines, involving outside speculators in heavy losses and discouraging rebuying. But toward the end of the month there were indications that professional operators were accumulating a general assortment of stocks, under cover of manipulation of Consolidated Gas, and the undertone was fairly strong, especially for leading railroad properties. The feeling was quite confident, based upon assurances that there would be nothing of a disturbing character in the President's message, and that a conservative course would be pursued by Congress regarding Cuba. The negotiation of the Rock Island refunding bonds, and generally increasing railroad earnings had a marked influence upon the speculation at the end of November, and there was an exceptionally good demand for railroad mortgages, indicating large investment buying. The conservative language of the President concerning our relations with Spain and the efforts of the Administration to induce Congress to pass some measure for the reformation of the currency had a stimulating effect upon the speculation in December, and the tone was generally strong with good buying of Manhattan Elevated, Metropolitan Street Railway, Third Avenue, and the local gas stocks as the feature. The activity in money after the middle of the month had only a temporary influence upon the market, simply tending to restrict business, and the tone was steady to firm at the close.

Total sales of stocks at the New York Stock Exchange for 1897 were 77,324,172 shares against 54,490,643 in 1896; 66,583,232 in 1895; 49,075,032 in 1894; 80,977,839 in 1893; 85,875,092 in 1892; 69,031,689 in 1891; 71,282,885 in 1890; and 72,014,600 in 1889.

The following table shows prices of leading stocks at the beginning of the years 1896, 1897, and 1898:

STOCKS.	1896.	1897.	1898.
New York Central	97	93½	106
Erie.....	14½	15	14½
Lake Shore.....	141½	152	170½
Michigan Central	95½	90½	101
Rock Island.....	67½	66	89½
Northwest, common	100	102½	121½
St. Paul, common.....	68½	73½	94½
Dela., Lackawanna and Western ..	160	157	155
Central New Jersey.....	100½	100½	96

The following shows the highest prices of a few of the speculative stocks in 1896, and the highest and lowest in 1897:

STOCKS.	1896.	1897.	
	Highest.	Highest.	Lowest.
American Sugar Refining Co.	126½	159½	109½
American Tobacco.....	95	96½	67½
Central New Jersey.....	110	109½	68½
Chicago, Burlington and Quincy..	83½	102½	69½
Chicago Gas.....	78½	108½	73½
Consolidated Gas	168	241½	136½
General Electric	39½	41½	28½
Louisville and Nashville	55½	63½	40½
Manhattan Elevated.....	113½	113	81½
Missouri Pacific.....	29½	40½	10
Omaha.....	49½	89½	47
Pacific Mail	31	39½	24
Reading.....	31½	29½	16½
Rock Island.....	74½	97½	60½
St. Paul	80	102	69½
Southern, preferred.....	33½	38½	22½
Tennessee Coal and Iron.....	34½	35½	17
Union Pacific.....	12½	27½	14½
United States Leather, preferred.	69½	72	50
Western Union.....	90½	96½	75½

Foreign Exchange.—The exports of merchandise for the year ending Dec. 31, 1897, were \$93,906,313 above those for 1896, and the imports of domestic and foreign merchandise were \$61,051,794 more. The excess of merchandise exports over imports for the year was \$357,112,204, against \$324,257,685 for 1896. The excess of exports over imports of merchandise, coin, and bullion for 1897 was \$382,340,503, against \$311,560,317 in 1896. Gold exports were \$256,529 in excess of the imports in 1897, against \$46,474,369 imports in excess of exports in 1896.

The foreign exchange market was firm until the last week in January, nominal rates being \$4.84 to \$4.84½ for sixty-day and \$4.87 to \$4.87½ for sight at the opening of the year, and advancing to \$4.85½ to \$4.86 for the former and to \$4.88 to \$4.88½ for the latter. The cause for the firm tone was the continued purchase of long sterling, which began in November last year, to hold until it ran to sight, and as often as bills bought sixty days previously became sight drafts they were sold, and the proceeds were reinvested in long sterling, thus extending the operation for another period of sixty, and in some cases of ninety days. Such movements were profitable only while discounts were high in London and while money was lending at a low rate here, and therefore when, on the 21st, the Bank of England reduced the minimum rate of discount from 4 to 3½ per cent., and the open market rate in London fell from 2½ to 2½ per cent., the profits of these exchange operations were materially lessened, the tone of the market grew easier, and at the close of the month there were liberal offerings of sight bills. After opening easy in February, the tone became firmer by reason of renewed purchases of long sterling, in the expectation that before the expiration of sixty days there would be an urgent demand to remit for goods imported in anticipation of the new tariff. After the middle of the month the political tension in Europe growing out of the troubles in Crete caused an advance in the open market discount rate in London, and the exchange market continued firm to the end of the month, when nominal rates were \$4.85½ to \$4.86 for sixty-day and \$4.87½ to \$4.88 for sight. The market was firm during March, closing at \$4.86 to \$4.86½ for long and \$4.88 to \$4.88½ for short, and one feature was buying of the former for investment to employ money which could not otherwise be used at remunerative rates. The firm tone continued until near the end of April. On the 24th there was a shipment of \$977,000 in gold bars to Europe, in violation of an agreement between bankers not to export gold unless a higher rate than \$4.88½ could be obtained for sight drafts. The bills against this shipment were sold at \$4.88½. The compact between

the bankers was then annulled, exchange fell off by reason of free offerings of bills against gold, and by the end of the month \$5,500,000 more gold was shipped. The market was dull and steady in May until the last week, when sixty-day fell to \$4.86½ and sight to \$4.88, and gold exports were made each week, the total for the month amounting to \$12,850,000, all of which went to Paris. The market was easier early in June, and it so continued until toward the middle of the month, when it grew firmer in consequence of a demand for remittance and a light supply of bills, and rates rose to \$4.87 for sixty-day, and \$4.88½ for sight. Shipments of gold for the month were \$6,750,000, chiefly to the Continent. The tone was steady in July. The market was influenced by small offerings of commercial bills against grain, and also by a comparatively good demand until the end of the month, when there was a better inquiry, and gold exports amounted to \$4,200,000. Early in August the market became weak, influenced by speculative sales of bills made in expectation of covering when the grain and the cotton exports should become free, and in the absence of an urgent demand rates fell to \$4.86 for sixty-day and \$4.87 for sight during the first week, later declining to \$4.84 for the former and \$4.85½ for the latter, but by the close of the month the tone grew steadier. Gold exports amounted to \$3,900,000, but these were made early in the month. When imports of gold from London were threatened by the decline in exchange in our market during August manipulation of the London open market discount rate by the Bank of England caused an advance in that rate, and concurrently there was selling in London of American securities. Remittances for those stocks, together with a light supply of grain bills and expectations that the movement of cotton would be late, made the exchange market firmer early in September. The outbreak of yellow fever at Ocean Springs, Miss., and its spread to New Orleans led to the organization of a stringent quarantine of Southern cities, and this checked the early shipments of cotton from the Gulf ports. Toward the middle of the month offerings of bills against future shipments of cotton, together with a lighter demand, caused a decline in rates to \$4.82½ for sixty-day and \$4.85 for sight, and gold imports began, \$1,000,000 being taken from the Bank of England and \$1,000,000 from Paris for export to New York. The Bank of England discount rate was advanced to 2½ per cent. Sept. 23. By the first week in October \$8,500,000 gold had been shipped from London and from Paris to this city, though efforts were made by the Bank of England to check the movement by advancing the minimum rate of discount to 3 per cent. on Oct. 7. The imports of gold from Europe then ceased, and exchange grew firmer by reason of a small supply of commercial bills, resulting from the light movement of cotton and breadstuffs, while there was a good demand for remittance and also an inquiry for long sterling to carry until it ran to sight. The market was generally firm at \$4.83 to \$4.83½ for sixty-day and \$4.86 to \$4.86½ for sight for the remainder of October and during the following month, when the absorption of long sterling for investment was the principal feature. Rates were \$4.83½ to \$4.84 for sixty-day and \$4.86½ to \$4.87 for sight by the end of November. The activity in the money market in December made it more profitable for the foreign bankers to loan their balances than to buy bills, and consequently rates fell to \$4.82½ for sixty-day and \$4.85½ for sight by the middle of the month, and \$500,000 gold was engaged in London, Dec. 24, for shipment to New York. In the last few days of the month expectations of easier money after the beginning of the new year induced a renewal of pur-

chasers of long sterling for investment, and the market was firm at the close, at \$4.83 for sixty-day and \$4.86 for sight.

Railroads.—The most important event affecting the transportation interests of the country was the decree, March 25, by the United States Supreme Court in the *Trans-Missouri* case, Judge Peckham, in an elaborate decision, declaring that the act of July 2, 1890, known as the Sherman anti-trust law, applied to all railroad and other combinations having for their object the regulation of rates or of prices, these being in restraint of trade within the meaning of the act. In consequence of this decision all railroad associations throughout the country organized for the purpose of regulating or maintaining rates were dissolved, except the Joint Traffic Association, which was continued in force pending an appeal taken by the Government from a decision by Judge Wheeler last year, and affirmed by the Circuit Court of Appeals, that the association was not operated in violation of the interstate commerce law. The dissolution of the Western railroad associations had a temporarily disturbing effect, but the executive officers of the principal roads informally agreed upon the maintenance of rates, carefully avoiding conflict with the law as interpreted by the Supreme Court, and there was no important derangement of railroad business thereafter. On Nov. 11 the United States Supreme Court in the *Alabama Midland* case decided against the Interstate Railroad Commission, which contended for the right to fix rates under what is known as the "long and short haul" clause of the interstate commerce act, and this decision encouraged a renewal of efforts to induce Congress to pass the railroad pooling bill. On Nov. 2 the Union Pacific, main line, was sold under foreclosure of the Government lien, and it was purchased by the Re-organization Committee for \$58,077,900.76, and the first installment of \$13,646,250 was paid by the syndicate Nov. 22. On Nov. 30 a further sum of \$6,100,000 was paid, on Dec. 6 another installment of \$8,538,401 was paid, followed by similar amounts on the 16th and the 27th, and the final payment on this account was on Jan. 6, 1898. The Northern Pacific reorganization syndicate in February sold to a combination of foreign capitalists a considerable portion of the syndicate holdings of the stock and bonds of the company, and at the same time Berlin holders of new Oregon Railway and Navigation, preferred, sold a block of their stock to parties here interested in the Northern Pacific, the Great Northern, and the Union Pacific. In March the Lake Shore made arrangements to refund its 7-per-cent. bonds into 3½ per cents. This was followed in April by a refunding scheme by the New York Central, and in May the Illinois Central announced issues of 3½-per-cent. bonds to finance operations connected with the Chesapeake and Ohio Southwestern and the St. Louis, Alton and Terre Haute roads. In August the Pennsylvania Company floated \$5,000,000 3½-per-cent. stock trust certificates guaranteed by the Pennsylvania road. Among the receiverships for the year were the Wheeling and Lake Erie, the Columbus, Sandusky and Hocking, the Sharpville, the St. Clair, Madison and St. Louis, the Little Rock and Mississippi River, and the Greenwood, Anderson and Western in January. The Oregon Short Line and Utah Northern, the Chattanooga, Rome and Columbus, the Cincinnati, Jackson and Mackinaw, and the Kentucky Midland were sold under foreclosure. In February the Columbus, Hocking Valley and Toledo was placed in the hands of receivers, followed in March by the Gainsville, Jefferson and Southern, the Wilmington, Newbern and Norfolk, and the Allegheny and Kinzua. The Louisville, New Albany and Chicago was sold under foreclo-

sure in March, and the St. Louis, Chicago and St. Paul and the Quiney, Omaha and Kansas City in April. In the following month the Middle Tennessee and Alabama and the Utah Central were sold, and a receiver was appointed for the Harriman and Northeastern. In June a receiver was appointed for the Centralia and Chester. The Cape Fear and Yadkin Valley was sold by order of the court. In July there was a foreclosure sale of the Wilmington, Newbern and Norfolk; in September, of the Colorado Midland, the Lancaster and Hamden, the Delaware River and Lancaster, the Emmittsburg and the Cuyler and the Woodburn roads; and in October, of the Millen and Southwestern and the Richmond, Nicholasville, Irvine and Beattyville. In December receivers were appointed for the Columbia and Maryland and for the Lawrence and Emporia. The Louisville and St. Louis was sold at foreclosure. Among the notable dividend payments was the Omaha, on the common stock, Nashville, Chattanooga and St. Louis, Great Northern, Rio Grande Western, Buffalo, Rochester and Pittsburg, Canadian Pacific, Atlantic and Danville, St. Paul, Norfolk and Western, Roek Island, St. Joseph and Grand Island, and the Cleveland, Cincinnati, Chicago and St. Louis. Dividends were reduced on the Manhattan Elevated, Central New Jersey, and the Chicago and Alton.

The following shows gross and net earnings of the trunk lines:

ROADS.	1891-'92.	1892-'93.	1893-'94.	1894-'95.	1895-'96.	1896-'97.
PENNSYLVANIA:						
Gross earnings.....	\$68,841,845	\$66,375,224	\$58,704,284	\$64,627,177	\$62,096,577	\$64,223,176
Net earnings.....	20,022,483	19,379,206	18,340,540	19,682,868	18,203,568	20,532,068
NEW YORK CENTRAL:						
Gross earnings.....	45,478,625	46,936,694	43,678,201	42,489,537	44,136,860	45,643,949
Net earnings.....	14,339,512	14,644,817	14,169,795	13,679,094	14,347,503	15,367,236
ERIE:						
Gross earnings.....	28,633,740	27,340,626	22,929,560	29,207,044	31,099,569	31,331,926
Net earnings.....	7,166,957	7,192,848	5,008,251	6,999,057	8,319,519	8,486,792
BALTIMORE AND OHIO:						
Gross earnings.....	25,877,358	26,214,807	22,502,662	22,817,182	23,944,782	25,582,122
Net earnings.....	7,444,402	7,172,825	6,941,973	7,016,139	6,361,361	5,570,028

Manufacturing Industries.—The most notable feature of the year was the steadily increasing production of iron notwithstanding the strike of the bituminous coal miners in western Pennsylvania, Ohio, Indiana, and Illinois, which began early in July and ended Sept. 15. This trouble restricted the supply of coal, and it was therefore embarrassing to the iron industry. The production increased from 164,064 tons per week in July to 226,024 tons in December. Prices were not high, and though there was a recovery from the low figures early in the year the rise was gradual. The steel-rail pool collapsed in February, causing a fall in steel rails from \$25 to \$15 per ton, and at the end of the year the price was \$19. Conditions in the cotton-goods trade were unsatisfactory. Competition of Southern manufacturers and an excess of production caused an accumulation of stocks, and at the end of the year there was a surplus of about 2,000,000 pieces of print cloths at Fall River, Mass. Manufacturers of finer lines of goods suffered from decreased consumption, this being largely due to the ability of consumers, by reason of the more prosperous times, to buy more costly goods of different material than cotton. The woolen manufacturers generally profited by the higher tariff, but early in the season they had to compete with the large foreign supplies which were imported before the Dingley bill went into effect.

Failures for the year 1897 were 13,090 in number, against 15,112 in 1896. The percentage of assets to liabilities was 54.4 per cent. in 1897 and 59.9 per cent. in 1896 and 65 per cent. in 1893.

FINE ARTS IN 1897. Under this title are treated the principal art events of the year ending with December, 1897, including especially the great exhibitions in Europe and the United States, sales and acquisitions of works of art, and erection of public statues and monuments.

Paris: Salon of the Champs Élysées.—The Société des Artistes Français elected the following officers for the year: President, Édouard Detaille; Vice-Presidents, Jean Louis Pascal, Achille Jacquet; Secretaries, Albert Maignan, Frédéric Auguste Bartholdi, Benoit Édouard Loviot, Alphonse Lamotte; Corresponding Secretary, Tony Robert-Fleury; Treasurer, René Marie Boisseau. President of the Jury of Painting, Fernand Cormon; Sculpture, Gabriel Jules Thomas; Decorative Arts, Benoit Édouard Loviot. The following are members of the Council of Administration: Zuber, Busson, Dawant, Humbert, H. Levy, R. Collin, Dameron, Bouguereau, Vibert, Thomas, Georges Lemaire, Guilbert, Blanchard, Coquart, Normand, Maunon, and Mongin.

The annual exhibition (April 20 to June 30), held in the Palais de l'Industrie, comprised 4,322 numbers, classified as follow: Paintings, 1,776; ear-tokens, water colors, pastels, miniatures, enamels, porcelain pictures, etc., 857; sculptures, 837; engraving on medals and precious stones, 71; decorative art, 150; architecture, 152; engraving and lithography, 479.

The following are the honorary awards for

1897: Section of Painting: Medal of honor, Henri Harpignies, for his "Solitude." First-class medal, Albert Laurens, "Glaukè et Thaléia." Second-class medals: Albert Charpin, "Le Versant des Alpes-Maritimes"; Lucien Pierre Sergent, "Ordre de Charger" (battle of Friedland, June 14, 1807); Marius Perret, "Les Piroguiers de Guet N'Dar" (Senegal); Edgard Maxence, "Chanteuses"; Mlle. Achille-Fould, "La Coupe Enehantée" and "Cendrillon"; Albert Gosselin, "Un Coin de Province de Paris" (artesian well at Grenelle) and "Crepuscule"; Gonzalo Bilbao, "Triste Antesala" (Spanish pawnshop); Paul Jobert, "Le Retour du Pêcheur" (Jersey) and "Dans la Brume" (Banks of Newfoundland); Georges Bergés, "Saint Georges Vainqueur" and "Intérieur à Anso" (Aragon); Arnaud Auguste Balouzet, "Soir d'Automne, à Morestel" (Isère); Emmanuel de Dieudonne, "L'Attente aux Bosquets d'Aphrodite"; Henry Vollet, "Offrande Printanière"; Jules Octave Triquet, "L'Acte de Foi"; René Maurice Fath, "Midi sous Bois en Juillet"; Eugène Louis Chayllery, "Un Intérieur Parisien"; Ernest Bisson, "Réverie du Soir." Third-class medals: Clémentine Hélène Dufau, Anatole Bernast, Constant Georges Gaste, Charles Fouqueray, Émile Auguste Wery, Georges Seott, Louis Loeb, Henry O. Tanner, John Smith-Lewis, Georges Henri Burdy, Albert Cresswell, Maurice Demonts, Antonin Marie Rambaud, Ellen Gertrude Cohen, Angèle Delasalle, Fernand Sabaté, Charles Léon Godeby, Alexandre Claude Louis Lavalley, Émile Aurèche, Silvain Grateyrolle, Julien Calvé, Jules Alexandre Grün, Victor Lecompte, Albert

Matignon, Alfred Magne, Amédée Rosier, Pierre Petit-Gerard, Henry Darien, Joseph Garibaldi.

Section of Sculpture: Medal of honor, Mathurin Moreau, for his marble group "Couronnement du Monument élevé à la mémoire de Joigneaux." First-class medals: François Sicard, "Agar" (marble group, high relief); Georges Bareau, "Le Temps et la Sagesse" (plaster statue). Second-class medals: Antonin Clair Forestier, "L'Ouragan et la Fouille" (plaster group); Jules Jean Pendariès, "La Fin du Jour" (marble statue); Aimé Jérémie Octobre, "Pour le Drapeau" and "Surprise" (plaster figures); Émile Laporte, "Hiver" (marble group); Alfred Félix Desruelles, "Job" (marble statue); Henri François Coutheilas, "Le Chêne et le Roseau" (plaster group); Prosper Lecourtier, "Cygne" (plaster group). Third-class medals: Eugène Paul Benet, Grégoire Calvet, Albert Dominique Roze, Pierre Laurent.

Section of Architecture: No medal of honor awarded. First-class medal: Emmanuel Pontremoli, "Restauration de Pergame." Second-class medals: Henri Eustache, Georges Morin-Goustiaux, Louis Pierre Blanc, Maistrasse et Berger. Third-class medals: Tony Garnier, Lucien Henri Woog, Jean Pailhès, Henri Guillaume, Charles Joseph Chaussepied, Jean Hébrard, Le Grand et Demierre.

Section of Engraving and Lithography: Medal of honor, Achille Sirony, "Portrait de M. Vignerou" (lithograph). First-class medal, Eugène Burney (steel engraving). Second-class medals: Camille Foncee (etching), Louis Isidore Journot (steel engraving), Henri Nicolas Dugourd (lithograph), Pierre Gusman (wood engraving), Jean Julien Tinayre (wood engraving). Third-class medals: René Paul Huet (etching), Camille Bellanger (lithograph), Émile Louis de Ruaz (wood), Henri Alasoinière (etching), Petrus Aressy (lithograph), Pierre Mallet (etching), Alfred Lachnitt (lithograph), Georges Profit (steel engraving).

"Solitude," by Harpignies, which received the medal of honor, embraces all that is best in contemporary French landscape art. It represents a setting sun on the Rhone between Vienne and Avignon at one of the defiles through which the river penetrates before issuing into the plain. On the bank at the right is a clump of bushes, on the left a gnarled tree, and the sky is full of the warmth of late sunset. The picture contains no figure. Another picture by the same artist, "Bords du Rhône," renders a morning effect.

Jules Breton's "La Moisson des Oeillettes" is, next to it, one of the most interesting pictures from an artistic standpoint. It represents a poppy field with a group of women and one man gathering and binding up the flowers in sheaves, and is strong with the individuality of the master, who has now passed the allotted three score and ten.

The "Marceau" of Émile Boutigny illustrates an incident in the French revolutionary wars of 1796, representing the mortally wounded Gen. Marceau, seated on an improvised litter, brought in to Altenkirchen by his comrades and delivered up to the humanity of the opposing general. Marceau, then only twenty-seven years old, was out with a reconnoitering party when he was shot by a Tyrolese chasseur concealed behind a tree, and his officers had no resource but to throw themselves on the generosity of the enemy. He was buried at Colblenz, but in 1889 his remains were taken in state to the Panthéon in Paris.

"Ordre de Charger," by L. P. Sergent, represents an aid-de-camp of Marshal Ney carrying to the dragoons of the division Latour-Maubourg, at Friedland, June 14, 1807, the order to charge. The regiment is drawn up at the right and in the rear, apparently awaiting the order.

Another military picture is "Charge des Grenadiers de la Garde à Eylau," by F. Schommer, a large canvas showing the grenadiers, with their officers leading, riding at full gallop to the front, which is strewn with dead and wounded men and horses.

The "Résurrection de Lazare," by Henry O. Tanner, an American, son of Bishop Tanner, of the Philadelphia African Methodist Church, attracted much attention. The scene is a grotto crowded with the witnesses of the miracle, curious, moved, or struck with awe. A lamp placed at the edge of the tomb (hidden by one of the figures, but giving by its clear and reflected light various values to the different actors) is the source of illumination in and center of the composition. It is a suggestive and interesting picture, with a treatment evidently inspired by the study of Rembrandt. It was awarded a third-class medal, and purchased by the French Government for the Luxembourg Gallery.

"L'Annonciation," by Georges Olivier Desvalières, is another religious picture, exhibiting a somewhat novel treatment of a subject on which so many painters have exercised their skill. The heavenly messengers bring to Mary a multiple and tragic message. While one places on her shoulders the heavy royal mantle, two, kneeling at her feet, present the scepter and the crown, and a fourth declares to her the choice which the Father has made of her, the fifth, in long mourning robes, lifts with a mournful gesture above her head the bleeding cross. The somber scenery, with its masses of brownish green, the sad glory of its sky, the blue mountains in the background, and the great pool which reflects the light of the sky and where the doves go to drink, give it a poetical bias which relieves it from the commonplace.

Bouguereau's "Compassion" is a sentimental picture representing Christ on the cross grouped with another figure of a man who places his head with an expression of love and sympathy against his body. While there is considerable pathos in the head, the picture generally is theatrical.

"La Lauragnais," a large decorative panel by Jean Paul Laurens, intended for the town hall of Toulouse, created much discussion. It represents the characteristic aspects of the Lauragnais, a part of Haut Languedoc, where the artist was born, and he has evidently dwelt lovingly on the scenes so familiar to him—the long rounding hills reaching to the horizon with yokes of oxen furrowing their sides with plows, and the fields, separated by low green hedges, cut by the furrows in lines side by side, with here and there the grass and the stubble turned yellow by the late summer's sun.

Gérôme contributed two pictures, "Fuite en Egypte" and "Entrée de Jésus à Jérusalem, le Jour des Rameaux." The first is a moonlight scene in the desert, with the well-known group dimly discerned in the foreground. The other is a scene without the walls of the city, with a crowd coming out to meet the Saviour and the road strewn with clothes and branches.

The portrait of the year is Benjamin-Constant's "Duc d'Anmale," showing him seated on a bench in a park amid warmly lighted foliage. It is a fine picture, made doubly interesting by the recent death of the subject.

John Smith Lewis, of Philadelphia, exhibited "Vlo, vlo, vlo!—en Bretagne," a huge but capital picture of cattle driven into a pool by a Brittany peasant woman.

Paris: Salon of the Champ de Mars.—The eighth annual exhibition of the Société Nationale des Beaux Arts (April 24 to July 10) comprised 2,392 numbers, of which 1,272 were paintings, 514 designs, drawings, etc., 192 engravings, 148 sculptures, 212 art objects, and 54 architecture.

Puvis de Chavannes was re-elected president, and the following as heads of the several sections: Carolus-Duran, Rodin, Roll, Besnard, Montenard, Mathey, Injalbert, De Baudot, Courtois, and Friant.

Among the large decorative panels exhibited was one intended for the Hôtel de Ville, entitled "Bois de Boulogne," by P. Lagarde. It represents the lake of the Bois de Boulogne in the silent hours, when it is a solitude enlivened only by the great swans that slowly move across its waters, the tranquil surface of which reflects the sweetness of the sky and the somber green of the leaves about to fall.

"Le Bassin des Tuileries" is another decorative canvas for the same building, by Montenard, a bit of country in the sun. The same artist exhibited "Rade de Marseille," for the palace of the French Union at Constantinople, representing the roadstead glowing with naval life.

Still another decorative panel is the "Automne" of René Ménard, a beautiful quiet landscape, with a sky touched by the last rays of the setting sun above distant hills, its glories of green and gold reflected in the ample river winding through the plain. The peaceful scene is enlivened by figures in the foreground.

"La Fin de la Journée," by L'Hermitte, is one of the strongest efforts of this artist, a picture likely to grow as it is studied. It is a simple composition, representing a young woman standing in the road, leaning upon a long staff and turning to speak to two youths who are reclining on the grass. In the background is a chateau with a square gateway, through which the cows she has driven home are about to pass.

The largest picture in the exhibition was Gervex's "La Distribution des Récompenses au Palais de l'Industrie (Exposition Universelle)." As the Exposition took place in 1889, it must have been a long time in painting. It was, of course, ordered by the Government.

Another large canvas, by Dubufe, intended for the library of the Sorbonne, is entitled "Et Scientia quoque Poesis erit!" It is an attempt at allegorical decoration and has the usual figures seated on clouds, but is unintelligible without a description.

Victor Prouvé's "La Vie," for the staircase of the Mairie at Issy-les-Moulineaux, is a long landscape with a group of lovers and dancing peasant girls on the right, the story continued through the family group in the center to that where the lovers appear as grandparents on the left. The picture, though decorative, has a human interest and is warmly colored.

Carolus-Duran was resplendent, as usual, with several portraits of Parisian ladies in rich costumes. He exhibited also some small but pleasing landscapes and several pictures of still life.

Cazin sent seven landscapes and F. Thaulow, an artist who is rapidly coming to the front, as many.

Paris: Miscellaneous.—At the sale of the Lagarde collection, in January, 141,000 francs was realized. The best prices obtained were: Corot, "L'Étang de Ville-d'Avray," 38,000; Daubigny, "Les Laveuses," 29,100; Troyon, "Chiens Écoissais," 45,000.

The sale of the Henry Vever collection, in January, brought a total of 967,970 francs. Among the best prices obtained were: Corot, "Eurydice bles-sée," 26,800; "L'Abreuvoir," 32,000; "Chemin Montant," 27,800; "Nymphé couchée au bord de la Mer," 30,000; "Le Lac," 16,000; "Ville-d'Avray," 35,000. Daubigny, "Les bords de l'Oise," 78,000 (bought for America), the highest price ever obtained for a Daubigny. Millet, "Femme au Puits," pastel, 27,000; "Les Puisseuses d'Eau," cray-

on, 20,200. Meissonier, "Le Déjeuner," 72,000; "Officier d'État-major en Observation," 94,100. Théodore Rousseau, "La Vallée de Tiffauge," 77,500. Claude Monet, "Pont d'Argenteuil," 21,500 (5,000 in 1887); "Sainte-Adresse," 12,000; "L'Église de Vernon," 12,000. Puvis de Chavannes, "Ludus pro Patria," reduction of the great composition at Amiens, 22,500.

The sale of the collection of drawings, water colors, and pastels belonging to the late brothers Goncourt, in February, realized 695,729 francs.

The sale of the collection of M. van den Eynde brought several good prices: Daubigny, "Le Printemps," 20,000 francs; Corot, "Paysage," 16,500; Decamps, "Marchands Arméniens," 15,500; Delacroix, "Les Convulsionnaires de Tanger," 36,200; "Lion et Caïman," 18,000; Th. Rousseau, "Montagnes d'Anvergne," 34,000; Roybet, "Les Joueurs d'Échecs," 25,000; Troyon, "Les Cygnes," 20,000.

London: Royal Academy.—The council of the Royal Academy for 1897 is made up as follows: Alma-Tadema, Marcus Stone, Luke Fildes, J. W. Waterhouse, Onslow Ford, Hamo Thornycraft, J. L. Pearson, H. H. Arncliffe, G. H. Boughton, and W. B. Richmond. The last five are the new members of the council, Messrs. Boughton and Richmond being newly elected academicians. J. S. Sargent also was elected an academician and Alfred Parsons and J. J. Shannon associates.

The twenty-eighth annual winter exhibition was devoted to the works of the late president, Lord Leighton, covering a period of nearly half a century. Most noticed among them were the large "Cimabue's Madonna carried through Florence," painted in 1855, now owned by the Queen; the "Romeo and Juliet," painted in 1858; the "Daphnephoria," in 1876; and of his other pictures between 1870 and 1880, his best period, the "Summer Moon," "Egyptian Slinger," "Music Lesson," "Antique Juggling Girl," "Winding the Skein," "Sister's Kiss," and portrait of Sir Richard Burton. His later works, excepting, perhaps, the "Flaming June" and the "Clytie," his last work, are marked by an overelaboration which grew upon him yearly.

The one hundred and twenty-ninth summer exhibition was particularly noticeable by the absence of works by the late presidents, Lord Leighton and Sir John Millais, whose pictures were always so marked a feature. The present president, Sir J. E. Poynter, sent two pictures, "The Message" and "Phyllis." The former represents two Roman maidens leaning on a balcony overlooking a quay, alongside of which is a boat, of which only the mast and cordage is seen, from which a young mariner is leaning to hand one of them a letter. The background shows a range of black marble columns leading up to a temple. The other picture is the Phyllis of Horace, whom the poet invites to come and spend the day with him in honor of Mæcenæ. The nymph is gayly crowning herself with ivy under an overspreading tree and admiring the effect in a hand mirror.

G. H. Boughton's "After Midnight Mass, Fifteenth Century," represents troops of worshipers streaming out of church after midnight mass on Christmas Eve. Snow is on the ground, and torch bearers light the way for a noble lady in pink and ermine, whose train is borne by pages. On the left people have drawn to one side to see the train pass by. This picture sold for £1,200.

"In Time of Peril," by E. Blair Leighton, is a scene from mediæval times, showing fugitives from danger seeking refuge in a monastery. A boat, rowed by two stalwart oarsmen and containing a knight in chain armor, a lady, two children, and household treasures, has stopped alongside of steps

leading up to the water gate of the monastery. The knight, who holds the helm, is leaning forward and explaining the situation to a gray-bearded cowed monk who is looking through the half-open door, while the lady looks up beseechingly.

J. W. Waterhouse's "Hylas and the Nymphs" was one of the principal successes of the exhibition, and attracted much attention. Hylas, kneeling at the left amid gnarled roots and branches of trees which spread their leaves above him, is seized by the arm by the naiads, who rise up all around him from among the pond lilies and welcome him with sad and sympathetic faces. The picture is reminiscent in treatment both of Lord Leighton and of Burne-Jones.

Edwin Abbey's "Hamlet" expresses under the guise of decoration much of the strong dramatic feeling which characterizes his work. It is the play scene. The king, splendid in red and gold, seems to shrink from the fierce eyes of Hamlet, who watches the impression made on his uncle by the players. The queen, in blood red and sable, looks on the performance with set lips and fixed eyes, while the aged Polonius, clad in gray, stands behind her and looks down askant at his daughter. Quite in front sits Ophelia, dressed in white, her loose yellow tresses covering her shoulder, her face marked by bewilderment, apprehension, and pain. Her concern is not with the players, but with Hamlet, who, lying at her side in disordered costume and roughened hair, keeps his eyes on the king with a regard full of wrath and hate. It is a strongly colored, dramatic picture, worthy to be classed with Mr. Abbey's "Gloucester and the Lady Anne," which was the figure picture of last season.

F. D. Millet's "Youth" is reminiscent of the best work of Alma-Tadema, who has painted more Greek and Roman lovers than any of his contemporaries. Mr. Millet's Roman lovers represent a graceful and stately lady walking slowly down a rocky path sloping gently to the shore between a steep cliff and the ocean, beside her tall and brawny lover. She leans slightly on his shoulder and clasps with one hand his arm, which is about her waist.

"Pilchards," by C. Napier Henry, represents a scene at daybreak on Mount's Bay in the fishing season, where two boats are drawn together with their crews lifting from the green depths of the sea a portion of their drift net. These nets, set over night, are often found so full of fish that part has to be abandoned, as shown in the picture. The artist has successfully seized the picturesque elements of his theme—the rugged fishermen adroitly grouped, the resplendent silver of the pilchards, and the ravenous gulls fluttering screaming over the capture. It is one of the successful pictures of the season, and was bought for £1,200 with the Chantrey fund.

Alma-Tadema's "Watching" exhibits a charming damsel in rose-colored tissue turning for a moment from the object of her watch. An open door behind her reveals an inlet of sunlit sea, athwart which flits the white sail of the boat she has waited for, but will thenceforth wait for in vain. In another picture, entitled "Her Eyes are with her Thoughts," the damsel leans her brow upon her hand, and as she looks seaward and shades her face from the intense light, she sees a wide sunlit sea, a turquoise sky, and a rocky coast with purple shadows, which recedes, headland after headland, into the dim distance, where the maiden's thoughts are.

London: New Gallery.—The winter exhibition was devoted to a collection of the pictures of Mr. G. F. Watts, including most of his important figure pieces, 17 of which have been set apart by him as a bequest to the nation. Chief among the larger canvases shown were the "Court of Death," "Love and

Death," "Love and Life," "Hope," "Paolo and Francesca," "Orpheus and Eurydice," "Time, Death, and Judgment," "Time and Oblivion," "Mammon," the two versions of the "Fata Morgana," the "Spirit of Christianity," "Chaos," and the "Childhood of Jupiter." Besides these were many smaller pictures and portraits, including among the latter the two of Lord Tennyson, Lord Leighton, William Morris, Sir Edward Burne-Jones, and his own portrait, painted in 1864.

The summer exhibition contained fewer important pictures than usual. Sir Edward Burne-Jones sent one only, entitled "Love and the Pilgrim," and Mr. Waterhouse but one, "Mariana in the South." Among the portraits were J. F. Sargent's "Mrs. George Swinton," J. J. Shannon's "Lord Ross," and Arthur Melville's "Martin White, Esq."

London: Grafton Galleries.—At the winter exhibition one of the chief attractions was a group of canvases by Sir John Millais, mostly portraits of members of his family. Among them were the half-length of Lady Millais, a masterly work in the artist's strongest manner, and portraits of the Earl of Shaftesbury and others. Other contributions were by Whistler, Alma-Tadema, Dagnan-Bouveret, Prof. Herkomer, and G. F. Watts, the last sending a head of Sir John Millais in middle life.

London: Miscellaneous.—The famous Wallace collection, probably the largest and most valuable ever brought together by private persons, has become the property of the British nation. Begun by the Marquis of Hertford, it passed at his death into the possession of Sir Richard Wallace, who rebuilt Hertford House, in Manchester Square, and added considerably to its treasures. In 1890 Sir Richard bequeathed the collection to Lady Wallace, through whose noble generosity it is to be kept intact for the public benefit. It is especially rich in pictures of the old and the new French schools, among the former being 11 Watteaus, 22 Greuzes, 9 Lancretts, 15 Paters, and 2 Clandes, with good examples of François Boucher, Fragonard, and others. Of modern masters, there are 33 pictures by Decamps and 15 each by Paul Delaroche and Meissonier, while the Barbizon school is well represented. The Dutch school is represented by 11 splendid Rembrandts, and many examples by Pieter de Hooch, Terborch, Cuyp, Frans Hals, Metsu, Paul Potter, Ruysdael, Hobbema, and many others. There are 11 works by Rubens, and pictures by Vandyke, Velasquez, Murillo, Alonso Cano, Titian, Bernardino Luini, Andrea del Sarto, Canaletto, and many other famous Spanish and Italian masters. The collection has been valued from £1,000,000 to £2,000,000 sterling.

The great event of the year was the sale of the collection of the late Sir John Pender, at Christie's, in May, with a result scarcely equaled by that of the Goldsmid sale of 1896. In the latter 17 pictures by British painters realized more than £50,000, while in the Pender sale 4 Turners alone brought an aggregate of £30,345. For these pictures Sir John paid about £8,000. The several prices were, in guineas: Turner, "The Wreckers," 7,600 (Bicknell sale, 1863, 1,890); "Mercury and Herse," 7,500; "The State Procession," 7,000; "Venice: the Giudecca," 6,800 (Bicknell sale, £1,655). For this last picture Mr. Bicknell paid originally only 250 guineas. Though Turners have changed hands at private sales for larger sums, none ever before sold so high by auction, the sale of the "Sheerness" at the Wells sale of 1890 at 7,100 guineas coming nearest to these figures. Philip's chief work, "La Gloria," was acquired by the National Gallery of Scotland at 5,000 guineas. Landseer, "The Lost Sheep," 3,000 (Bicknell sale, 2,300); "Event in the Forest," 2,500. Millais, "The Proscribed Royalist," 2,000 (Plint

sale, 1862, 525). W. Muller, "Encampment in the Desert," 1,600. Rosa Bonheur, "Landscape with Cattle," 1,500. Troyon, "Heights of Suresnes," 1,700 (Seerétan sale, 1889, 2,900). J. Phillip's "Gypsy Toilet," 1,700 (Knowles sale, 1865, 525); "Baptism in Scotland," 1,400 (Eden sale, 1874, 1,755). Ary Scheffer, "Paolo and Francesca," 320 (Ellesmere sale, 1870, 1,830). Sir D. Wilkie, "Cotter's Saturday Night," 1,250 (1872, 590). W. Collins, "Buying Fish," 1,100 (Bicknell sale, 960). The single day's sale realized £75,916.

At the sale of the pictures of Sir John Millais 7 canvases by the late president were disposed of at the following prices, in guineas: "The Empty Chair," 700; "The Naturalist," exhibited in 1885 as "The Ruling Passion," 1,700; "The Girlhood of St. Theresa," 650; "The Forerunner," 480; "Time," 420; "Sweet Emma Moreland," 390; "The Moon is up, and yet it is not Night," 1,050. A fine portrait by Holbein, bought by Millais for 70 guineas, was sold for 3,000 guineas to the Berlin Museum. Vandyke, "Time clipping the Wings of Love," 1,050 (Blenheim sale, 1886, 230). The entire properties realized £10,968.

Some important early British pictures from the collections of Earl Sondes, the Marquis of Normandy, and William Sharpe, a nephew of the poet Rogers, were sold on May 8. Among them were: Gainsborough, "Mrs. Puget," 4,800 guineas; "Lady Mulgrave," 1,020 (Price sale, 1895, 3,500); "Charles Frederik Abel," 1,200 (Egremont sale, 1892, 1,400); Romney, "Mrs. Tickell," 2,000; "Mrs. Grove," 3,500; "Anne Henshaw," 2,300. Reynolds, "Lady Waldegrave," 800 (1896, 1,050); "Alexander Wedderburn," 1,200; "Lady Anne Fitzpatrick as Sylvia," 1,800 (Montrose sale, 1895, 1,500). Hoppner, "Young Lady," 1,460.

The Unthank collection of old masters brought a total of £16,500. The principal prices were: Hondekoeter, "Two Cocks fighting," 2,180 guineas; Hobbema, "Village Scene," 1,900; Giorgione, "Italian Nobleman," 900.

The Cholmondeley sale included several noteworthy pictures, among them Sir Thomas Lawrence's "Miss Farren," 2,250 guineas. A picture attributed to Velasquez sold for 1,340.

In the sale of the late Baron Hirsch's collection a Vandyke, "Portrait of a Boy," brought 1,600 guineas, and a Gainsborough, "Second Baron Mulgrave," 700.

Romney's portraits of "Two Children in a Garden," from the Carleton Hall collection, Penrith, sold on June 16, realized the large sum of £9,100, a price exceeded only by the Clifden Romney "Viscountess Clifden and Lady Speneer," which brought in 1896 10,500 guineas.

Several notable pictures were sold at Christie's on July 10, among them Sir Thomas Lawrence's portrait of "Benjamin Gott," which brought 1,650 guineas, and his "Sisters Hamond," 1,400. Romney's "Lady Hamilton as a Bacchante" attained 1,900, and his "John Walter Tempest" 1,200.

Copenhagen.—The International Exhibition of the Fine Arts, May 1 to Oct. 31, held in the new Ny Carlsberg Glyptotheca in commemoration of the transmission to its future home of the splendid collection of sculpture, the gift to the city of Mr. Carl Jacobsen, was one of the most successful of the Continental exhibitions. This collection, begun by Mr. Jacobsen in 1882, is probably the best of the modern French school to be found outside of Paris, it containing good examples of all the great names. Here are Dubois's "Florentine Singer" and "Connétable de Montmorency," Barrias's "Les Premières Funérailles," Chapin's "Jeanne d'Arc," Delaplanches' "La Musique," Gautherin's "Le Travail," Falguière's "Diane," Lord Leighton's "Athlete with a Ser-

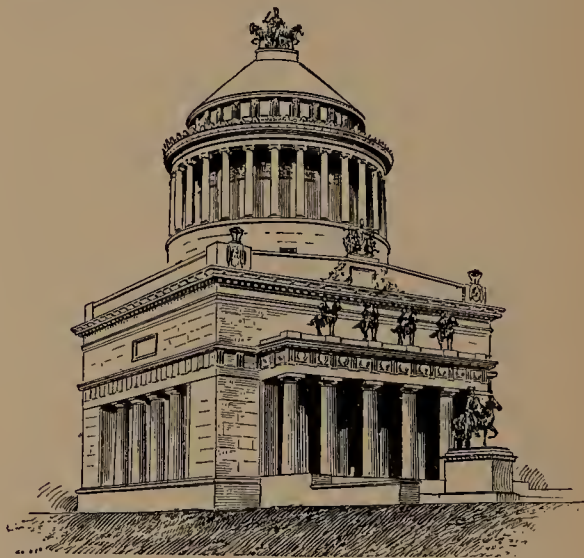
pent," Baily's "Eva," McDowell's "Day Dream," and many other equally known works from Germany, Italy, and other countries. The building to contain this collection and other art treasures, with commodious halls for exhibitions, was finished this spring. Of the 924 canvases shown, the United States contributed 41, Great Britain 99, France 114, Germany 148, etc. Among the American painters represented were Stewart, Harrison, and Pearce.

Dresden.—The international art exhibition (May 1 to Sept. 30) was in commemoration of the twenty-fifth anniversary of the reign of King Albert of Saxony. Of the total number of 718 paintings exhibited, 370 were contributed by foreigners, and of the 267 sculptures, 191 were the work of foreigners.

Munich.—The international exhibition held in the Crystal Palace (June 1 to Oct. 31) was organized by the two rival societies, the so-called "Secession" having agreed to unite for the occasion with the Artists' Society.

Venice.—The second international art exhibition, one of a series held every three years, was opened in April. The sections were: Italian, French, Spanish, Belgian, Dutch, Russian, German, Austro-Hungarian, Anglo-Saxon (England, Scotland, America), Scandinavian (Denmark, Sweden, Norway), and Japanese. Prizes were awarded as follow: For best work by an Italian artist, 10,000 lire, divided between Ettore Tito and Alessandro Milesi; best work by a foreign artist, 10,000 lire, divided between Ludwig Dettmann, Otto Sinding, and Fritz Thaulow; Italian Government prize, 5,000 lire, divided between E. Marsili and A. Zorn; province of Venice prize, 5,000 lire, divided between P. S. Kroyer and J. Sorolla Bastida.

New York: National Academy of Design.—The Academy decided on Feb. 6 to remove to a new site on 110th Street and Amsterdam Avenue. The new galleries to be erected there, after the designs



GENERAL GRANT'S TOMB IN RIVERSIDE PARK, NEW YORK.

of Messrs. Carrière and Hastings, the architects of the new Public Library, will be of white marble. The council for 1897-'98 consists of the following: President, Thomas W. Wood; Vice-President, James M. Hart; Corresponding Secretary, J. Carroll Beekwith; Recording Secretary, George H. Smillie; Treasurer, James D. Smillie; Harry W. Watrous, J. G. Brown, Robert Blum, F. S. Church, Frederiek Dielman, H. Bolton Jones. The Academy now has 92 academicians and 52 associates.

At the seventy-second annual exhibition (April 5 to May 15) 405 canvases were exhibited. The prizes were awarded as follow: The Thomas B. Clarke

prize (\$300), for the best American figure composition, to Robert Reid, of New York, for "Moonrise," a decorative panel; the Norman W. Dodge prize (\$300), for the best picture painted by a woman, to M. L. Macomber, of Waverly, Mass., for "St. Catherine"; the first Julius Hallgarten prize (\$300), to Wilbur F. Reaser, of New York, for "Mother and Child"; second Julius Hallgarten prize (\$200), to Leo Moeller, of South Sandfield, Mass., for "Patriot at Valley Forge"; third Julius Hallgarten prize (\$100), to Charles E. Proctor, of New York, for "Grandpa."

Among the noteworthy pictures was "Cleopatra on the Terraces of Philæ," by F. A. Bridgman, a clever reproduction of part of the architectural splendors of the island with the opposite bank of the Nile in the background, and the river enlivened with boats. The queen stands in the foreground looking dreamily off on the scene while a maid throws a shawl over her shoulders. Another attendant is leaning over the stone parapet, looking at the boats below.

Another large canvas, by Daniel Huntington, represents the "American Projectors of the Atlantic Cable." Cyrus W. Field is standing at the right, as if speaking, holding a roll in his left hand and pointing with his right to a map on the table. At the other side sits Peter Cooper beside a globe, and grouped behind the table are Marshall O. Roberts, Moses Taylor, and others. The picture belongs to the New York Chamber of Commerce.

"Vesuvius from near Sorrento," by James D. Smilie, is a striking composition, the foreground showing the walls and towers of Sorrento on the right, and a rugged hill on the left with a solitary traveler coming down the steep descent, while the mountain is in the misty background across the bay.

"To Decide the Question" is a characteristic group by J. G. Brown, exhibiting three old men, seated, apparently in a carriage house, engaged in earnest discussion.

Edmund C. Tarbell's "Josephine and her Mother," a child standing beside her mother, seated, in the almost shadowless light of a summer day, on the seashore, is a well-balanced, dignified composition, painted with great breadth and unity of effect. Robert Reid's "Moonrise" and "Evening Song," too, are in an equally high key and broadly treated. The former, to which was awarded the Clarke prize for the best American figure composition, is a decorative panel representing a nude female figure floating upward amid lilies from the surface of a lake. E. A. Bell's "Spring Flowers," Henry Prellwitz's "Ferdinand and Ariel," and Miss D. L. Murdock's "My Neighbors" are also noteworthy among the figure compositions.

The sixteenth annual autumn exhibition contained 431 numbers, including portrait busts and medallions. Conspicuous among the portraits were John S. Sargent's head of Claude Monet, the now recognized chief of the impressionists, and Carroll Beckwith's "Portrait Study," a clever painting of a beautiful woman. Gilbert Gaul sent his "Exchange of Prisoners," a story of frontier warfare, Theodore Wores two of his characteristic Japanese scenes, and Thomas Moran "Santa Maria and the Ducal Palace, Venice."

New York: Society of American Artists.—The nineteenth annual exhibition opened on Monday, March 29. The Webb prize (\$300) was awarded to Bruce Crane's "Signs of Spring," a picture exhibiting great technical skill as well as careful observation of Nature. Winslow Homer's contribution, "The Lookout," representing a sailor's head by moonlight, with a background of dark rigging, is one of the best figure pieces. Birge Harrison sent an exquisite snow scene entitled "Winter," Joe

Evans "A Garden in Winchelsea," and Edward H. Barnard "A Summer Rain," the last a satisfactory rendering of the effect of light struggling through a heavy shower. "A Mountain Lake," by William T. Smedley, is a pleasing effect of light and color. John S. Sargent contributed a portrait of a lady in white satin, exhibiting his usual skillful handling



BRONZE BUST OF ABRAHAM COLES, WASHINGTON PARK, NEWARK, N. J.

and delicacy of touch, and Edwin Abbey a decorative panel, called "A Pavane," illustrating one of the early stately dances, but suggestive rather of the theatrical stage than of the ballroom. W. M. Chase was represented by a charming little interior "In the Studio."

New York: Metropolitan Museum.—The autumn reopening, Nov. 1, was interesting as offering to the public the first view of Mr. McMonnies's "Bacchante" in her new home. This much-abused young woman, repudiated by Boston, has been given a prominent place opposite the principal entrance, where all can admire her unveiled beauties. John S. Sargent's portrait of Mr. Henry G. Marquand, the president of the museum, is, after the "Bacchante," the principal acquisition. It is in the painter's characteristic style, excelling in cleverness of handling and harmony of color, and placing the sitter's personality before the spectator without the appearance of posing. Three paintings of the English school were presented by Mr. Hearn—a "Coast Scene" by Bonington, "The Bridge on the Stour" by Constable, and a "Portrait of Lord Temple" by Sir Peter Lely. Among other acquisitions by the museum during the year is a life-sized portrait of Washington, painted in 1779 by C. W. Peale, presented by Mr. C. P. Huntington. It was obtained from a family in Surrey, England, where it had been for several generations. An altarpiece in silver *repoussé* and enamel, a copy from Perugino, representing the Madonna enthroned, was presented by J. Pierpont Morgan. Another gift is a colossal group of statuary, by George Grey Barnard, entitled "There are Two Natures struggling within me," presented by Mrs. Elizabeth S. Clark, in memory of her husband, Alfred Corning Clark.

New York: Architectural League.—The twelfth annual exhibition was held in the American Fine Arts Building in February. Among the interesting exhibits were designs for the decoration of the new Library of Congress, in Washington, es-

pecially those by Kenyon Cox and E. H. Blashfield. Sketches in color for painted friezes were shown by Mrs. M. Lesley Bush-Brown and by Dudley Carpenter. A notable part of the exhibition was a collection of portrait busts, medallions, and other works by the late Olin Warner. Another interesting design was the model for the proposed memorial of the late Richard M. Hunt, to be set into the wall of Central Park in Fifth Avenue, near the entrance to the Metropolitan Museum, which was erected by Mr. Hunt. The memorial is in the form of an exedra, surmounted by a colonnade supported by Ionic columns, with a bust of Mr. Hunt on a pedestal in the center and draped figures at the extremities representing Painting and Architecture. The work is by Bruce Price and Daniel C. French.

The gold medal of the League was awarded to William C. Ayres for his design of "The Principal Entrance of a Terminal Railway Station," and the silver medal to Raymond Bossange. The Avery prize was given to J. F. Harper for a design for an electric-light pole for a public square.

The Fine Arts Federation, organized in 1895, filed its certificate of corporation in June of this year. It now includes the National Academy of Design, the Society of American Artists, the New York Chapter of the American Institute of Architects, the American Water-Color Society, the Architectural League of New York, the Municipal Arts Society, the Society of Beaux-Arts Architects, the National Sculpture Society, and the National Society of Mural Painters.

Boston.—The Museum of Fine Arts has acquired two late pictures by Whistler, "The Master Smith of Lyme Regis" and "The Little Rose of Lyme Regis," both half-lengths, evidently portraits.

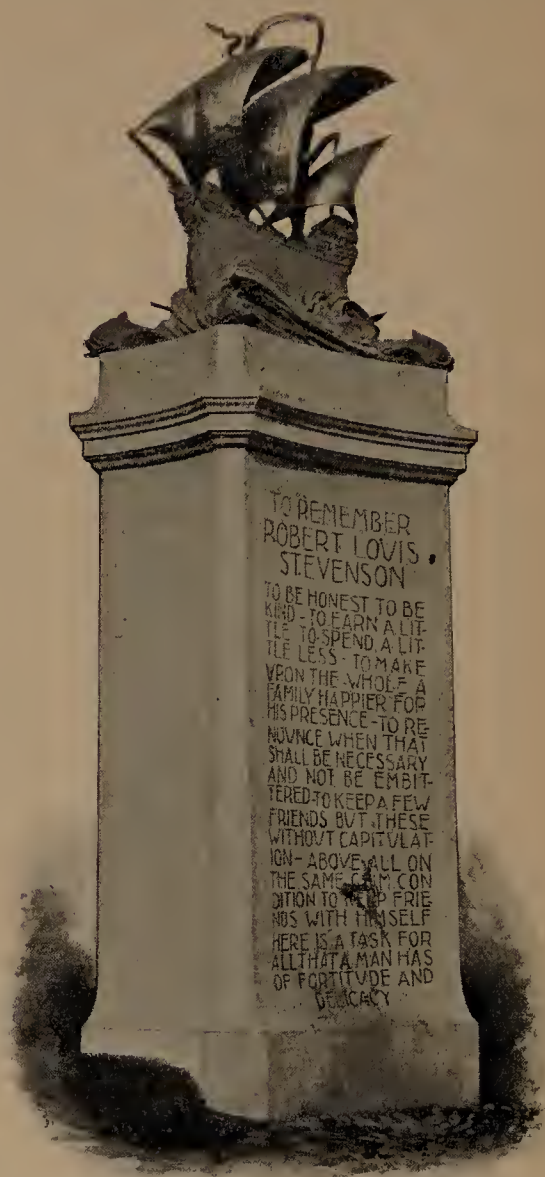
The Longfellow traveling scholarship of \$600 a year for three years, offered by the museum, was won by William Homer Haskell, of Merrimac, Mass. The recipient must spend it in art schools in Europe under the supervision of American painters.

Philadelphia.—The sixty-sixth annual exhibition of the Pennsylvania Academy of the Fine Arts, held in March, was very successful, having been visited by more than 50,000 persons.

Pittsburg: Carnegie Institute.—The second annual art exhibition, opened on Founder's Day, Nov. 3, was signalized by the presence of the President of the United States, who delivered an address. The exhibition was a most satisfactory one, including many examples from London, Paris, and Munich, selected by advisory committees of painters resident in those cities. The honorary awards were: J. J. Shannon, London, first-class medal (gold) carrying with it a prize of \$1,500; Fritz Thaulow, Dieppe, France, second-class medal (silver), with prize of \$1,000; J. Alden Weir, New York, third-class medal (bronze), with prize of \$500. Wilton Lockwood, Boston, Mass., and Louis Paul Dessar, Paris, France, received honorable mention.

Monuments, etc.—New York's grandest memorial, the Grant monument, was formally dedicated on April 27. Its site is unrivaled, upon the highest part of Manhattan island, at the present termination of the Riverside Drive, where it overlooks the Hudson and the Highlands for many miles. The monument, of white granite, consists, in its general design, of a huge, nearly cubical base, surmounted by a cylindrical structure terminating in a cone, to be capped eventually with a colossal statue in bronze. The front of the base, on the south, where the entrance is, has a hexastyle Doric portico, rising about two thirds of its height, with a flat entablature intended for statuary. On each of the other three sides the portico is replaced by columns *in antis* against a blank wall. At the an-

gles of the base are square pedestals for sculpture. The cylinder above the base is encircled by twenty-four Ionic columns resting upon a plain circular wall. Above this a secondary attic carries the cone,



STEVENSON MEMORIAL FOUNTAIN, IN THE OLD PLAZA, SAN FRANCISCO.

which consists of a series of receding steps capped by a circular pedestal for the statue. The interior shows an open crypt, surrounded by a parapet within which the sarcophagus rests on a pedestal, like that of Napoleon in the Invalides, and surmounted by a well-proportioned hemispherical dome. The construction of the monument, which still needs statuary and other sculpture before it can be called completed, is chiefly due to the efforts of Gen. Horace Porter. The architect was John H. Dunnean, and the sculptor J. Massey Rhind.

A Washington memorial, erected in Philadelphia by the Society of the Cincinnati, was dedicated May 15, in the presence of the President and Vice-President of the United States, members of the Cabinet, and other distinguished visitors. The monument, the work of Prof. Rudolph Siemering, of Berlin, is about 40 feet high, the equestrian statue of Washington rising 20 feet above the pedestal. The four corners of the platform are decorated with fountains with figures of Indians and guarded by American animals. At the front and

rear are allegorical figures of America, and on the sides are bas-reliefs, representing the American army on the march and a westward-bound emigrant train.

A statue of Peter Cooper, by Augustus St. Gaudens, was unveiled, May 29, in the small park facing the south front of the Cooper Union Building, New York. It represents the philanthropist seated, cane in hand, in a massive armchair. The commemorative address was made by John E. Parsons.

The Shaw Memorial, in memory of Col. Robert Gould Shaw, who was killed while leading the Fifty-fourth Regiment of Massachusetts Infantry in the assault on Fort Wagner, South Carolina, July 18, 1863, was unveiled in Boston on Decoration Day. The monument, the work of Augustus St. Gaudens, which stands directly in front of the Statehouse, consists of a terrace 70 feet long, with a balustrade and seat of pink granite on three sides. In the center, flanked by bronze Ionic pilasters, is a granite panel bearing a bronze in high relief, representing Col. Shaw on horseback followed by the colored soldiers of his regiment. On the side toward the Common the balustrade is supported by a wall relieved by three large lions' heads, from whose mouths streams of water flow into a massive granite basin.

A colossal bronze bust of the late Dr. Abraham Coles, of Newark, N. J., was unveiled in Washington Park, in that city, on July 6. Dr. Coles, prominent as a physician and active in labors for the promotion of physical, religious, educational, and scientific development, found time also for literary effort, and was well known as the author of "The Evangel in Verse" and translations of the "Dies Iræ." The bust, the work of J. Q. A. Ward, is mounted upon a pedestal of selected stones from Palestine, the base being a boulder weighing seven tons, from Plymouth, Mass. In it is inserted part of a stone from the pyramid of Cheops in Egypt. The base represents two large folio volumes, bearing the titles of the published works of Dr. Coles. The monument was presented to the city by his son, Dr. J. Ackerman Coles.

The Robert Louis Stevenson monument, in the old Plaza, San Francisco, erected by the Guild of Arts and Crafts, has been crowned by a bronze representation of a ship under full sail, a "thirty-gunner" of the sixteenth century, speeding westward, with a figure of Pallas looking toward the setting sun on the bow. The sculptor of the ship, which is about 5 feet high and is named the "Bonaventure," is George Pipers, and it was cast in San Francisco.

FLORIDA, a Southern State, admitted to the Union March 3, 1845; area, 58,680 square miles; population, according to each decennial census since admission, 87,445 in 1850; 140,424 in 1860; 187,748 in 1870; 269,493 in 1880; and 391,422 in 1890. By the State census of 1895 it was 464,639. Capital, Tallahassee.

Government.—The following were the State officers during the year: Governor, William D. Bloxham; Secretary of State, John L. Crawford; Comptroller, William H. Reynolds; Treasurer, Clarence B. Collins, succeeded in June by James B. Whitfield; Attorney-General, William B. Lamar; Superintendent of Public Instruction, William N. Sheats; Adjutant General, Patrick Houston; Commissioner of Agriculture, Lucius B. Wombwell; State Examiner, W. V. Knott; Chief Justice of the Supreme Court, R. F. Taylor; Associate Justices, Milton H. Mabry and Francis B. Carter.

Finances.—The Governor, in his message, said: "Florida's financial condition, notwithstanding the panics and other destructive forces from which she has suffered, is most gratifying. Her Comptroller's warrants pass current in the banking institutions

and moneyed marts of the country: the small amount of bonds she has outstanding in the hands of individuals are at a premium, although they have but a few years to run; she has no floating debt, and has cash in the treasury to meet all legitimate expenses. Her entire debt is not over \$2.50 *per capita*, being less than any State in the Union, and her State tax proper is smaller than any Southern State."

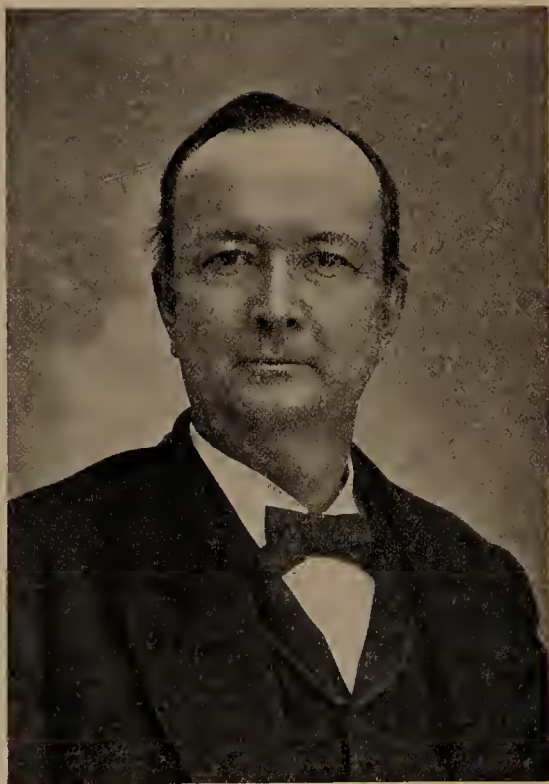
The total amount of warrants issued in 1895 was \$714,013.36, and in 1896 it was \$647,864.85. This does not include interest on the bonded debt.

The State's entire debt for all purposes is \$1,232,500. Of this sum the State holds in her educational funds and under her control \$850,800, and her internal-improvement fund holds \$25,000.

The rate of taxation for 1897 for all purposes is 5½ mills, divided as follows: General revenue, 3½ mills; pensions, ½ mill; general school tax, 1 mill; State Board of Health tax, rate fixed by the Governor, ¼ mill.

Florida has 728 pensioners, at a cost of \$58,870.49 a year.

The direct-tax fund, amounting to \$38,486.08, was all paid out before Jan. 1, except \$8,093.88; but claims were on file amounting to \$1,173.43.



WILLIAM D. BLOXHAM, GOVERNOR OF FLORIDA.

Valuations.—The report of the Comptroller gives the following items for 1896: Aggregate value of real estate, \$61,363,219; personal property, \$16,066,322; railroads, rolling stock, etc., \$17,728,982.63; total value of real estate, personal property, railroads, and telegraphs, \$95,389,966.38. Taxes levied for State purposes, \$358,076.82; for county purposes, \$1,089,090.86; State license tax, \$153,635.16; auction tax, \$282.03. Value of real estate, except town or city lots, \$36,377,524; value of town or city lots, \$24,985,695; cash value of all animals, \$11,456,519. The eleven telegraph lines are assessed at \$227,439.50, on 2,995.74 miles of wires, poles, etc.

Education.—The number of schools in operation in June, 1896, was 2,350, and the number of pupils enrolled was 100,373, of whom 36,787 were colored.

The aggregate salaries paid teachers were as follows: White, \$383,809.35; negro, \$90,704.87; total, \$474,514.22. The total amount received for school purposes was \$732,926, and the amount expended \$660,249. The total cost of negro schools for 1896 was \$156,292.44; cost per pupil based on population, \$2.35; on enrollment, \$4.25; on average attendance, \$6.47. *Per capita* cost of schools, counting both races, based on population of 1895, \$1.45; on youth of school age, \$4.33; on enrollment in schools, \$6.58; on daily attendance, \$9.95.

The report of the summer training schools in 1897 shows that the number maintained was 12—8 for whites, 3 for negroes, and 1 for both races in separate departments. The total enrollment was 717, being 28 per cent. of the whole number of teachers employed in 1896.

Charities.—The report of the superintendent of the asylum for the insane at Chattahoochee shows that during 1895 there were in the institution 216 males and 149 females. Counting every item of expense, these were maintained at a *per capita* cost of \$105.06. At the close of 1895 the patients numbered 288—males, 159; females, 129. The number of admissions for 1896 was 171. The deaths were 35, the discharges 86. The year closed with 373 patients. The aggregate cost of the institution for 1896 made the *per capita* expense \$95.58.

The disbursements on account of the institution were \$49,263.72 for 1895, and in 1896 they aggregated \$63,515.56. The products of the asylum farm for 1895 were valued at \$5,177.50, and at \$8,750.50 for 1896. The Legislature of 1895 abolished that section of the lunacy law which permitted private parties to care for lunatics, and required that they be re-examined and admitted to the asylum. Improvements have been made in the sanitation of the buildings, and the Legislature made appropriation for an electric-light plant.

Militia.—The Adjutant General's report gives the following data: Infantry, 80 officers, 90 non-commissioned staff and bands, and 1,220 men; artillery, 4 officers and 80 men; total, 84 officers, 90 noncommissioned staff and bands, and 1,300 men. Naval militia, 25 officers and 262 men, making the aggregate of land and naval forces 1,761 officers and men. State appropriations, \$16,000—for annual camps of instruction, \$8,000; transporting troops, \$4,000; other expenses, \$4,000. National appropriation, \$3,486.48. At home stations most of the companies have recitations in tactics and guard duty; in camp, battalion commanders have officers' schools.

Insurance.—During 1896 there was paid for insurancee \$1,239,028.43. The losses during the same period were \$249,795.45. This does not include the sums paid to building and loan and investment companies outside the State, or to insurance companies not authorized to do business there. The receipts of life insurance companies alone from the State for 1896 were \$587,741.38, while the losses amounted to \$65,063.79.

Banks.—The Merchants' National Bank of Ocala failed Jan. 14. It was regarded as being in danger as early as 1894, but the State Treasurer did not withdraw the State's money; on the contrary, he continued to loan public funds to the bank. In June the receiver found evidence against the president of the bank, and his arrest was ordered; but when the officer appeared to arrest him he shot himself, and died almost instantly.

Water Ways.—The annual report of the chief of engineers shows the following amounts expended during the year ending June 30, 1897, on Florida rivers and harbors: St. John's river, \$500,000; Indian river, \$29,000; Key West harbor, \$225,000; Charlotte harbor and Pease creek, \$25,000; Sara-

sota Bay, \$42,500; Manatee river, \$29,000; Appalaehicola Bay, \$50,000; Pensacola harbor, \$50,000.

It was announced in July that a company had been organized to build a ship canal across the peninsula of Florida from a point near St. Augustine to one near Cedar key. The estimated cost of a 200-foot canal is \$75,000,000. The length will be 114 miles. It would save about 600 miles to vessels trading between Gulf ports and the Atlantic coast.

Products.—In an article on the resources of Florida, in the "Manufacturers' Record," the Governor says: "Twenty-five years ago the total value of her entire export trade—foreign, coastwise, river, and overland—was less than \$9,000,000; to-day the value of her forest products exported to foreign and domestic ports, not counting overland shipments, alone exceeds that sum. The value of her phosphates exported by water and transported by rail aggregates \$5,500,000, while the value of tobacco, in bales and manufactured, is upward of \$17,000,000.

The annual report of the cotton crop credits the State with 60,000 bales.

The total investment for fishing in salt waters is \$1,329,937, with an annual production valued at \$1,209,725. These figures are from the report of a recent investigation by the United States Fish Commission, which gives the nine leading items as follows: Sponge, \$363,107; mullet (fresh and salted), \$284,773; snappers, \$155,346; oysters, \$61,723; pompano, \$37,893; turtles, \$28,503; trout, \$27,170; mullet roe, \$25,961; Spanish mackerel, \$21,455.

Lawlessness.—Among the recommendations in the Governor's message to the Legislature was one for an amendment to the Constitution, allowing a circuit judge to be appointed for the State who could hold court in any county where immediate necessity called for it; and that, for the interval before the time such amendment could go into effect, the Governor might have the power to assign any of the circuit judges to hold a special term in an emergency, for the purpose of preventing lynchings; two, he said, had occurred this year before the assembling of the Legislature. In June another lynching was attempted at Key West; but a mob of negroes collected and prevented the prisoner from being taken. They tried to lynch the white man who led in the attempt, but he escaped. A white man was shot by negroes during the excitement, and the result was another attempt to lynch the prisoner. The militia was ordered to be in readiness, and the assistance of Government troops was called for, but the anticipated race war did not take place.

Court Decisions.—Formerly the State Supreme Court, in order to give its judgments effect, was compelled to file a written opinion in every case decided by it, in which the reasons for its decision on every question or point presented were required to be set forth at length, and this whether it affirmed, reversed, or modified the judgment of the lower court. This provision was amended at the election of 1896, and the court is no longer obliged to file written opinions and give authority to its decisions.

A decision was rendered in the United States Court at Jacksonville in March sustaining the separate-coach law.

The Legislature of 1893 imposed a graduated license tax upon express companies. The Southern Express Company resisted the payment of this tax, on the ground that the statute was unconstitutional and infringed that clause of the Federal Constitution which reserved to Congress the right to regulate interstate commerce. The Supreme Court of

Florida held the statute to be constitutional. Appeal was taken, and about the beginning of this year the United States Supreme Court affirmed the judgment of the State court. The amount involved was about \$20,000.

Conventions.—Three conventions were held early in the year. The National Tobacco Growers' Convention assembled at Ocala, Jan. 12. Delegates from a large number of States were present. On Jan. 20 the South Atlantic and Gulf Coast and Harbor Defense Convention assembled at Tampa. Twenty-two States were represented. A permanent organization was made and resolutions were adopted looking to the securing of more adequate coast defenses in the Southern States. The National Good Roads Congress met at Orlando, Feb. 2.

Legislative Session.—The Legislature met April 6 and adjourned June 5. Charles J. Perrinot was elected president of the Senate and Dennett H. Mays Speaker of the House. The Governor recommended in his message that the Legislature provide for an increase of revenue by imposing a collateral inheritance tax, restoring the tax of \$1 which the revenue law of 1893 required before any civil action could be docketed in any court other than a court of a justice of the peace, and which was omitted from the revenue law of 1895. He also favored a tax of \$6 in civil cases where a jury is demanded, a tax upon extradition warrants, the assessment of bank stock as railroad property is assessed, and measures for securing fuller assessment of personal property. He recommended action in regard to the suppression of lynching, to convict labor, for better protection of game and fish, for the establishment of a reform school, and for the creation of the officer of auditor.

Balloting for a United States Senator to succeed Wilkinson Call began April 21. The leading candidates were Senator Call and W. D. Chipley; George P. Raney, W. A. Hocker, R. A. Burford, and M. H. Mabry also received votes. Toward the end of the contest Mr. Call withdrew and his supporters went to J. N. C. Stockton. Finally the supporters of Mr. Stockton and Mr. Hocker united and chose Stephen R. Mallory as their candidate, and he was elected on the twenty-fifth ballot by a vote of 53 to 44. He spoke in the House of Representatives after his election, saying that he "indorsed all the planks of the Chicago platform, dwelling particularly on the financial question and advocating the free coinage of silver at a ratio of 16 to 1, regardless of foreign countries." The Governor had appointed John A. Henderson to fill the seat in the Senate during the special session, but he was not admitted.

Resolutions proposing amendments to the Constitution as to bonds, as to establishment of courts, and relating to the legislative department were passed.

A bill was passed creating a State railroad commission.

The committee to decide upon the best method for employment of State convicts reported that they deemed it inexpedient, in view of the financial condition of the State, to make any change, as such would involve cost out of proportion to the benefit; and they therefore recommended the passage of a resolution calling for bids for lease of the convicts for the ensuing four years, and providing that all bids should be submitted to the Legislature. Action was taken in accordance, and but one bid was received, offering \$20,000 a year on the basis of 700 convicts; this was deemed too low, and the bid was raised to \$21,000 for all the convicts, without reference to number, and in this form it was accepted.

An act was passed providing for the location and erection of a State reform school.

The committee to investigate the Treasurer's office in regard to the loss of State funds in the Merchants' National Bank of Ocala (see under "Banks," in this article) made a report, sustaining the charges against the Treasurer, showing a total shortage in his accounts of \$50,987, and recommending that he be requested to resign at once, and, in case of his failure to comply, that steps be taken to remove him from office. In accordance with the report, a committee of the House was appointed to draw up articles of impeachment, which they presented May 20, charging him with loaning money to the bank knowing it to be insolvent, with unlawfully loaning State money to others, with investing it in uses and enterprises not for the purposes of the State, with depositing \$254,124 in various banks without adequate security, with exhibiting a trial-balance sheet purporting to show cash on hand and deposits amounting to \$343,127.39, which was more than \$2,000 above the actual amount, with making fictitious and irregular entries, and with reporting that there was no money on deposit at the Merchants' National Bank when there was \$32,927 there. The articles were accepted, and a committee from the House appeared before the bar of the Senate and impeached the Treasurer. He was summoned to appear and answer the charges, but before the time appointed he tendered his resignation to the Governor, and it was accepted. Both Houses were notified, and the House sent its committee to the Senate to ask permission to withdraw the charges. After much discussion, the Senate, sitting as a high court of impeachment, refused permission. The House then adopted a resolution withdrawing the articles of impeachment, and discharged the prosecuting committee, in consequence of which the court of impeachment was adjourned. Suits were brought against the Treasurer and his bondsmen.

Acts were passed amending the law relating to embezzlement by public officers, and to define and declare what is *prima facie* evidence thereunder, and that with reference to an examination of the State Treasurer's office by the Governor, and monthly statements to the Governor; also an act authorizing the Governor, Comptroller, and Treasurer to deposit the public moneys in such banks in the State as shall furnish collaterals, providing for the sale of such collaterals, and prohibiting the Treasurer from depositing any moneys in any bank without the consent of the Governor and the Comptroller.

Amendments were made to the election laws—regulating primaries, to prevent the use of money for political purposes by corporations, and amending the provisions for registration and holding of general and special elections.

The revenue laws were amended, and provision was made for the levy of a tax of a half mill for payment of pensions.

Several acts were passed in regard to the taking of fish.

Two acts concerned phosphates—providing for the appointment of official samplers of phosphates, and requiring the sampler of each port from which phosphates are shipped to inspect every car of phosphates arriving at such port for shipment, and to issue certificates for it.

The Sanibel Island Railway and Construction Company was incorporated; also the West Florida Gulf Coast Railroad, the act providing for its organization, construction, and operation, and for issuing bonds and granting lands in its aid; also the Alafia, Manatee and Gulf Railway Company; and the Tallahassee and Central Florida Railway Company, with grant of lands to aid in its construction. The time for the beginning of work on the Titusville, Canaveral and Peninsular Railroad and on the Jacksonville and Tampa Bay Improved Rail-

way was extended; and also the time for the completion of the main line of the South American and International Railroad; and the charter of the Carrabelle Railroad was extended.

Amendments were made to the laws in regard to the giving of bonds in judicial proceedings; to the acquisition of liens by persons in privity with the owner, and by those not in privity with the owner; to the examination of accounts; to the selling of liquors in counties or precincts voting against such sales; to the fine-and-forfeiture fund in the counties, the payment of criminal costs, and the provision for the feeding of prisoners and hire of convicts; to the granting of permits for the sale of liquors, wines, or beer; to the protection of growing crops; to examination and licensing of pilots; to the classification of sawed pine timber; to the disposition of the proceeds of life insurance; to trespassing on farms and gardens; to the prosecution by the State of violations of the prohibition regulations; to the construction of railways by companies incorporated in other States.

Resolutions were passed requesting the representatives of the State in Congress to take steps to have the President, Vice-President, and Senators elected by popular vote; requesting them to use their efforts toward securing an appropriation for deepening the harbor at Boca Grande; and asking Congress for an additional appropriation for the improvement of the Appalachicola river, including the cut-off and the lower Chipola river. Various other memorials to Congress also were adopted. Other acts of the session were:

Imposing a penalty for landing sick seamen or paupers in the State.

Encouraging and protecting growers of artificial sponges.

Relating to fire insurance policies—prescribing a rule of evidence and measure of damage in cases of loss.

To punish the improper exhibition of dangerous weapons.

Relating to negotiable instruments; to establish a law uniform with the laws of other States.

To prevent adulteration of candy.

To establish a battalion of naval militia.

To punish desertion of wife and children.

To prohibit arrangements, contracts, agreements, trusts, or combinations, and certain other acts or things tending to prevent or obstruct the lawful sale of Florida-fed beef or other beef or fresh meat or cattle, or other edible animal.

To fix a penalty for horse and cattle stealing.

To provide for teachers' summer schools, and to make appropriations therefor.

To enable cities and towns to manufacture and distribute gas and electricity.

To declare valid the acts of notaries when commissions are more than four years since issued.

Requiring a special license tax to be paid by express companies doing business in the State.

Hon. Wilkinson Call was appointed agent to effect a settlement of the Indian war claims against the Government, the fees to be 15 per cent. of the amount collected.

FRANCE, a republic in western Europe, proclaimed on Sept. 4, 1870, when the Emperor Napoleon III was deposed. The Constitution of June 16, 1875, was amended by the National Assembly in June, 1879, August, 1884, June, 1885, and, for the last time, in July, 1889. The legislative power is vested in the Senate and the Chamber of Deputies. The Senate is composed of 300 members, elected for nine years in the several departments by electoral bodies formed of electors representing the voting citizens of the communes of the department in proportion to their population, together with the

Senators, Deputies, councilors-general, and, district councilors. Since the discontinuance of life senatorships by the Senate bill of 1884, whenever the seat of a life Senator becomes vacant one of the 225 departments, selected by lot, elects a Senator for the regular term. The Chamber is composed of 584 Deputies, elected for four years by the whole adult male civil population of the several arrondissements except those who are disqualified for crime, or who have not yet resided six months in the commune. An arrondissement having more than 100,000 inhabitants is divided into two or more constituencies. There were 10,446,178 registered electors in 1893, of whom 7,427,354 voted. The President of the republic is elected for seven years by the National Assembly, which is composed of the Senate and the Chamber of Deputies united in Congress. Félix Faure, born in 1841, was elected President on Jan. 17, 1895. The Cabinet, formed on April 29, 1896, was composed as follows: President of the Council and Minister of Agriculture, J. Méline; Minister of the Interior, M. Barthou; Minister of Finance, G. Cocheret; Minister of Foreign affairs, M. Hanotaux; Minister of War, Gen. Billot; Minister of Marine, Admiral Besnard; Minister of the Colonies, A. Lebon; Minister of Public Worship and Education, M. Rambaud; Minister of Justice, M. Darlan; Minister of Commerce, Industry, and Posts and Telegraphs, Henri Boucher; Minister of Public Works, M. Turrel.

Area and Population.—The area of France according to the surveys of the Ministry of War is 536,408 square kilometres; according to the cadastral survey 528,876 square kilometres, or 204,092 square miles. The table on page 327 gives the area of the several departments and the population as determined by the census of April, 1896, compared with the population in April, 1891.

The number of foreigners residing in France in April, 1896, was 1,027,491, forming 2.66 per cent. of the total resident population. The number of marriages in 1894 was 286,662; of births, 855,388; of deaths, 815,620; excess of births, 39,768. The number of divorces granted in 1894 was 6,419. Emigration in 1893 amounted to 5,586 persons; the number of emigrants of all nationalities sailing from French ports was 34,215. The population of the principal cities in 1896 was as follows: Paris, 2,536,834; Lyons, 466,028; Marseilles, 442,239; Bordeaux, 256,906; Lille, 216,276; Toulouse, 149,963; St.-Étienne, 136,030; Roubaix, 124,661; Nantes, 123,902; Havre, 119,470; Rouen, 113,219; Rheims, 107,963.

Finances.—The budget estimates for 1897 make the total revenue of the Government 3,392,554,662 francs, of which 3,213,638,203 francs are the ordinary revenue, 56,610,860 francs various extraordinary receipts, 70,158,405 francs receipts *d'ordre*, and 52,147,194 francs the revenue of Algeria. Of the ordinary revenue 483,231,289 francs come from direct taxes, 37,932,550 from taxes assimilated to direct taxes, 1,984,266,750 francs from indirect taxes, 657,562,864 francs from Government monopolies and factories, and 50,644,750 francs from state domains and forests. The direct contributions comprise 156,900,620 francs from the income tax, 80,971,988 francs from the land tax, 118,637,264 francs from the tax on buildings, 125,589,317 francs from trade licenses, and 1,132,100 francs from the tax for advertisement. The taxes assimilated to direct taxes are 6,956,640 francs from property in mortmain, 2,275,070 francs from mines, 5,049,000 francs from verification of weights and measures, 12,636,250 francs from carriages and horses, 2,568,705 francs from velocipedes, 5,212,885 from the military tax, and 3,234,000 francs from other taxes. Of the indirect taxes registration dues yield 530,010,500 francs, stamps 185,253,370 francs, income from transferable securities 65,-

DEPARTMENTS.	Square miles.	POPULATION.	
		1891.	1896.
Ain.....	2,239	356,907	351,569
Aisne.....	2,889	545,493	541,613
Allier.....	2,822	424,382	424,378
Alpes (Basses-).....	2,685	124,285	118,142
Alpes (Hautes-).....	2,158	115,522	113,229
Alpes-Maritimes.....	1,482	258,571	265,155
Ardeche.....	2,136	371,269	363,501
Ardennes.....	2,020	324,923	318,865
Ariège.....	1,890	227,491	219,641
Aube.....	2,317	255,548	251,435
Aude.....	2,498	317,372	310,513
Aveyron.....	3,376	400,467	389,464
Belfort (territory).....	235	83,670	88,047
Bouches-du-Rhône.....	1,971	630,622	673,820
Calvados.....	2,132	428,945	417,176
Cantal.....	2,217	239,601	234,382
Charente.....	2,234	360,259	356,236
Charente-Inférieure.....	2,635	456,202	453,455
Cher.....	2,780	359,276	347,725
Corrèze.....	2,265	328,151	322,393
Corse.....	3,377	288,596	290,168
Côtes-d'Or.....	3,383	376,866	368,168
Côtes-du-Nord.....	2,659	618,652	616,074
Creuse.....	2,150	284,660	279,366
Dordogne.....	3,546	478,471	464,822
Doubs.....	2,018	303,081	302,046
Drôme.....	2,518	306,419	303,491
Eure.....	2,300	349,471	340,652
Eure-et-Loir.....	2,268	284,683	280,469
Finistère.....	2,595	727,012	739,648
Gard.....	2,253	419,388	416,086
Garonne (Haute-).....	2,429	472,383	459,377
Gers.....	2,425	261,084	250,472
Gironde.....	3,761	793,528	809,902
Hérault.....	2,393	461,012	469,684
Ille-et-Vilaine.....	2,597	626,875	622,039
Indre.....	2,624	292,868	289,206
Indre-et-Loire.....	2,361	337,298	337,064
Isère.....	3,201	572,145	568,933
Jura.....	1,928	273,028	266,143
Landes.....	3,599	297,842	292,884
Loir-et-Cher.....	2,452	280,392	278,153
Loire.....	1,838	616,227	625,336
Loire (Haute-).....	1,916	316,735	316,699
Loire-Inférieure.....	2,654	645,263	646,172
Loiret.....	2,614	377,718	371,019
Lot.....	2,012	253,939	240,403
Lot-et-Garonne.....	2,067	295,360	286,377
Lozère.....	1,996	135,517	132,151
Maine-et-Loire.....	2,749	518,589	514,870
Manche.....	2,289	513,815	500,052
Marne.....	3,159	434,734	439,577
Marne (Haute-).....	2,402	243,734	232,057
Mayenne.....	1,996	332,387	321,187
Meurthe-et-Moselle.....	2,025	444,150	466,417
Meuse.....	2,405	292,253	290,384
Morbihan.....	2,625	544,470	552,028
Nièvre.....	2,632	343,576	333,899
Nord.....	2,193	1,736,341	1,811,868
Oise.....	2,261	401,835	404,511
Orne.....	2,354	354,387	339,162
Pas-de-Calais.....	2,551	874,364	906,249
Puy-de-Dôme.....	3,070	561,266	555,078
Pyrénées (Basses-).....	2,943	425,033	423,572
Pyrénées (Hautes-).....	1,749	225,861	218,973
Pyrénées-Orientales.....	1,592	210,125	208,387
Rhône.....	1,077	806,737	839,329
Saône (Haute-).....	2,062	280,856	272,891
Saône-et-Loire.....	3,302	619,523	621,337
Sarthe.....	2,396	429,737	425,077
Savoie.....	2,224	263,297	259,790
Savoie (Haute-).....	1,667	268,471	265,872
Seine.....	183.6	3,141,595	3,340,514
Seine-Inférieure.....	2,330	839,876	837,824
Seine-et-Marne.....	2,215	356,747	359,044
Seine-et-Oise.....	2,164	628,590	669,098
Sèvres (Deux).....	2,317	354,282	346,694
Somme.....	2,379	546,495	543,279
Tarn.....	2,217	346,739	339,827
Tarn-et-Garonne.....	1,436	206,596	200,390
Var.....	2,349	288,336	309,191
Vauchuse.....	1,370	235,411	236,313
Vendée.....	2,588	442,355	441,735
Vienne.....	2,691	344,355	338,114
Vienne (Haute-).....	2,130	372,878	375,724
Vosges.....	2,263	410,196	421,412
Yonne.....	2,868	344,688	332,656
Total.....	204,092	38,342,948	38,517,975

594,000 francs, import duties 366,474,000 francs, statistical dues 6,610,000 francs, navigation dues 7,258,000 francs, customs duty on salt 23,316,000 francs, various dues and fines, 6,195,880 francs,

taxes on wine, cider, etc., 173,715,000 francs, tax on beer 23,546,000 francs, tax on spirits 262,145,000 francs, railroad taxes 51,890,000 francs, licenses for beverages 73,527,000 francs, various excise duties 73,527,000 francs, and the duty on sugar 194,818,000 francs. The revenue from Government monopolies and factories is made up of 381,200,000 francs from tobacco, 39,504,840 francs from matches and gunpowder, 224,937,950 francs from posts, telegraphs, and telephones, and 11,920,074 francs from other establishments.

The total expenditure for France was estimated in the budget for 1897 at 3,321,007,350 francs and Algerian expenditure at 71,219,959, making the total budget 3,392,226,309 francs. Of the expenditures for France 1,243,777,152 francs are for the public debt, 13,211,720 francs for the President, Senate, and Chamber of Deputies, 19,514,810 francs for the Ministry of Finance, 34,696,733 francs for the Ministry of Justice, 14,837,800 francs for the Ministry of Foreign Affairs, 74,579,112 francs for the Ministry of the Interior, 591,457,151 francs for the army of France, 100,977,656 francs for the colonial army, 237,147,390 francs for the navy, 207,610,931 francs for the Ministry of Instruction and Fine Arts, 43,181,653 francs for the Ministry of Worship, 195,480,518 francs for the Ministry of Commerce, Industry, and Posts and Telegraphs, 33,036,013 francs for the Ministry of the Colonies, 28,657,583 francs for the Ministry of Agriculture, 233,530,450 francs for the Ministry of Public Works, 209,356,516 francs for *régie* and collection of taxes, and 39,954,162 francs for repayments.

The national debt of France on Jan. 1, 1894, amounted to the capital sum of 31,035,252,522 francs, of which 22,005,373,951 francs represent the consolidated debt, 243,788,253 francs the Morgan loan, 3,986,320,000 francs redeemable loans, 3,347,428,776 francs the capitalized value of annuities, 1,146,889,547 francs floating debt, and 305,451,995 francs guaranteed debts. The interest and annuities paid in 1896 amounted to 1,219,792,036 francs, as stated in the budget, and of this sum 693,761,924 francs were interest on the consolidated debt, 298,813,194 francs interest and amortization of redeemable debt, and 227,216,918 interest and payments on the floating debt.

The sum of the revenues of the departments for 1894 was 273,456,452 francs, and their expenditure 274,229,204 francs. The debts of the departments amounted to 408,313,542 francs. The revenue of all the communes was estimated in their budgets for 1895 at 730,380,393 francs from ordinary sources, and their ordinary expenditure at 693,814,543 francs. The total of the communal debts on March 31, 1894, was 3,514,436,672 francs. The revenue of the city of Paris was estimated for 1896 at 336,738,175 francs, balancing the budget of expenditure. The debt of Paris in 1896 stood at 1,769,000,000 francs.

The Army.—Every Frenchman not physically unfit may be called upon to serve in the active army or the reserves between the ages of twenty and forty-five. The active army is composed of all the young men of the nation, not legally exempted, who have reached the age of twenty. Their period of service is three years, but all soldiers who have learned their duties sufficiently and are able to read and write may be sent on an indefinite furlough after a year of service with the colors. Students and seminarists are only required by law to serve a single year, on condition of their completing their studies and attaining a certain grade. Young men who are the main support of their parents can also claim exemption at the end of a year. At the end of the legal period of active service the soldier passes into the active army reserve, at the end of ten years more into the territorial army, in which

he is inscribed for six years, and then for six years in its reserve. The colonial army is recruited exclusively by voluntary enlistment. Men who are not capable of bearing arms or who have not served the full three years pay a military tax of 6 francs a year, with a variable surtax. The number of conscripts called into the service in 1895 was 224,535, including the marines and volunteers. The conscripts from the French population of Algeria are not obliged to serve more than a year. The number of French conscripts that can pass into the reserve after a year of active service is fixed every year by the Minister of War. The infantry arm is the Lebel rifle of the model of 1886, holding 8 cartridges in the magazine and having a caliber of 8 millimetres. The field artillery is armed with cannon adopted in 1877, having a caliber of 90 millimetres for the mounted batteries and 80 millimetres for the horse artillery. There are 103 batteries of foot artillery armed with cannon of 95, 200, and 270 millimetres caliber and mortars of 15 centimetres. Rapid-firing guns of 12 centimetres caliber have been introduced, each battery being formed of 6 pieces and 6 ammunition carts.

The peace strength of the active army, including men on leave of absence, was fixed in the budget for 1897 at 559,525 men, including 27,376 officers, with 127,484 horses. The effective colonial army in Algeria and Tunis and in France numbered 53,417 men, including 2,495 officers, with 13,521 horses. The 18 army corps of France have a total effective of 525,637 men, including 21,129 officers, of which number 341,936, including 12,697 officers, are infantry; 12,462 are administrative troops; 69,178, including 3,550 officers, are cavalry; 80,838, including 4,027 officers, are artillery; 12,468, including 476 officers, are engineers; and 8,755, including 379 officers, are train. The general staff numbers 4,170 men, of whom 3,462 are officers; the military schools have 3,204 men, of whom 397 are officers; and there are 1,928 men, of whom 1,682 are officers, unclassified among the troops. The total for the army of France includes also the gendarmerie, numbering 21,535 men, of whom 623 are officers, and the Garde Républicaine, 3,050, of whom 83 are officers.

In Algeria and Tunis there are 345 men on the general staff, 656 unclassified, 28,874 infantry, 1,547 administrative troops, 6,714 cavalry, and 5,393 artillery in the army corps, and 1,276 men in the gendarmerie, and in France 8,612 officers and men belonging to the colonial army. The present effective of the French active army for 1897, with deduction of sick and absent, was 493,555 officers and men, and that of the gendarmerie and Garde Républicaine 24,340.

The army corps in case of mobilization are formed according to the necessities into armies. Each army corps on a war footing consists of from 36,000 to 38,000 infantry, 1,200 cavalry, and 114 pieces of artillery. The army had 2,274 effective field pieces in 1896.

The Navy.—The French navy in 1895 comprised 33 armored battle ships, 5 armor-clad cruisers, 8 armor-clad coast guards, 8 armored gunboats, 18 first-class, 17 second-class, and 28 third-class cruisers, 6 torpedo catchers, 8 first-class and 20 other avisos, 12 transport avisos, 14 torpedo avisos, 13 gunboats, 33 sloop gunboats, 16 sloops, 1 torpedo cruiser, 36 seagoing torpedo boats, 74 first-class, 92 second-class, and 41 third-class torpedo boats, 14 torpedo vedettes, and 18 transports. There were in course of construction 4 battle ships, 4 first-class, 6 second-class, and 5 third-class cruisers, 1 torpedo aviso, 1 transport, and 5 first-class torpedo boats. The Mediterranean squadron consisted of 8 armored battle ships, 3 armored cruisers, 2 second-class and 2 third-class cruisers, 3 torpedo cruisers, 3 torpedo

dispatch boats, and 5 seagoing torpedo boats, with 2 battle ships, 2 armor-clad coast guards, 1 first-class cruiser, 2 third-class cruisers, 2 torpedo cruisers, 2 torpedo avisos, and 3 seagoing torpedo boats forming the reserve. The squadron of the north coast numbered 1 battle ship, 1 armored cruiser, 4 armor-clad coast guards, 2 first-class cruisers, 1 third-class cruiser, 1 torpedo cruiser, 2 torpedo dispatch boats, and 4 seagoing torpedo boats.

The *personnel* of the French navy consists of 1,898 officers and aspirants, 1,330 mechanics and employees, 37,178 active seamen and marines, and 3,531 officers and men in the reserves.

Commerce and Production.—The production of wheat in 1895 was 119,967,745 hectolitres; of oats, 94,877,753 hectolitres; of rye, 25,167,623 hectolitres; of barley, 17,014,736 hectolitres; of buckwheat, 9,896,641 hectolitres; of corn, 9,219,658 hectolitres; of potatoes, 129,249,146 quintals; of sugar beets, 63,782,875 quintals; of other beets, 109,477,513 quintals; of colza, 565,601 quintals; of flax, 176,077 quintals of seed and 222,819 of fiber; of hemp, 119,629 quintals of seed and 272,899 of fiber; of tobacco, 248,453 quintals; of clover, 44,262,743 quintals; of hay and grass, 198,317,045 quintals. The wine vintage was 26,917,981 hectolitres, compared with 39,436,878 in 1894, 50,702,611 in 1893, and 28,891,406 in 1892. The imports of wine were 6,356,000 and the exports 1,696,000 hectolitres. The production of cider in 1895 was 25,587,000 hectolitres. There were 154,800 persons engaged in silk culture, producing 9,300,727 kilogrammes of cocoons. The exports were 625,400 kilogrammes of cocoons, valued at 4,627,960 francs, besides 3,161,000 kilogrammes of raw silk, valued at 76,800,640 francs. The farm animals in France on Dec. 31, 1895, included 2,812,447 horses, 211,479 mules, 357,778 asses, 13,233,828 cattle, 21,163,767 sheep, 1,509,502 goats, and 6,306,019 hogs.

The production of coal and lignite in 1894 was 27,417,000 metric tons; of iron ore, 3,772,000 tons; of pig iron, 2,069,714 tons; of manufactured iron, 785,781 tons; of steel, 674,190 tons. The mines of France, employing 157,724 persons, yielded 337,896,000 francs worth of minerals in 1893. There were 356 sugar mills in 1896, employing 48,794 persons. The product of refined sugar in 1893 was 593,647,000 kilogrammes. The fisheries in 1894 employed 27,415 boats, of 171,312 tons, and 155,125 men. Of the boats 353, of 40,153 tons, and of the fishermen 9,046 were engaged in the cod fisheries; their catch was valued at 12,992,000 francs. The product of the other fisheries in 1893 was valued at 100,958,000 francs. In 1895 there were 511,325 quintals of codfish and oil obtained. The Government grants premiums to cod fishers amounting to 3,800,000 francs a year. The quantity of herring landed in 1895 was 369,605 quintals.

The total value of the general commerce in 1895 was 4,920,000,000 francs for imports and 4,589,000,000 francs for exports. The special imports amounted to 3,720,000,000 francs and the special exports to 3,374,000,000 francs. In 1896 the special imports amounted to 3,837,000,000 francs and the special exports to 3,404,000,000 francs. The imports of food products in 1896 were 1,060,000,000 francs and the exports 640,000,000 francs in value, the imports of raw materials 2,154,000,000 francs and the exports 830,000,000 francs, the imports of manufactured goods 623,000,000 francs and the exports 1,934,000,000 francs. The values of the principal imports in the special commerce in 1895 were as follow: Wool, 308,000,000 francs; raw silk, 226,000,000 francs; wine, 212,000,000 francs; coffee, 177,000,000 francs; coal, 169,000,000 francs; cotton, 167,000,000 francs; cereals, 162,000,000 francs; oil seeds, 157,000,000 francs; hides, skins,

and furs, 135,000,000 francs; timber, 130,000,000 francs; cattle, 112,000,000 francs; flax, 60,000,000 francs; silk manufactures, 50,000,000 francs; ores, 49,000,000 francs; woolen manufactures, 42,000,000 francs; sugar, 38,000,000 francs; cotton manufactures, 34,000,000 francs. The values of the principal special exports in 1895 were as follow: Woolen textiles, 323,000,000 francs; silk textiles, 271,000,000 francs; wine, 222,000,000 francs; small wares, 154,000,000 francs; raw wool and yarn, 153,000,000 francs; raw silk and yarn, 126,000,000 francs; cotton textiles, 118,000,000 francs; leather, 105,000,000 francs; linen and lingerie, 96,000,000 francs; skins and furs, 94,000,000 francs; leather goods, 83,000,000 francs; hardware and tools, 70,000,000 francs; chemical products, 70,000,000 francs; cheese and butter, 61,000,000 francs; spirits, 48,000,000 francs; refined sugar, 41,000,000 francs. The imports of flax were 86,835,828 kilogrammes; of hemp, 22,753,071 kilogrammes; of jute, 77,183,267 kilogrammes. The imports of cotton yarn were 15,400,000 francs in value and the exports 2,600,000 francs; the imports of cotton cloth, 34,300,000 francs and the exports 117,900,000 francs. The imports of woolen manufactures were 13,600,000 francs worth of yarn and 41,900,000 francs worth of cloth; the exports, 31,100,000 francs worth of yarn and 323,100,000 francs worth of cloth. The imports of silk cloth were 50,200,000 francs and the exports 270,800,000 francs.

The foreign commerce was distributed among different countries in 1895, as shown in the following table, which gives the values of the special imports and exports in francs:

COUNTRIES.	Imports.	Exports.
Great Britain.....	496,000,000	1,000,000,000
Belgium.....	288,000,000	497,000,000
Germany.....	310,000,000	334,000,000
United States.....	284,000,000	289,000,000
Algeria.....	245,000,000	203,000,000
Spain.....	213,000,000	109,000,000
Italy.....	115,000,000	134,000,000
Argentine Republic.....	180,000,000	43,000,000
Russia.....	195,000,000	.....
British India.....	163,000,000	.....
Switzerland.....	.....	163,000,000
Brazil.....	.....	76,000,000

In the general commerce of 1895 the imports by sea were 3,457,000,000 francs in value, of which 1,625,000,000 francs were carried in French and 1,832,000,000 francs in foreign ships; imports by land, 1,462,000,000 francs. Of the general exports 3,176,000,000 francs went by sea, 1,699,000,000 francs in French and 1,477,000,000 francs in foreign ships, and 1,413,000,000 francs were shipped in land vehicles. The transit trade in 1895 was valued at 656,000,000 francs.

The special imports of gold coin and bullion in 1895 were 253,875,195 francs, and the special exports 244,381,198 francs; the special imports of silver were 141,152,976 francs, and the exports 78,459,257 francs; total imports of specie, 395,028,171 francs; total exports of specie, 322,840,455 francs.

Navigation.—During 1895 there were 97,810 vessels, of 20,363,609 tons, entered and 98,416, of 20,714,818 tons, cleared at French ports. Of the vessels entered 8,476, of 4,113,737 tons, were French vessels engaged in the foreign trade, of which 7,604, of 4,000,823 tons, carried cargoes and 872, of 112,914 tons, were in ballast; 19,222, of 9,665,348 tons, were foreign vessels, of which 16,770, of 9,220,572 tons, carried cargoes and 2,452, of 444,776 tons, were in ballast; and 70,112, of 6,584,524 tons, were French coasting vessels, of which 52,983, of 5,525,250 tons, carried cargoes and 17,129, of 1,059,274 tons, were in ballast. Of the total number cleared 8,910, of 4,417,497 tons, were French vessels in the foreign

trade, of which 7,552, of 3,933,773 tons, carried cargoes and 1,358, of 483,724 tons, were in ballast; 19,394, of 9,712,797 tons, were foreign vessels, of which 12,480, of 5,339,061 tons, carried cargoes and 6,914, of 4,373,781 tons, were in ballast; and 70,112, of 6,584,524 tons, were coasting vessels, of which 52,983, of 5,525,250 tons, carried cargoes and 17,129, of 1,059,274 tons, were in ballast.

The merchant marine on Jan. 1, 1896, consisted of 14,386 sailing vessels, of 386,510 tons, and 1,212 steamers, of 500,568 tons. Of the sailing vessels 274, of 136,334 tons, and of the steamers 170, of 266,897 tons, navigated the high seas, while 235 sailing vessels, of 23,991 tons, and 249 steamers, of 180,453 tons, were employed in European seas, and the rest in the coasting trade, the service of the ports, and the maritime fisheries. The French Government offers premiums amounting to 12,500,000 francs a year for the construction, equipment, and navigation of vessels.

Communications.—There are 22,505 miles of railroads of general interest, 2,390 miles of local interest, and 1,413 miles of tramways. The receipts of the national lines in 1895 were 1,263,550,000 francs and the expenses 684,050,000 francs. There were 348,852,000 passengers and 100,834,000 tons of freight carried during the year.

The telegraphs had a total length on Jan. 1, 1895, of 57,574 miles, with 193,184 miles of wire. The number of messages transmitted during 1894 was 41,434,727, of which 33,785,162 were internal, 4,902,534 international, 1,345,426 forwarded in transit, and 1,401,605 official.

The post office in 1894 carried 716,098,000 ordinary letters, 38,000,000 registered letters, 45,974,000 postal cards, and 928,246,000 newspapers, samples, etc., in the internal service and in the international service 98,502,000 letters, 2,147,000 registered letters, 4,144,000 postal cards, and 81,297,000 newspapers, etc. The receipts from the post office alone amounted to 214,311,331 francs; the expenses of posts and telegraphs together, 167,808,136 francs.

Senatorial Elections.—The triennial elections for the renewal of one third of the elective Senators were held on Jan. 3, 1897. Including casual vacancies and the assignment to departments of the seats of deceased life Senators, there were 97 seats to be filled. The Radicals hoped to make a conspicuous inroad in the Moderate majority. In this they were disappointed, for the Moderates won 66 seats, the same number that they had before; the Radicals 10, a gain of 6; the Socialists 3, a gain of 2; and the Conservatives 12, losing 8. The Radicals wrested 6 seats from the Moderates, who displaced as many Conservatives, and the Radicals and Socialists obtained 2 seats previously held by Conservatives.

The Session.—The Chamber and Senate began the legislative session on Jan. 12. M. Brisson was re-elected president of the Chamber without opposition. The Radicals assailed the Government for appointing one of their leaders, M. Doumer, to the post of Governor-General of Indo-China. They carried a majority of Republicans with them when they proposed the demolition or secularization of the Basilica of Montmartre, built by popular subscription and accepted by the National Assembly in 1873, against the votes of the Republicans of that time, as a national monument in sign of the dedication of France to the Sacred Heart in expiation of the causes that had led to the crushing defeat of the French armies. The sermon delivered on the twenty-fifth anniversary of this occasion, which spoke of the sacrilege then committed against the Holy See in Rome, led M. Rouanet to bring in a bill for repealing the act of the Clerical majority of 1873. The Government was sustained in refusing urgency by 332 votes to 196, but afterward the

measure was approved by the committee. The seat for Lanillis, near Brest, rendered vacant by the death of Monsignor d'Hulst, who succeeded Bishop Freppel as the representative of the Clerical and Royalist cause, was contested by the Abbé Gairaud, a Rallied Republican, representing the reconciliation of the Pope with the republic, and the Comte de Blois, a Royalist. The latter had the support of the anti-Clerical Republicans, but nevertheless the priest won, being zealously supported by his fellow clerics. The Chamber condemned the electioneering of the clergy, holding that under the Concordat they are forbidden to intervene in electoral contests, and consequently annulled the election; but when it was held again, Père Gairaud was elected anew. The Council of Education approved a proposal for teaching the dangers of alcoholism in schools of all grades.

Admiral Besnard asked for 80,000,000 francs to be expended in six years on new vessels, exclusive of the normal amount granted in the budget for new construction, which was 72,000,000 francs for 1897 and in other years about 76,000,000 francs. The extra expenditure was declared to be necessary owing to the rapid increase of the naval forces of other powers, especially those of the triple alliance. The vessels to be constructed are an 18-knot ironclad turret ship of 12,050 tons, 2 armored 21-knot cruisers of 7,550 tons, 2 protected cruisers of 2,500 tons, 4 torpedo-boat destroyers of 300 tons, and 9 coast-defense torpedo boats of 85 tons. M. Lockroy brought forward a counter-scheme proposing to spend 200,000,000 francs in four or five years, of which 150,000,000 francs would go for new ships, mostly cruisers of a large sphere of action; 40,000,000 francs for fortified naval stations in Diego Suarez, New Caledonia, Martinique, etc.; and 10,000,000 francs for repairing and reconstructing existing vessels. The Minister of Marine was compelled by the action of the Naval Committee to combine this proposal with his own. The committee proposed that 120,000,000 francs be applied to the construction of large armored cruisers and light vessels, 60,000,000 francs expended on torpedo boats, destroyers, and submarine boats, and 17,000,000 francs devoted to necessary repairs of battle ships and gunboats in active service. The need of distant refuge and coaling stations throughout the world was insisted on, and the Government promised to establish such stations, obtaining the necessary funds by the sale of public buildings and lands. The vessels to be commenced were 1 battle ship, 6 cruisers, 4 destroyers, and 9 torpedo boats. The naval budget for 1898 amounted to 284,000,000 francs, an increase of 26,000,000 francs over that of 1897. The sum of 92,000,000 francs is devoted to construction. The new vessels to be begun during the year are 2 battle ships, each to cost 28,000,000 francs, an armored cruiser of 9,000 tons, costing 19,000,000 francs, 5 seagoing torpedo boats, and 6 first-class coast-defense torpedo boats. Public anxiety about the navy was increased after the close of the session by an accident to the gunboat "Bruix," caused by a flaw in the propeller shaft.

The Government carried a bill to raise some money from sugar by increasing the excise duty in order to meet the expense of increasing the bounties. M. Jaurès, the Socialist leader, proposed to make a state monopoly of sugar-refining as a substitute for bounties. M. Siegfried suggested lowering the duty as more productive of revenue than increasing it. The Chamber voted to restrict the decorations of the Legion of Honor to 20 grand crosses, 50 grand officers, 250 commanders, 2,000 officers, and 12,000 chevaliers. A Government bill subjects foreigners who neglect to notify the police of a change of residence to a penalty of 50 to

200 francs, the same as for neglect to notify their original residence in France. The Minister of War arranged with the Army Committee that the gradual addition of a fourth battalion to each infantry regiment should not reduce the strength of the existing three battalions. The decline of the French mercantile marine, in spite of bounties equal to half the cost of building ships and premiums on navigation, and the deflection of trade to the railroads and ports of Belgium and Holland, attributed to recent legislation in those countries, was the subject of much discussion. A bill was adopted imposing 1½ franc on each metric ton of merchandise, each passenger, and each head of cattle landed from foreign vessels. A duty was imposed on lead, which will enable French mines, M. Boucher calculates, to supply half of the quantity required. A step was taken in the direction of reforming the secret magisterial inquiries that have been the subject of criticism for nearly a hundred years. Under the French law, as it has hitherto existed, a suspected person may be imprisoned for days, sometimes for months, while undergoing secret interrogation by the magistrate, unable to confer with his counsel, who is as ignorant as the client of the deposition of the witnesses and of the objects of the inquiry. A bill was passed by the Senate providing that any person arrested is to be interrogated within twenty-four hours; that, at this first examination, the prisoner's identity is to be proved and he is to be informed of the offense with which he is charged; that at subsequent examinations he shall not be interrogated nor confronted with witnesses except in the presence of his counsel; and that the magistrate shall not debar the prisoner from all communication with outsiders for more than two periods of ten days.

A Senate bill makes married women valid witnesses to legal documents. The new law decentralizing the universities and emancipating them from the rigid control of the Ministry of Education had the effect of reviving the activity of some of the lesser ones by opening the door to bequests and donations for the endowment of special studies. Each university is to have a council consisting of the rector, the heads of faculties, and delegates elected by the professors, which council will have control of the teaching, discipline, and property of the university, subject in some cases to the Supreme Education Council. The state will continue to pay the stipends of professors and to receive the fees for examinations and diplomas; the university will have the students' fees, and from these and endowments must maintain the buildings. The degree of Doctor can henceforth be worn by foreigners as well as Frenchmen, but a very high examination must be passed before it can be awarded to any one. M. Bérenger extracted a promise of a stricter censorship over some of the Parisian places of amusement, but the Minister of Education was averse to fettering the freedom of artistic productions or that of the city of pleasure in which foreigners found delight, while the laboring people of Paris constituted a different city, one that would meet the tests of the best civilization. A bill of M. Bérenger that passed the Senate imposes the punishment of imprisonment from a month to two years and a fine of from 100 to 5,000 francs for circulation of indecent speeches, songs, books, drawings, emblems, or objects inciting to debauchery. The budget was passed, with no material changes from previous budgets, before the Chamber adjourned on April 12 to meet again on May 18. The burning of a charity bazar on May 4, by which the Duchess d'Alençon and 130 others lost their lives, led to an examination of the arrangements for safety in case of fire in all the theaters and public halls of Paris, which

resulted in alteration of the Opera, the Trocadero, and numerous others.

An interpellation by the Socialists on a labor strike at Grande Combe ended in tumult and the abrupt termination of the sitting. Gerault Richard, being pointed out by members of the Right as interrupting, denounced them as spies, and for this insult was suspended by a vote of the house and led out by soldiers sent for by the president. Turning then on M. Brisson, the Socialists, to whom he largely owed his seat, shouted to him to resign, decrying him as reactionary, rascal, and traitor. The proposal by M. Cavaignac of an income tax as an amendment to the bill renewing the direct taxes was negatived by the narrow majority of 282 to 249. The Cadenas bill empowering the Government to levy duties without previously obtaining the consent of Parliament was passed by 425 votes to 110. A bill was voted for the relief of land taxation.

The principal act of the session was the bill for renewing the privileges of the Bank of France. The Radical and Socialist amendments for creating a state bank or for reducing the Bank of France to the complete control of the Government were rejected. The Radicals carried an amendment disqualifying the governor and deputy governor of the bank from sitting in Parliament. Near the close of the debate, having failed to elicit any particulars regarding the agreement between the Government and the bank in the event of war, excepting a statement that all eventualities had been provided for and that in any case war would entitle the Government to take all requisite measures, the Radicals proposed a clause enabling the Government to draw on the bank to any extent necessary for the national defense, and, when this was rejected, a second amendment giving the Government in the event of war the entire management of the bank. Both houses were prorogued on July 20.

The Panama Scandals.—Emile Arton, the lobbyist who distributed bribes among the Deputies to secure support for the Panama Canal Company's projects, before his sentence of two years' imprisonment was confirmed promised to reveal the names of recipients of 2,000,000 francs of the bribery fund. His disclosures implicated many of the sitting Deputies, each of whom demanded a suspension of his parliamentary immunity in order that he might meet the accusation before the tribunals. This was done in the cases of Deputies Naquet, Maret, and Boyer, but the Minister of Justice said that no case could yet be made out against Deputies Rouvier, Salis, Clovis Hugues, Goirand, and Jullien, as to whom Arton affirmed that he had intrusted money to a third party to be paid over to them. The Senate removed the parliamentary immunity of M. Levrey. The papers of M. Vian, ex-Deputy, were seized. M. Rouanet, the Socialist, proposed that a new parliamentary commission be appointed to probe the Panama affair to the bottom. The Prime Minister deprecated the reopening of the investigation, at least for the present, and promised that the documents brought together by the magistrates would be communicated to the Chamber. The Chamber approved deferring the investigation while judicial investigations were proceeding, but voted in favor of appointing a new commission within three months. At the end of June the commission was appointed, all the parties being represented on it in proportion to their numbers. M. Quesnay de Beaurepaire, who was public prosecutor at the time of the trials and was now a magistrate, refused to testify before the Committee of Inquiry. Ex-Minister Balthaut underwent imprisonment for failing to pay the fine imposed, for which M. Blondin and Charles de Lesseps, who were abroad, were declared jointly responsible, and he was released after the

inquiry began, having served his term. Arton declared that the police agent Dupas had promised that he would be let off easily if he made full disclosures. The Minister of the Interior refused to divulge the police reports on the four years' search for Arton. Dr. Cornelius Herz, whom the English Government had refused to extradite, offered to reveal the whole truth and deliver up all the documents and the whole correspondence if the members of the committee would come to him at Bournemouth. He threatened to reveal important state secrets, and declared that the revelations would prove his own innocence. Already he had presented as an American citizen a claim against the French Government of \$5,000,000 for false imprisonment in England on a charge of swindling. When the members of the commission were on the point of going to Bournemouth, Dr. Herz, in answer to their telegrams, backed out, postponing the meeting and imposing unacceptable conditions. The judicial investigation of the fresh evidence proceeded at the same time with the parliamentary inquiry. Others besides those already indicted were implicated, among them Camille Richard, ex-Deputy for the Drôme, who committed suicide on Aug. 31 to avoid prosecution.

The Dual Alliance.—A formal treaty of alliance between France and Russia is believed to have been the subject of negotiations since 1889, when the understanding between the two countries was first established. In the beginning of 1894 President Carnot and M. Casimir-Périer, then Premier, are said to have signed a military convention, while continuing negotiations for a definitive treaty until M. Carnot's assassination. These negotiations, resumed for a brief period by President Casimir-Périer, afterward actively carried on during M. Faure's presidency by M. Hanotaux and Prince Lobanoff, and after the latter's death resumed once more after the Czar's visit to Paris by Count Muravieff, are supposed to have resulted in a definitive treaty, which awaited President Faure's return visit to the Czar to be signed by the heads of the two governments and by the ministers, M. Hanotaux and Count Muravieff. In the summer of 1897 President Faure paid his visit to the Czar. At the gala dinner given for his reception at the Peterhoff Palace, on Aug. 23, the Czar expressed the hope that the sojourn of the President of the republic in Russia would "draw still closer the ties of friendship and deep sympathy that unite France and Russia," and M. Faure, in responding to the toast, said that in obedience to the profound sentiment of the entire French nation he had come "to affirm and draw still closer the powerful ties" uniting the two countries. At the farewell banquet, given on board the flagship "Pothuau," on Aug. 26, before the French squadron sailed for home, President Faure spoke of "two friendly and allied nations, guided by a common ideal of civilization, law, and justice," uniting in a brotherly manner in a most sincere and loyal embrace, and the Czar in answering this toast said, "I am happy to see that your stay among us creates a new tie between our friendly and allied nations, who are both equally resolved to contribute by everything in their power to the maintenance of the peace of the world in a spirit of justice and equity." These phrases demonstrated to the world that then, if not before, France and Russia stood united by a solemn pact in a common policy and allied for its maintenance.

Colonies.—Algeria and the French colonies are represented in the Senate and Chamber. Algeria has an administration and laws independent of the colonies proper, and is considered as an outlying portion of France. The other possessions are governed under the direction of the Minister of the

Colonies, except the protectorate of Tunis, which is under the Minister of Foreign Affairs. The total area and population of the colonies and protectorates are given in the following table :

DEPENDENCIES.	Square miles.	Population.
Algeria.....	184,474	4,125,000
Tunis.....	45,000	1,500,000
Senegal, French Soudan, Guinea, and Gabon.....	514,000	5,000,000
French Congo.....	258,000	5,000,000
Sahara.....	1,000,000	.....
Réunion.....	970	171,720
Comoro Isles.....	620	53,000
Mayotte.....	143	8,700
Nossi Bé.....	113	7,800
Ste.-Marie.....	64	7,670
Obok and Somali coast.....	46,320	200,000
Madagascar.....	227,750	3,500,000
French India.....	197	286,910
Cochin-China.....	22,950	2,126,930
Annam.....	81,000	6,000,000
Tonquin.....	122,000	12,000,000
Cambodia.....	40,000	1,500,000
French Guiana.....	46,850	22,710
Guadeloupe.....	688	167,100
Martinique.....	380	187,690
St.-Pierre and Miquelon.....	93	6,250
New Caledonia and dependencies.....	7,630	51,030
Marquesas Islands.....	480	4,450
Tahiti and Moorea.....	455	11,710
Tubuai and Raivavæ.....	80	880
Tuamotu and Gambier.....	390	5,250
Wallis Archipelago.....	100	5,000
Total.....	2,600,747	41,949,800

The special trade of France with the colonies in 1895 amounted to 120,272,790 francs of imports, and 103,632,550 francs of exports, not including the trade with Algeria and Tunis, which would bring the total up to 399,872,000 francs of imports and 326,980,000 francs of exports. The commerce of the several colonies for the latest years reported was, in francs, as follows :

COLONIES.	Imports.	Exports.
Senegal.....	13,866,000	17,985,000
French Guinea.....	4,893,000	5,222,000
Ivory Coast.....	3,124,000	4,070,000
Dahomey.....	10,772,000	9,974,000
French Congo.....	3,166,000	2,345,000
Mayotte and Comoro.....	661,000	1,031,000
Diego Suarez.....	3,351,000	341,000
Nossi Bé.....	2,633,000	2,709,000
Réunion.....	19,671,000	17,086,000
French India.....	3,277,000	20,129,000
Cochin-China and Cambodia.....	41,636,000	88,826,000
Annam.....	4,532,000	2,549,000
Tonquin.....	30,776,000	13,311,000
St.-Pierre and Miquelon.....	6,750,000	9,401,000
Martinique.....	29,117,000	22,511,000
Guadeloupe.....	22,636,000	21,060,000
French Guiana.....	11,437,000	4,984,000
New Caledonia.....	8,661,000	6,370,000
Oceanica.....	2,585,000	3,141,000

The expenditure of France for the colonies in 1897 amounted to 33,036,013 francs and the revenue from the colonies was 7,892,000 francs, including 4,690,000 francs from Cochin-China, 600,000 from the penal establishment, and 691,110 francs from the various colonies, besides 185,000 francs of contributions toward expenditures occasioned by the colonies. The above sum does not include Algerian expenses and contributions nor expenditure of the Ministries of War and Marine in the colonies.

The Algerian population includes 271,101 French, 47,564 Jews, 3,554,067 native Algerians, and 18,617 Moors and Tunisians. The revenue for 1897 was 52,147,194 francs, of which 12,286,089 francs came from direct taxes, 13,800,310 francs from registration and stamps, 13,072,025 francs from customs, 5,492,310 francs from monopolies, 2,986,700 francs from domains and forests, 1,125,840 francs from various sources, and 3,383,920 francs were *recettes d'ordre*. The total expendi-

ture was 71,219,959 francs, of which 2,771,250 francs were for justice, 11,194,632 francs for the interior, 7,718,066 francs for instruction and worship, 1,394,750 francs for agriculture, 31,143,175 francs for public works, 696,078 francs for various administrations, 15,366,208 francs for *régie*, etc., and 935,800 francs for repayments. The Nineteenth Army Corps, forming the military force of Algeria, consists of 3 regiments of zouaves, 3 regiments of tirailleurs, 2 foreign legions, 3 battalions of light infantry, 3 discipline companies, 3 companies of cavalry remounts, 12 batteries of artillery, 3 companies of engineers, 9 companies of train, and the staff and recruiting corps. A new force, consisting of spahis and tirailleurs has been formed for the defense of the southern Saharan frontier.

The value of the imports in 1895 was 280,643,273 francs, of which 222,594,350 francs came from France and 58,048,923 francs from foreign countries. The exports were valued at 307,787,357 francs, of which 253,293,225 francs went to France and 54,494,132 francs to other countries. The principal exports are wheat and flour, iron ore, esparto fiber, cork, wine, and fruits and vegetables. The length of railroads in 1896 was 1,820 miles.

Tunis has been a French protectorate since 1881. The French Government is represented by a Minister Resident, at present R. P. Millet. The Bey of Tunis is Sidi Ali, born in 1817. A body of 11,300 French troops occupies the country, the cost of which is borne by France. The ordinary revenue for 1897 was estimated at 23,676,100 francs, of which 7,800,000 francs come from direct taxes, 8,090,000 francs from customs, 5,682,300 francs from monopolies, 1,305,500 francs from domains, and 797,700 francs from various sources. The expenditure was estimated at 23,675,256 francs, of which 1,851,900 francs were for civil list and pensions, 9,842,500 francs for finance and debt, 3,431,504 francs for administration, 4,342,000 francs for public works, and 4,207,352 francs for various expenses. The debt amounts to £5,702,000 sterling, paying a perpetual *rente* of 6,307,520 francs. The imports in 1895 were valued at 44,085,945 francs and the exports at 47,525,784 francs. Of the imports, 24,691,033 francs came from France and Algeria, to which 30,927,267 francs of exports were destined. The chief exports were of the following values: Cercals, 14,692,000 francs; olive oil, 6,883,000 francs; cattle, 2,710,000 francs; wines, 2,635,000 francs; hides, 2,051,000 francs; tan bark, 1,844,000 francs; fruits, 1,448,000 francs; fish, 1,205,000 francs; textiles, 1,457,000 francs; esparto grass, 1,057,000 francs; zinc, 1,057,000 francs.

Agreements with Germany and other countries enabled the French Government to abolish the capitulations and to regulate the customs tariff. There were ten of these conventions, beginning with the one concluded with Austria-Hungary on July 20, 1896, and ending with that signed on May 5, 1897, with Sweden and Norway. The acceptance of this treaty by Italy went far to restore cordial relations between that country and France. While the Anglo-Tunisian treaty of 1875 remained still in force the other countries, which under the new agreement received the most-favored-nation treatment, with the exception of France, paid the regular 8-per-cent. duty on imports fixed in that treaty. The new treaty to be negotiated with England would fix the future duties for all countries, but by the stipulations in the Italian treaty the rate was not to exceed the French minimum tariff except in certain articles. This new Anglo-French treaty, after fourteen months of negotiations, was signed at Paris on Sept. 18. The old treaty was of indefinite duration, and in exchange for the concession which Great Britain made in terminating it Tunis

agreed to reduce the duty on British cotton goods to 5 per cent. *ad valorem* for fifteen years. As to all other goods, France was at liberty to fix any duties she liked, and England obtained no other concession for agreeing to the abolition of the capitulations and consular jurisdiction. The treaty remains in force for forty years. The free importation of Tunis cattle, wine, and oils into France is limited by annual decrees, and imports of fruit, cereals, horses, and other products are rendered impossible by the prohibitive tariffs. Efforts have been made to open up new markets for the oils, cereals, and wines of the protectorate in England, Sweden, Norway, and Russia. The new harbor at Sfax was opened in the summer of 1897. A railroad has been built between Bizerta and Zagħwan, where there are valuable mines. The old fortifications at Bizerta will give place to new ones inclosing a larger area, and an arsenal and graving docks are to be built at a cost of 14,000,000 francs, of which Tunis will contribute 2,000,000 francs and the French Government the rest. The military harbor will be at Sidi Saad, at the extremity of the lake, 7 miles from the sea, and the canal leading to the lake will be fortified.

The French establishments in India are the towns of Pondicherry, Karical, Shandernagar, Mahé, and Yanaon, with their dependent districts. The local revenue in 1896 was 1,699,415 francs. The chief export is oil seeds.

French Indo-China comprises Cochin-China, Tonquin, Annam, and Cambodia. There are 23,370 troops in Annam and Tonquin, of whom 14,500 are natives. The products of Annam are rice, maize, areca nuts, cinnamon, tobacco, sugar, betel, silk, manioc, timber, caoutchouc, dyes, and drugs. Tonquin produces immense quantities of rice for export, chiefly to China. Other products are sugar, silk, cotton, pepper, and oils. The railroad from Phulang to Langson, 64 miles long, is being extended to the Chinese frontier at Nacham. The transit trade to Yunnan has amounted to 5,000,000 francs and the transit trade from there to 3,200,000 francs. The local revenue of Annam and Tonquin in 1895 was \$7,570,000; the expenditure of France in 1897 was 24,390,000 francs.

M. Doumer, the new Governor General of Indo-China, induced the King of Annam to sign a decree abolishing the office of Viceroy of Tonquin and transferring its functions to the French Resident, who takes full charge of the Annamite administration in Tonquin. In Cambodia, where the political situation was disturbed for some time, the Governor General obtained important concessions from the king of that country. Frenchmen and French subjects who are not natives of Cambodia will always be subject to French jurisdiction. The rights of private property are recognized, and slavery is abolished. The execution of the king's decrees will henceforth be subject to the approval of the Resident General.

New Caledonia is a French penal colony. The population in 1896 consisted of 8,384 European civilians, 10,757 convicts, 1,506 military, 3,041 Asiatics, and 27,345 natives. The chief exports are nickel, preserved meat, chrome ore, and silver-lead ore. Attached to the administration of New Caledonia are the Isle of Pines, the Loyalty Archipelago, the Huon Islands, the Chesterfield Islands, and the Wallis Archipelago. The French establishments in Oceania are the Society Islands and the neighboring Marquesas, Tuamotu, Gambier, and Tubuai groups, and Rapa island. The colony of Tahiti with its population of 25,000 depends on the outside world for nearly all the necessaries and all the luxuries. The United States is the main source of foodstuffs and the leading importing country. Of

late the canned meats of Australia and New Zealand have begun to displace those of Chicago, while American prints and calicoes of the cheaper grades have ousted those of Manchester manufacture, being free from dressing and of faster colors. An improvement in trade has followed upon increased production of mother-of-pearl at Puanolu, with higher prices for the shells. Copra and vanilla are the principal other exports.

After hostilities lasting seven years the rebellion in Raiatea and Huahine was put down in the early part of 1897. Queen Namae and her chief men were captured by the transport dispatch boat "Aube" and the "Caroline" after a severe fight, in which 36 natives were killed and 16 drowned. The queen and 136 chiefs were sent on Feb. 28 into exile for life in New Caledonia, and an armed French force remained in charge of the islands. (See MADAGASCAR, WEST AFRICA, WEST INDIES.)

FRIENDS. The "Independent," New York, in its statistics of the churches of the United States for 1897, gives the following numbers for the several branches of the Society of Friends: Orthodox, 1,298 ministers, 830 churches, and 90,921 members; "Hicksite," 115 ministers, 201 churches, and 21,992 members; "Wilburite," 38 ministers, 53 churches, and 4,329 members; Primitive, 11 ministers, 9 churches, and 232 members; total, 1,462 ministers, 1,093 churches, and 117,474 members. For all the branches except the Orthodox, the numbers returned in previous years are repeated. The increase shown—of 148 ministers, 6 churches, and 485 members—belongs therefore to the Orthodox branch.

The third General Conference of Friends in America was held in Indianapolis, Ind., in October. O. Edgar Nicholson presided. Unlike the two former conferences the proceedings of this meeting were conformed to a definite prearranged programme. In the discussion of the first subject, "The Theory and Practice of Quakerism," the mission of the Society of Friends was set forth to be to represent New Testament Christianity without encumbering additions or weakening subtractions. Long and careful consideration was given to the subject of forming a central organization with authority in a limited sphere, which will bind the yearly meetings together for more effective work on common lines. In the end the Conference declared its belief "that much benefit would result to our branch of the Church of Christ from such a union of our yearly meetings as would tend to protect them from common dangers and to strengthen their joint participation in Christian work. We believe much could be accomplished by the yearly meetings conferring upon future conferences limited legislative authority within distinctly defined spheres that would not interfere with the autonomy of the yearly meetings in their relation to their own members or to their separate interests." A committee was appointed to formulate a plan for closer union and to prepare a discipline to go into effect under similar conditions.

Friends' Missions.—The foreign mission work of American Friends began in 1871, when missionaries were sent by Indiana Yearly Meeting to Matamoros, Mexico. Other yearly meetings followed, until now nearly every one has its foreign-mission committee, and nearly all have work directly under their control. The reports for 1896 showed that work was carried on in 13 principal stations in Mexico, Japan, Palestine, India, China, Jamaica, and Alaska, with 48 subordinate stations, 41 foreign missionaries, 14 recorded as ministers, 2 medical missionaries, 9 native ministers, 91 native helpers, 21 churches, 882 native members, 104 received during the year, 1,262 attendants not members, 30 Sunday schools, with 1,211 pupils, and 34 day schools, with

1,030 pupils. For the support of this work American Friends gave \$30,311, slightly in excess of 33·6 cents per member, or 12·5 less than the amount *per capita* (\$4·20) by English Friends.

Acts of Yearly Meetings.—The Philadelphia Yearly Meeting this year sent out epistles to other meetings for the first time since 1857. Two epistles were sent out—one addressed to all meetings bearing the name of Friends and to Friends who “may be members of them,” and one to the smaller or Barnesville Yearly Meeting in Ohio, addressing the members as “fellow-believers who had adhered to the doctrines of the faith,” and exhorting them to continue a concern for those who have gone astray. This step marked the end, in sentiment, of a split in the orthodox branch of the society of forty years’ duration. It occurred in the Ohio Yearly Meeting, and was the occasion of such a difference of opinion in the Philadelphia Yearly Meeting that it was evident that the sending of an epistle to either body in Ohio would produce a separation at home. To avoid the difficulty the meeting decided “to suspend all epistolary correspondence for the year.” The suspension continued till the present time, when the correspondence has been renewed without objection. The Indian Committee reported an attendance of 45 pupils at the Indian boarding school in Tunessa, N. Y., with 70 waiting for admission. The Indian Aid Association had a boarding school at Skiatook, Indian Territory, with about 80 pupils. A report was read from a third boarding school, and aid had been given to 6 family and 13 meeting schools.

In the New York Yearly Meeting the Home and Foreign Mission Board reported concerning work in Mexico; at High Point, N. C. (school for colored boys and girls); and among the Seneca Indians of Indian Territory and the Indians of Herpa valley, Cal. The legacy of Lindley Murray, originally of \$34,000, had been increased in sixty-three years to \$54,700, and was still applied according to the plans of the givers, with practical benefits bestowed upon Indians, colored people, and the oppressed and degraded of other races. The Book and Tract Committee, whose work had continued through one hundred and fourteen years, distributed literature “likely to promote the principles of truth, virtue, and our Christian testimony” in nearly all the yearly meetings of America. The Evangelistic Committee had held 22 series of meetings, resulting in nearly 100 accessions to membership. The Woman’s Foreign Missionary Society was supporting 3 girls and 1 young man at the training schools in Japan, 6 girls at Ramallah, 3 boys in India, and 1 in China, a mission work at Yokohama, Japan, and had given aid to the Armenians and the Jews.

In the New England Yearly Meeting the women, having held a single separate session, informed the joint session that they thought no separate session would be needed at the next meeting.

The Foreign Missionary Board of the Oregon Yearly Meeting reported concerning work at Kake island, Alaska. In connection with the report of the Peace Association of Friends in America, the introduction of the military system into the schools and colleges was deplored. The resolutions of the meeting upon temperance regard total abstinence not alone as a means whereby each man protects himself, but also as one of the means by which he may aid in protecting others, and in the trying conditions of the present day as a patriotic as well as a Christian duty.

London Friends.—The London Yearly Meeting met in May. The year had been one of rather larger growth than usual in membership, an increase of 200 members and 800 recorded attendants of meetings being returned. The total membership was 16,670 in

Great Britain, and it appeared that the society was more than keeping pace with the growth of the population. Only about one fourth of the new members, however, were members by birth. In a discussion of the report of a committee of visitation appointed in 1896 to visit all the meetings on ministry and oversight, it was recognized that Quaker ministry, all impromptu as it is, has always been weakest on its expository or intellectual side; and the problem of combining the freedom of operation of the Divine Spirit upon the preacher’s heart at the time with the intellectual fullness and state of preparation possessed by preachers of the sister churches was acutely felt. Some speakers pleaded for the permission of more variety in ministry, and held that there was much service of the utmost value which would be considered unfit for Friends’ meetings. Strong expression was given, however, to the sentiment that there should be no lowering of the standard of Friends’ warrant for preaching, no preaching for the sake of occupying the time or for the sake of avoiding long silences, or because strangers were present who would not understand an hour’s silent meeting. The need was considered of some means of bringing into communion with the membership the thousands of adult scholars who were practically convinced of the principles of Friends, and yet hesitated to join them. Of course great care should be exercised, as is done in admission; but some closer, some intermediate stage, might perhaps bridge the gulf. The subject was referred to the Home Mission Committee to make inquiry and tabulate the results for contemplation at the next Yearly Meeting. A plea was made for the recognition of the “Hicksite” Friends in America, who differ from the orthodox Friends on important theological questions, but nothing was done with reference to it. The meeting directed the abolition of the queries which were now publicly answered every year concerning the numbers attending the several yearly meetings. Reports were received from the foreign missions in Madagascar, India, China, and from the industrial mission to freed slaves at Pemba, near Zanzibar. About 90 missionaries were sustained in these countries and in South Africa, Constantinople, and Syria. At this meeting, in pursuance of and under an order made in 1897, men and women met together in the meetings on a footing of perfect equality.

A summer school of theology was instituted under the auspices of individual Friends and held at Scarborough, Aug. 4 to 18. Its purpose, as expressed in the circular of its promoters, was to “stimulate thought, promote helpful reading and study, and awaken in the society a fuller conception of the place in the service of Christ of the trained and consecrated intellect.” It was attended by 700 men and women accustomed to minister in meetings for worship or to teach in the Sunday schools. Lecturers were invited from different denominations, each an expert in his special field. Two of them were from the United States. The programme included lectures or courses on “The Literary Study of the Bible”; “Assyriology”; “The Old Testament Canon, the Prophets, the Exile, and Post-Exilic Thought”; “The Logia of Jesus,” just discovered (by Mr. Grenfel, the discoverer); “Early Christianity in England”; “The Bible and the Spirit”; and “The Early Poetry of Israel and the Book of Jonah.”

The 308 schools for working men and women of London Yearly Meeting, which are the society’s chosen form of home missions, were attended by 43,376 pupils, of whom two thirds were adults; 1,600 members had been added to them during the year, and 16 new schools had been begun.

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GEOGRAPHICAL PROGRESS IN 1897.

The Arctic Regions.—The Jackson-Harmsworth expedition, the progress of which was described in part in the "Annual Cyclopædia" for 1896, returned from Franz Josef Land in September, after an absence of three years. The story of the return and the explorations of the past year are given briefly as follow:

"Having practically completed the exploration of Franz Josef Land, with the exception of some odd corners, we left Cape Flora on Aug. 6. It was toward evening when we sailed, and before leaving I carefully sealed up Elmwood, which had been our home for three years. With the exception of our luggage, specimens, etc., we left Elmwood just as it had been during our stay. The windows were carefully boarded and nailed up, the door, to which I fastened a Union Jack, was carefully protected by two spars, and a flag was left floating on the pole at Flagstaff Point. I also left behind, for the use of subsequent explorers, six tons of coal and anything that I considered might be useful. In the room of our living house I left a quantity of supplies, in case Andrée should turn up in that region. Of course I did not know of the safety of the 'Fram' until the arrival of the 'Windward,' and I had established a depot on Bell island in Leigh Smith's old house, in case any of Nansen's companions should have gone in that direction. This contains a good supply of provisions, and can be easily found, the house being on a prominent part of the island. After leaving Elmwood we steamed northwest for 50 miles, but saw no indication of land. The water was very open, and there was less ice than I had ever seen before. We landed at Cape Mary Harmsworth for a few hours, and collected some specimens from a low spit projecting beyond the ice-covered cape. This was done with the object of refuting or confirming the opinion I had formed in the spring that Gillis Land has no existence in the position assigned to it on the charts. We then steamed within 10 miles of the situation given for the east coast of the eastern Johannesen island in very clear weather, but failed to see any land. South of Bear island we met with bad weather, but, thanks to the skillful navigation of Capt. Brown and the stanch little 'Windward,' we have reached home safely."

Speaking of the work of the expedition since the departure last year of the 'Windward' with Dr. Nansen, Mr. Jackson said:

"We passed the winter (1896-'97) very busily, happily, and comfortably. Scientific observations and researches of all kinds were conducted to the utmost extent. The winter was less severe and less windy than usual. On March 16 Mr. Armitage and I left with sledges and two teams, consisting of the pony and 13 dogs, to go round western Franz Josef Land and define its limits. We met with bad weather at the very outset, and found the snow lying deep and soft, with very trappy, rough ice on the western side of the British Channel, up which we laid our course. On March 28 we discovered a new headland and fjord, and on the 29th we rounded the northeast extremity of the western land and proceeded west, having explored all the western shores of the British Channel to the Queen Victoria Sea. The weather continued exceedingly bad, with almost constant gales and driving snow, and with temperatures often more than 40° below zero, which played havoc with our animals. On

April 7 we had lost all but 5 dogs when north of the head of Cambridge Bay, and on the 10th were forced to take to the high glaciated land, as open water up to the glacier face cut off all advance upon sea ice. On the 12th our pony died, which necessitated leaving behind all equipment not absolutely essential. The weather, at an altitude of 1,500 feet, now grew worse than ever, with exceedingly dense and constant mist, in addition to gales and driving snow. On the 19th we descended the high glaciated land behind Cape Mary Harmsworth (the land does not extend west of the point, and no land could be seen during the short, clear intervals anywhere off the coast) from an altitude of 1,500 feet. We crossed over behind Cape Lofley, as the sea ice was broken up all along the coast, and kept us on the glacier, and found a little fast ice at the head of Weyprecht Bay, stretching toward Cape Ludlow. On approaching the cape we again met open water, which obliged us to climb the high glaciated land behind the cape. In Weyprecht Bay we left a canoe behind, as we could not get along with it, owing to the badness of the ice. The weather continued excessively bad, and gales gave us no rest. Above Cape Ludlow I shot the only bear we had seen, which supplied us with meat and blubber for cooking. On April 29 we rounded Cape Neale. We encountered exceedingly rough ice crushed up against the land. To get along at all, we had to avail ourselves of every minute of fine weather offered to us, and frequently marched for twenty-four hours at a stretch, marching from the time one gale ceased until another began.

"The rough ice of the sea and the steep inclines of the glaciers forced us for a great part of the journey to go three times over the same ground. On May 3 we crossed Gray Bay, but on approaching Cape Grant we were again cut off by open water and had to climb the steep glacier behind, hauling our sledges with a purchase up the glacier face (45 feet) aided by a snow drift, and descended at the head of the bay to the west of Cape Stephen. On May 5 we reached Bell island, where we were met by Dr. Köttlitz and Messrs. Bruce and Wilton, who had brought a sledge with provisions to look for us, and had got anxious, as we were nearly a fortnight overdue.

"This journey was successful in every way, but had occupied two months. We had only thirteen and a half fine days. After staying at Elmwood for ten days to refit, Mr. Armitage and I started off east, taking with us, however, no canoe or boat, as we could not carry it and go along rapidly. We covered 21 miles the first day, but on the second, when nearing Cape Cecil Harmsworth (southeast extreme of Hooker island), the ice became very thin, and when within 400 yards of the cape the sledge broke through, and in spite of our utmost endeavors we lost all our provisions and dog meat except the food which we had kept for lunch, and all our cartridges were wetted. As we could not reach the shore, owing to the very thin ice, we retraced our steps and tried to approach Hooker island, farther to the west, with the intention of crossing the glacier to Cape Cecil Harmsworth, to ascend it and map in the neighborhood of Brady island from there. But whenever we approached Hooker island very thin ice stopped us, and, our advance east also being cut off, we returned. Open water was visible in many directions, and the ice generally was remarkably thin. Owing to the

loss of our provisions we were compelled to march twenty-five and three fourths hours consecutively, and in that time covered 42 miles, completing the 20 miles back to Elinwood the next day."

In the course of this journey Mr. Jackson solved a most interesting geographical problem, for he not only determined the northern coasts of Franz Josef Land, hitherto absolutely unknown, but he was also able to decide the problem of Gillis Land. It is now quite clear, at any rate, that this much-discussed land does not lie where arctic geographers have been in the habit of putting it. This journey, in spite of the comparatively short march subsequently undertaken by Mr. Jackson, practically completed the map of what may be called British Franz Josef Land. The main points of this map have completely revolutionized all old ideas of Franz Josef Land, for Mr. Jackson has swept away a continental mass of land, and in its stead placed a vast number of small islands; where lofty mountains were supposed to be Mr. Jackson found the long, ridged hummocks of arctic ice pack; and, most curiously of all, perhaps, to the north of these frozen areas he discovered an open sea which is at present the most northerly open sea in the whole world. It has been named the Queen Victoria Sea.

Other discoveries in the vicinity of Franz Josef Land are reported in the Dundee "Advertiser" as having been made by Capt. Robertson, of the Dundee whaler "Balæna." "Cruising along the south coast, Capt. Robertson discovered several islands which had not been mapped either by Leigh Smith or Jackson. The largest of these was about half a mile long. It was visited in a boat by the first mate, who planted a pole, upon which was carved the name of the whaler, and thus, in all likelihood, it will be christened by those responsible for such matters. Between Franz Josef Land and Spitzbergen, in latitude 79°, the charts show two islands are said to have been discovered by Capt. Johannesen and Andreassen in August, 1884. The "Balæna's" homeward course lay toward these islands, but instead of land in the locality in question there was found to be 100 fathoms of water, so that the existence of the islands must either be erroneous or they have since been engulfed. Capt. Robertson describes the scenery of Franz Josef Land as very wild and romantic. Highland, broken at frequent intervals by great glaciers, meets the eye on every hand, but the country is not so bleak in the summer months as one might imagine. There is plenty of grass and great variety of mosses and flowering plants. Of bird life there is abundance, the most plentiful species being the loon. The chief inhabitants of the waters were walrus, the pursuit of which led Capt. Robertson to these far-off regions. They were found congregated in little colonies on the ice, and were dispatched with the rifle."

The balloon voyage of Salomon August Andrée to the polar regions, which was originally planned to begin in 1896, but was postponed to 1897 on account of unfavorable climatic conditions the former year, has awakened the greatest interest, and tidings from him have been watched for with anxiety throughout the civilized world. Before setting out Herr Andrée had his balloon enlarged in Paris, making it 23 by 22 metres in size, with a capacity, in round numbers, of 5,000 cubic metres. The expedition left Gothenburg, May 18, for Danes' island, north of Spitzbergen, where the balloon was revarnished and filled with hydrogen, the filling occupying eighty-nine hours. On July 11, the wind being favorable, Herr Andrée started, accompanied by Nils Strindberg and Knut H. F. Frænkel. When asked when news from him might be looked for,

Herr Andrée said: "At least not before three months; and one year—perhaps two years—may elapse before you hear from us, and you may one day be surprised by news of our arrival somewhere. And if not—if you never hear from us—others will follow in our wake until the unknown regions of the north have been surveyed."

These details are taken from an article in the "Century" magazine for November, 1897, by Jonas Stadling, who was with the balloonists at Spitzbergen. He says further: "In the month of January, 1896, the owners of the Stockholm daily "Aftonbladet" bought 104 trained carrier pigeons in Holland, and sent them to the most northern lighthouse in the world, Fruholmen, Norway, in the same latitude as North Cape, where they were kept until the expedition started from Tromsøe on June 14, 1896. There being no carrier pigeons in Norway, and no time for training a new stock, which would have taken two or three years, it was necessary to use pigeons from another country. During April and May, when both day and night had become light, several of these pigeons were sent with fishermen and whalers out into the polar sea, and then set free. Several flew south; one of these was caught, three days after its escape, 1,000 miles south of the starting point. The pigeons that had laid eggs at their new home almost invariably returned there. About eighty that thus seemed to feel at home in Norway were selected and sent last year with the expedition to Spitzbergen. A large number of these pigeons were sent up at different times from Spitzbergen, and all, except three which stayed, flew first high, and then south. None, however, were captured in Norway; but carrier pigeons were seen both in northern Norway and in Sweden at times corresponding with the flight of the Spitzbergen messengers. On our return in 1896 from Spitzbergen to Tromsøe the remaining carrier pigeons, which had thriven admirably in the polar regions, were left in the last-named town during the past winter; and thirty of the strongest and best were sent back this summer with the balloon, being lodged in small two-storied baskets fastened under the balloon above the stores. It is, of course, very doubtful whether these carrier pigeons will ever reach inhabited parts of the globe, but they might alight on vessels in the arctic seas."

Reports have come from time to time of the taking of pigeons supposed to be from Andrée, but some of them seem to have been from among a large number of birds released by pigeon-flying associations in the vicinity of Heligoland. A pigeon, shot by one of the crew of a sealing vessel some time previous to July 22, was reported to have carried a message, signed by Andrée, addressed to the "Aftonbladet," Stockholm, and reading: "Eighty-two degrees passed. Good journey northward." Still another pigeon dispatch was brought to Hammerfest by a whaling ship, reading: "July 13, 12.30 p. m., latitude 82° 2' north, longitude 12° 5' east. Good voyage eastward. All well." As the first three days were expected to be the most dangerous, this dispatch was regarded as auguring well for the success of the expedition. It indicated that the explorer had gone across the open sea north of Spitzbergen in safety and reached the beginning of the pack ice. There were also reports that the balloon had been seen, but none of them gained credence. The most probable of these was one that it had been seen by inhabitants of a village in the district of Jeneseisk, in arctic Russia, on the night of Sept. 14. Some shipwrecked sailors reported that they had heard mysterious cries of distress, Sept. 22, off the Dammands isles west of Spitzbergen, and the next day saw a driving reddish-brown object on the sea a mile from land. They were unable to go to see what

the cry came from, as their boat was small and the sea was rough; and the captain who picked them up thought the noise came from a bird. On their report a relief ship was sent out under Paul Bjorvig, but it returned Nov. 20, having found no traces of the explorer. The supposition is that the cries came from birds, and that the object seen was a dead whale.

Dr. Nansen's story of his adventures appeared this year in "Farthest North," a book in two volumes with photogravure illustrations and maps; and the explorer has lectured to large audiences in Great Britain and America. Dr. Nansen has asked permission to name the Siberian peninsula, discovered by him, after King Oscar of Sweden. The King and the Russian authorities have given their consent.

In a lecture at Christiania, Dr. Nansen said the best course for another expedition would be through Bering Straits in a northerly and northeasterly direction. The explorers could then drift in the ice with the current, which would bring them out on the coast of Greenland.

The Cullum geographical medal, instituted by Gen. George W. Cullum, late vice-president of the American Geographical Society, was conferred in January on Lieut. Robert E. Peary, in recognition of his services in arctic exploration. Lieut. Peary made a voyage to North Greenland in the summer to establish a settlement there to be used as a base of supplies for an expedition in 1898. Of the result of this he said:

"What I consider the most important discovery was my finding of the relics of Greely's expedition. These I found on Cape Sabine. We touched Meteoric island on Aug. 30, and proceeded to get the meteorite which we had discovered before on board the 'Hope.' It was just large enough to go into the hold. It measured 12 by 8 feet, and weighed 100 tons. It is a beautiful specimen; in fact, the best I ever saw. I have tested it, and I find that the composition is almost similar to that used in plate armor on United States war ships. It looks like nicked steel."

The story of Sir Martin Conway's expedition, noted last year, has been published this year in his book "The First Crossing of Spitzbergen."

Antarctic Regions.—An expedition sailed from Antwerp Aug. 16 for antarctica. It is under the lead of Capt. Adrien de Gerlache. Its object is to penetrate those waters of antarctica which have hitherto proved impenetrable to the unsuitable craft that endeavored to navigate them, chart the coast line, if any is found, effect a landing at Cape Adare, where a house and observatory will be erected and left in charge of officers and men, who will traverse the ice cap or interior of the continent as far as possible, endeavor to discover the true position of the south magnetic pole, and make constant records of the climatic, magnetic, and astronomical conditions. For this purpose the steam whaler "Belgica" will, after completing her coal supply at Punta Arenas, touch at Graham's Land and work through Waddell Sea to Enderby Land, continuing her way along the shores of Wilkes Land to Cape Adare, in Victoria Land, where the shore-going party will land and winter, the "Belgica" herself, unless compelled by circumstances to remain, proceeding to Melbourne for a time, returning in the following year either to reship or revictual the explorers at Cape Adare. The expedition arrived at Rio Janeiro Oct. 22, and was joined by Dr. Cook, who was one of the scientists of Lieut. Peary's party.

North America.—An examination of the Noddawai river system was made in 1896 by Dr. Robert Bell, of the Canadian Survey, who discovered a hitherto unknown river. The Noddawai flows into the southeastern part of James bay. It has its rise

in Mattagami lake, into which the Megiskun or Bell river flows from the south, and the Waswanipi from the east. The territory drained by the system is a kind of plateau broken by isolated hill ridges, and has a large number of lakes. Dr. Bell thinks the region favorable for settlers, as the soil and climate are suitable for all ordinary crops, especially for wheat. The Indians met with were semi-civilized.

An ascent of Mount St. Elias was made, July 30, by Prince Louis Amadeus, of Savoy, and several of his countrymen. The details and results of the expedition are reported as follows:

"After six days' travel, Malaspina glacier was reached. Although but 20 miles wide, this glacier occupied four days in crossing. For two days a heavy fog enshrouded everything, and the party were compelled to rely on their compasses for their direction. They were then at the foot of Seward glacier, and they were obliged to journey about 12 miles until an available spot was found to cross the field of ice. Crossing the glacier, they came to Dome pass, and from here the descent of 2 miles was made to Agassiz glacier slowly. The party then proceeded up Agassiz glacier to a point where the Mount Newton glacier joins the divide at the foot of Mount St. Elias. This glacier at the foot of Mount Newton is, in the opinion of all mountaineers who have seen it, the roughest in the world. From this point no one was allowed to march alone, all being securely attached to one another with ropes. Here the American members of Prince Louis's party were left, and they formed a camp to await the return of the mountain climbers.

"The ascent of Mount St. Elias began on Friday, July 30, and after several hours' hard climbing the party arrived at the top of the divide. Here a tent was pitched. Then the ascent began again, and in four hours from the divide they were on the most lofty peak of the mountain. About two hours were spent on the peak, and during this time much was done. Some members of the party took scientific observations. The photographer took many pictures from the summit, all of which, together with data secured, will be submitted in a report to the Alpine Club. The expedition has fixed the altitude of Mount St. Elias at 18,100 feet. The figures are subject only to such slight correction as may change the total 30 or 40 feet either way. The expedition has also answered in the negative the question whether St. Elias was at one time a volcano. There is not the slightest indication of volcanic action anywhere. A new glacier was discovered between the Augusta mountains and Great Logan. It takes its course apparently to the sea, and was named 'Colombo.'"

One of the party that went part of the way up the mountain described a wonderful mirage seen from the Malaspina glacier. "It was about sunrise," he said, "and I was looking around at the mountains in their rugged grandeur and the sky with its limitless sea of light blue. Mount St. Elias, Mount Newcomb, Mount Augusta, and Mount Cook, the Seward, the Marvib or Mervin, the Pinnaele, and Agassiz glaciers lay before our enchanted eyes. I looked to the north, and was thunderstruck to behold a city, apparently resting on a ridge which is an extension from the west side of massive Mount St. Elias. Every detail of streets and buildings was plainly visible. I called the attention of my companions to the strange sight, and found that they saw everything exactly as I saw it. The mirage, for such it must have been, lasted from 2.45 in the morning until 4.20. It began to disappear at 4.15, and required five minutes to disappear."

Utmost Source of Missouri River.—Hydrographic and topographic surveys and explorations

in the main range of the Rocky mountains, the final results of which were published in 1897, have been conducted by Jacob V. Brower at the head waters of Missouri river, incidental to the computation of the length of the longest continuous stream of water in the world that maintains perennial flowage. In the Centennial valley, Madison County, Montana, are two small bodies of water known as Upper and Lower Red Rock lakes. These lakes are in low depressions in the upper portion of the valley, which formerly constituted a glacial lake bed, drained at the most northwestern limit. From the Three Forks, decided by Lewis and Clark in 1805 to be the initiation of the main channel of the Missouri, at the confluence of the Jefferson, Madison, and Gallatin forks, the principal stream was found to be continuous and uninterrupted, except by artificial irrigation, up the channel of Jefferson fork. By what ought to be considered an erroneously adopted rule in hydrographic nomenclature, the stream again changes its name to Beaver Head river near the point where it passes Beaver Head Rock, likewise again changing its name to Red Rock river near the point where it flows past a picturesque red butte. Following this as the direct and longest channel, explorations up its course led on to these Lower and Upper Red Rock lakes and to the channel of the brisk and sparkling mountain stream above those lakes which flows through the Alaska basin. Into this basin the main stream descends from a point near the crest of the main range of the Rocky mountains, through an eroded and rugged channel in Culver's Cañon. At the head of this cañon, twenty miles above Upper Red Rock Lake, is an amphitheatrical *caldera*, formed by volcanic walls and eroded declivities. Along these walls and declivities are perpetual snowbanks, which, melting in the summer sun, saturate the immense mountains to such an extent that perennial springs and streamlets send forth a constant supply of water, decreasing in winter and increasing in summer, supplied exclusively by secular precipitation.

The high elevations—from 8,000 to 11,000 feet above the sea—surrounding the Missourian *caldera* causes the melting snows to be resupplied every month in the year, the freshets beginning about the last of May and generally ending by Aug. 1. No person, except Indians, is known to have penetrated to this utmost source of Missouri river previous to this discovery, Aug. 28, 1895. It was ascertained by Mr. Brower, who again ascended the mountains to the *caldera* in July, 1897, that a village had been maintained there, at an elevation of 9,000 feet above the sea, in prehistoric times, as shown by the discovery of numerous flint and obsidian spearheads, arrow points, spalls, and other stone utensils. An extensive fossiliferous deposit was also discovered at the same place, in contact with limestone, identifiable as *Phillipsia tuberculata*, *Productus cora*, etc. The total length of the river channel is as follows: Missourian *caldera* to Three Forks, 398 miles; thence to Mississippi river, 2,547 miles; thence to the Gulf of Mexico, 1,276 miles; longest river channel in the world, 4,221 miles.

Quivira.—The remarkable march of the forces under Francisco Vasquez Coronado from Compostela, Mexico, to a termination at the province of Quivira, 1540-42, where were situated about 25 villages of barbarous Indians, living upon the flesh and blood of the buffalo, has from time to time received the careful attention of historians and geographical writers, who have been perplexed in identifying the locality of Quivira. Gen. J. H. Simpson, Adolph F. Bandelier, and George Parker Winship have severally traced Coronado to a cross-

ing of the Arkansas river, and thence northeastwardly to portions of Kansas. In March, 1897, Jacob V. Brower explored the region along both sides of Kansas river to the lower waters of Smoky Hill river, from 100 to 150 miles northeastwardly from Great Bend, and definitely located more than thirty old Indian village sites near extensive chert quarries, where were made flint implements of war and arms of the chase. These Indian village sites are almost exactly comparable with the descriptions left by Coronado and his chroniclers, and as they are situated favorably to the most certainly determined line of march at its termination, there is little doubt that the definite location of the village sites of the province of Quivira have been finally discovered and ascertained. Several thousand flint tomahawks, spearheads, and arrow points have been recovered from the village sites described in the report of the exploration.

South America.—An ascent of Mount Aconcagua, believed to be the highest peak of the Chilean Andes, was made in January by an expedition from the Royal Geographical Society, headed by Mr. E. A. Fitzgerald. They entered the Horcocones valley, where, at a height of 12,500 feet, a camp was pitched on Jan. 7. Another camp was established at a height of 14,000 feet, from which the actual ascent began. At the height of 18,000 feet it was decided to plant on the side of Aconcagua the last camp. On Jan. 15 Mr. Fitzgerald, accompanied by the chief guide, Matthias Zurbriggen, set out for the summit, but found himself unable to proceed. The guide went on alone, and in the afternoon reached the highest summit. Almost a month later, Feb. 13, Mr. Vines also reached the top, after a journey of nine hours, starting from the camp at 8 o'clock in the morning and arriving at the summit at 5 in the afternoon. Explaining the difficulties which he had to overcome, Mr. Vines said that every 4 or 5 metres he was compelled to stoop down on all fours and wait two or three minutes to recover his breath. This was the only mode of ascent possible at such an altitude. The summit was found to be flat, having an area of 60 square metres. The Pacific Ocean from that height, 23,000 feet, resembled, in the words of the explorers, a vast unruffled pond; while in the afternoon, when the sun shone in the west, the ocean appeared like an immense conflagration. Mr. Vines studied the geological structure of the mountain. The hillside, he said, is porphyritic and has a thick covering of argillaceous earth, which can not sustain vegetation. The south side is broken up into peaks. Mr. Vines also ascended Mount Tupungato and another mountain unnamed, about 19,000 feet high. Tupungato is volcanic, but Aconcagua is not.

Drs. Steffen and Dusen, O. von Fischer, and others spent January to May in an excursion for exploring the Chilean river Aisen. It flows to the sea through a broad estuary in about 45° 20' south latitude, entering the channel that runs behind the Chonos archipelago, and is formed by two branches, the smaller from the east, the larger from the northwest and springing from a fine glacier between the Aisen and Lake Fontana.

The expedition that was sent in February, 1896, by Princeton University, under the control of Prof. Scott, of the United States Geological Survey, to explore Patagonia, returned in August, 1897. From the port of Gallegos, on the eastern coast, investigations were conducted as far northward as Port Desire, and southward to Sandy Point in the Straits of Magellan. The expedition went into the interior, where many new glaciers and water courses were discovered. Many plants and animals new to science were collected, while the information obtained relating to geological phenomena was of the

greatest value. Numerous volcanic cones, hitherto unreported, were discovered. After a little more than a year had been passed on the mainland the expedition proceeded to Tierra del Fuego and the adjoining islands, where collections were made and observations were taken of the geology and paleontology of the islands. The collection secured by the expedition comprises a nearly complete series of mosses and flowering plants, 800 skins and skeletons of recent birds and mammals, and 8 tons of fossils, including more than 1,000 skulls and many nearly complete skeletons.

Asia.—The researches of Dr. Sven Hedin, a Swedish explorer, in Asia resulted in many discoveries, not only in geography, but in archaeology, geology, and ethnography. His travels occupied nearly four years. The following summary is from the London "News":

"The explorer started at the beginning of 1894 for the Pamir military post in Kashgaria, and four times in the course of the ensuing summer made the ascent of the Mustagh Ata, one of the highest summits in the Pamirs. He reached an altitude of 20,000 feet. The mass of the mountain is composed of gneiss and crystalline schist.

During the autumn of the same year the traveler proceeded in the direction of Lake Teshil-Kul to explore it and also the Alid-Sehur mountain range.

In February, 1895, Sven Hedin set out to cross the Takla Makhan desert, which had never been explored, even by natives. His object was to observe the sand hills in that region, which rise sometimes to a height of 100 feet. The complete dearth of vegetation and water rendered this journey very arduous and dangerous, inasmuch as instead of taking enough water for ten days he only took four days' supply. On his way across the desert he lost several of his men, his camels, and a number of scientific instruments, including his photographic apparatus. Eventually he had to return to Kashgar by way of Ansoi to obtain a fresh supply of provisions. Pending the arrival of new apparatus and instruments, which could not reach him for three months, Sven Hedin explored the source of the Amu-Daria and the Hindu-Kush range. In December, 1895, he left Kashgar for the last time, traveling by way of Khotan toward Lake Lob Nor and traversing another desert 300 kilometres across. During this journey, which occupied four months and a half, Sven Hedin discovered the remains of two ancient towns and the ruins of Buddhist monuments. Proceeding as far as the Keria-Daria river, he ascertained that this stream ran as far as $39^{\circ} 30'$ north. He found in that region a tribe of half-savage shepherds unknown even to the Chinese. Pushing on to the Chinese town of Koreaia, along the banks of the river Tarim, Sven Hedin reached the Chinese or northern part of Lake Lob Nor, which Przhevsky was unable to discover, apparently because this lake empties itself, whenever there is an abundance of water, into its southern portion, the only one seen by the Russian explorer. Farther on the Swedish traveler followed up the course of the Kutcha-Daria river, which flows into the northern part of Lob Nor and connects a whole series of oblong lakes, the more northerly of which had not been discovered.

From Lob Nor Sven Hedin, in the spring of 1896, came back to Khotan via Teherien, Kipa, Nia, and Keria, and then returned to Keria in order to undertake a journey in northern Tibet. During the expedition the explorer discovered a lofty mountain range, whose highest peak rose about 24,000 feet, which was named Mount Oscar. He also found in this region 23 salt-water lakes. During the two months the expedition lasted not a single human being was met with. Sven Hedin then proceeded,

via Tsaidam, Kahu Nor, Sinin-Fu, Lian-Tehu, the deserts of Alia-Schan and Ordos, to Peking, which city he reached March 14, 1897, across northern China. The expedition, the cost of which was defrayed by the King of Sweden, Mr. Nobel, and several other rich Swedish gentlemen, was the means of securing botanical, geological, and archaeological collections (notably several Buddhist manuscripts found at Khotan) and about 500 sheets of topographical plans, as well as a large number of photographs.

A letter was received in October from Henry Savage Landor, who has just reached the frontier of India after an unsuccessful attempt to make his way into Lhasa, the Tibetan capital. Mr. Landor, who is an artist and writer besides being an explorer, says that he has had a wonderful journey, but had some terrible experiences in Tibet. Of 30 men who set out with him, 28 abandoned him a few days after they had crossed the frontier of Tibet. Mr. Landor proceeded for 56 marches with only one bearer and a sick coolie. He lost all his provisions, and then the Tibetans, by an act of treachery, made him and his men prisoners. They were put in chains and sentenced to death. The bearer was cruelly flogged, and Mr. Landor was brought to the execution ground. The Tibetans decided to behead him. A man held Mr. Landor by the hair, while another swung a long sword to right and left of his neck as a preliminary to the fatal blow. At the last moment the Grand Llama stopped the executioner and commuted the sentence to torture, which injured his spine, legs, feet, arms, and hands. Mr. Landor remained chained up for eight days, while his servants were kept in fetters and manacles for eighteen days. In the end the prisoners were released, and Mr. Landor is now in India, with 22 wounds."

M. Bogdanovitch, who has begun a tour of exploration in eastern Siberia, reports that the Samovoi mountains, which form 3 parallel chains, are rich in gold-bearing rocks, and that traces of gold are also found in the water courses.

A report from Mr. Bourne, of the British consular service, describes an extraordinary landslide on the banks of the upper Yangtse, creating a new and dangerous cataract, much the worst rapid in the Yangtse. All junks have to be emptied and their cargo carried at least half a mile. The rapid was formed on the night of Sept. 30, 1896, by a landslide after forty days of rain; and since then 100 junks and 1,000 men are said to have been lost. A block of ground, measuring 700 yards north and south by 400 yards east and west, has fallen from the slope of the mountain on the north bank, a distance of 150 yards, reducing the breadth of the river from 250 to 80 yards. The removal of this obstruction would probably present no great difficulties to a foreign engineer, but the Chinese are only making roads on both banks of the river out of Government funds and subscriptions of the trade guilds at Wanhien and Chung-King, as if they regarded the rapid as permanent.

Africa.—In a paper read to the Royal Geographical Society, "An Expedition to the Sources of the Niger," Col. J. K. Trotter, who was the principal British officer of the Anglo-French Delimitation Commission appointed in 1895, said that practically nothing was previously known about the Niger sources. When, on Jan. 13, 1896, the commission reached the western watershed of the Niger, whence from an elevation of 3,280 feet they looked down upon the Tembi valley, their native guides considered their task ended. They declined to point out the source of the Tembi, declaring that it was the seat of the devil, whom they had no anxiety to meet, though they were devil

worshippers. But the commission had not much difficulty in finding the source. They were disappointed at not finding the elevation of the Niger sources greater, the highest recorded being 3,379 feet. The adjacent country was mountainous, but none of the summits exceeded 5,000 feet.

In the western Sudan the Kulikoro has been explored throughout its length and its navigability proved, by the Hourst expedition, which in 1895-'96 descended the stream in a little aluminium steamer. M. Hourst says that Barth, notwithstanding the forty years and more that have passed since his explorations, is still held in pleasant remembrance by the native population, especially by the Tuareg.

In the Cameroons Lieut. Baron v. Stein discovered lately a small lake named Lungasi or Ossa, north of the lower Sanaga, and connected with it by a narrow, tortuous channel.

About Jan. 1 a party consisting of Acting-Consul-General Phillips and other officials and civilians, together with a number of Kroomen and native carriers, set out unarmed from the coast to go to Benin City on a peaceful errand. It was surprised on the frontiers of the chief of Benin City, fired upon, surrounded, and captured. All the white men in the party except Capt. Boisragon and Mr. Loeke were killed. The king and the country have a reputation for most terrible barbarities, and human sacrifices are common there; the city is said to be the seat of a powerful theocracy of fetich priests. The king and his chiefs were tried for the massacre. Three chiefs were convicted of murder and sentenced to death, and two were shot, while the third committed suicide. The king denied that he had anything to do with the crime, though he was reported to have said previously that he would kill the next white man found in his city. Capt. Boisragon has published a book giving details of the tragedy and describing the country.

The agreement between France and Germany upon the boundaries of Togoland, the German colony west of Dahomey, gives to it the island Bayol in the south, and in the north Gambaga and Sansanne-Mango, the northern boundary being the eleventh parallel. On the west is the neutral territory including Jendi and Salaga. Germany resigns the claim for an extension to the Niger based on the treaties made by Dr. Gruner and Lieut. von Carnap, and makes no further claim to Borgu, Gurma, and Gando. The neutral zone is in the back country of the English and German colonies of the Gold Coast and Togoland, the boundaries of which were created by an Anglo-German agreement of 1883. Its position is indicated on official maps by a square of which the northern limit is the tenth parallel and the southern limit lies about 10' above the eighth parallel, the western limit being drawn through 1° 15' west of Greenwich, and the eastern limit through 35' east of Greenwich. An agreement was made between England and Germany that this zone should be left neutral for conveniences of trade until such time as the colonies should be more definitely delimited. France was not a party to it. There is still a conflict of claims between France and England.

Lieut. Seymour Vandeleur describes the capital city of Bida as follows: "The main thoroughfares are fairly broad, and lead from one gate to another, bordered by great inclosures and compounds surrounded by lofty walls excellently made, and often 18 feet in height, and the doorways are in some cases roughly carved outside. The walls of the large buildings are very massive, and often the roofs of the rooms are arched and supported on pillars of black clay, which is polished and looks exactly like stone. Outside of the late Emir Meliki's palace

lies the slave market, where formerly it was common to see 200 slaves exposed of an evening for sale to the highest bidder. The entrance to the palace is covered with a high dome made of bamboos resting on thick walls, and supported at the bottom by short, carved wooden pillars. Between the main roads of Bida there is a network of narrow streets with walls on each side, and there are many mosques, though none of any size or importance. A stream leads to the Wanangi creek, which in the rainy season gives boat communication with the Niger. Bida is an interesting place, with its schools and institutions. A great many books and boards with Arabic writing, also a very tattered old lion skin with a plan and some Arabic characters on it, were found here. There are numerous dye pits in the town, and indigo forms a valuable article of commerce. The people are great workers in leather, and make very good saddles, scabbards, and slippers; they are also workers in glass. They are very superstitious, and carry charms wrapped up in little leather and leopard-skin cases; and they even tried to bring disaster upon us by planting little sticks with writing on them in the pathway. Ilorin, though not nearly so imposing as Bida, seemed to cover an immense area, and, I afterward found out while employed in making a plan of it, is nine miles in circumference, and, except on the northeast, is surrounded by a dilapidated mud wall. From the many gateways well used roads lead in all directions across the open grass country."

According to a German traveler, Capt. Langheld, Lake Rikwa, or Leopold, east of Tanganyika, has almost disappeared. He made a journey through the region in January and February, 1897, and was told by the natives that about six years ago the lake was so dried up that only a pond remained with great swamps in the southeastern part of what had been the lake. Other travelers have reported that the lake seemed to be drying up.

Poulett Weatherly, who has been traveling for some years in Central Africa, has written a letter, descriptive of a visit made recently to Lake Bangweolo, which throws some new light on the geography of this part of Africa. "The Luapula," he writes, "up to the falls, Mambilima No. 1, or Johnston's Falls, must be delightful. From where I struck it, 30 or 40 miles south of Kinyama's present Bona, you get delightful reaches, but above and below each of those reaches are rapids without end. There seems but little deviation in its course. It is, in most parts, tremendously broad. Where it leaves Bangweolo it is fully a mile wide. Giraud put it at 250 feet. What surprises me is, that the adjoining curious lake, Chifunanti, should have escaped notice, but I fancy Livingstone saw it, and thought it Bangweolo. It is one to three miles in breadth, and runs the whole length of Bangweolo. Lifungwe is marked as an island; it is an isthmus of white sand hills, 30 to 50 feet above the lake level, and 400 to 600 yards in breadth, extending from a little to the west of the Liposochi, right away down till it merges in the south shore of Bangweolo. Bangweolo is distinctly wrong. It is Bangweulu, meaning, 'There where water and sky meet.' A native points and says, 'Ulu,' in varied intonations, according to the distance, extending one arm and snapping his fingers. The whole of the east and northwest shores are swamp. The whole way from the Luapula to Kirui is a wall of papyrus."

Some notable discoveries were made in eastern Africa by Mr. H. S. H. Cavendish, who began a journey through Somaliland in September, 1896, and was gone a year. About 100 miles east of Lake Stefanie he found a remarkable salt crater, 1,300 feet deep; while south from it, and afterward

west of Lake Rudolf, he discovered beds of good coal. West of Lake Rudolf is a mass of uninhabited mountains, separated from the lake by a plain 50 miles wide, which is often flooded in part by the waters of the lake. The Teleki volcano, which Dr. Donaldson Smith saw in activity, has disappeared as if shattered by a convulsion, nothing being found now in its place but a plain of lava. Mr. Cavendish discovered a new lake in which a former volcano had been engulfed not far from Lake Baringo.

Noteworthy journeys have also been made in East Africa by Mr. Ramsay, who in 1896 explored the region between Tabora and Tanganyika, and confirms the report of the lowering of the surface of this lake, and who also examined the Lussisi river, and by Lieut. Brasseur, who visited the hitherto unexplored parts of the Lualaba and the Luapula, whose junction forms the Congo. He holds the Lualaba to be the head stream of the Congo, basing his opinion on geologic grounds, though he admits that in both length and volume the Luapula is the greater stream. He also explored the great bend of the Ubangi and some of its tributaries not hitherto laid down on the maps, the principal of which is the Lua.

Intelligence was received in May that many of the Bôttego exploring party in East Africa had been killed in an encounter with natives while attempting to enter Ethiopian territory on the Galla side. The news was afterward confirmed. Capt. Bôttego was killed. Two of his companions, Lieuts. Vannutelli and Citerni, were taken prisoners, but afterward released. They brought away the results of the explorers' work, which are important. The course of the river Omo, which has been in doubt, was settled; it proves to be identical with the Nianam, the principal tributary of Lake Rudolf. It runs through a narrow valley bordered by high mountain walls. The Sobat river was examined as well as the Upeno, its main tributary, a wide but shallow stream. The borders of the southern Ethiopian range of mountains were located and the western side of Lake Rudolf was surveyed. A lake which was known to exist but had not been explored was visited. It is described as very beautiful, about 95 miles long and containing 12 inhabited and cultivated islands. The native name is Pagade, but the explorers named it Lake Regina Margherita. It is connected by a short effluent with a smaller lake, which was called Abbaya by Prince Ruspoli, but was named by them Chiamo; but it seems to have no connection with Lake Stefanie. The party traversed 6,000 kilometres, 3,000 of which were through regions hitherto unknown to Europeans.

Australia.—The Calvert exploring expedition set out in June, and reached the Fitzroy river after suffering great hardship from scarcity of water. Mr. A. F. Calvert gave the following details in December, 1896: "Mr. Wells, the leader of the expedition, says that his hardships began when he was unable to find Johanna springs, and he attributes this mishap to their being wrongly mapped on the chart or else dry. He was then 500 miles distant from the Fitzroy. He pushed on to a small native well, out of which he managed to get 360 gallons of water in two days. As his camels were in a very bad way, he abandoned all his extra gear, firearms, ammunition, specimens, photographic camera, and survey plant, and five camels. Mr. Wells wisely reserved four buckets of water, which eventually proved to be the means of saving the party, for one of their stages without water was one of 200 miles. Mr. Wells describes the country as simply a red desert, consisting of nothing but sandstone. Mr. Keartlands, the naturalist, had to abandon his collection

of about 3,000 specimens. Two of the party left the line of traverse 360 miles from the Fitzroy to make a flying trip 80 miles west, cut the surveyor's line, and meet Mr. Wells, but they have not since been heard of. The missing members are Mr. G. L. Jones, the geologist, and Mr. C. F. Wells. The bodies of the two missing explorers were found in June about 20 kilometres southwest of Johanna springs; there seemed to be no doubt that they had died from thirst.

Polynesia.—The Royal Geographical Society sent an expedition to the Ellice Islands last year, to make borings with the object of throwing light on the origin of coral islands. The borings could not be successfully carried through the sand-filled hollows of the coral; but this year the operations were renewed at Funafuti with improved apparatus, and were carried to a depth of 643 feet without reaching the end of the coral formation. The result supplies confirmation of Darwin's theory of the origin of such islands.

GEORGIA, a Southern State, one of the original thirteen, ratified the Constitution Jan. 2, 1788; area, 59,475 square miles. The population, according to each decennial census, was 82,548 in 1790; 162,686 in 1800; 252,433 in 1810; 340,985 in 1820; 516,823 in 1830; 691,392 in 1840; 906,185 in 1850; 1,057,286 in 1860; 1,184,109 in 1870; 1,542,180 in 1880; and 1,937,253 in 1890. Capital, Atlanta.

Government.—The following were the State officers during the year: Governor, William Y. Atkinson; Secretary of State, Allen D. Candler; Treasurer, W. J. Speer; Comptroller, William A. Wright; Attorney-General, Joseph M. Terrell; Adjutant General, J. McIntosh Kell; State School Commissioner, G. R. Glenn; Commissioner of Agriculture, Robert T. Nesbitt; Commissioner of Pensions, Richard Johnson; Railroad Commissioners, Allen Fort, L. N. Trammell, and T. C. Crenshaw; State Librarian, John Milledge; State Geologist, W. S. Yeates; Chief Justice of the Supreme Court, Thomas J. Simmons; Associate Justices, Samuel Lumpkin, Spencer R. Atkinson, Andrew J. Cobb, William A. Little, and William H. Fish. All the State officials are Democrats.

Finances.—The report of the Treasurer in October shows that the cash balance in the Treasury when he took the office was \$466,923.08, and that the receipts since have been \$2,929,388.89, making a total of \$3,396,311.97. The disbursements during the same time amounted to \$2,974,065.77, leaving a balance of \$422,246.20. This balance does not consist of cash, but is largely represented by the semiannual interest on the public debt paid on July 1, advances to the civil establishment for the quarter ended Sept. 30, the *per diem* and mileage for the extra session of the Legislature, and expenses of the investigating committee authorized by resolution approved Feb. 4, 1897. All these will appear in the next annual report of the office.

The Comptroller's report shows that the total of taxes due to the State from the various counties for 1897 was \$2,269,741.33.

The pensions paid by the State amount to more than \$500,000, of which widows of Confederate veterans get about \$240,000. About 6,000 veterans have filed applications.

Education.—The following on the schools of the State is from the Atlanta "Constitution":

"In 1895 about 250,000 of our school population out of 600,000 did not attend school at all. The schoolhouses were for the most part so uncomfortable that the children could not attend in the winter term, and in the spring and summer those who were large enough were obliged to work. Our present policy of maintaining the public-school system is radically wrong. Some of the counties, in self-

defense, have supplemented the fund they receive from the State with money raised by local taxation, and wherever this has been done the result is satisfactory. The great majority of the counties are content with the pittance received from the State fund—a pittance that is not sufficient to provide comfortable schoolhouses, much less pay capable teachers. In 1895 the average pay of teachers in schools supported by local taxation was \$502 a year. In the country schools unsupported by local tax the pay of teachers was \$120 a year."

The sum given for the school fund for 1897 was \$1,169,945, less \$6,585, which was devoted to expenses. The fund was apportioned at the rate of \$1.92 *per capita* of school population. This was about 1 cent and 3 mills greater than in 1896.

The School of Technology, at Atlanta, sent out a class of 8 in June. At its entrance the class numbered 60.

At the Normal and Industrial School more than 200 applications for admission were refused for lack of accommodations in June; 260 had applied for admission in September. A course of one year will be added to the normal department separate from the collegiate department, designed to give practical instruction to teachers.

The Industrial School for Negroes has a fine new building near Savannah, and is in charge of six colored professors. In addition to the industrial work in wood and metal, the literary curriculum is high for a Southern negro school, and the standard in all departments is most excellent.

The State University, at Athens, had 301 students in 1896-'97, and graduated 87 at its ninety-sixth commencement, in June, 43 of whom were in the law class. This institution was originally Franklin College, and as such a fund of \$20,000 was given to it for the endowment of a professorship of agriculture. When the grant from the Morrill fund was accepted by the State, a College of Agricultural and Mechanical Arts was organized, and the two colleges were united as the University of Georgia.

The chancellor and the Board of Visitors recommended that the university should be opened to women. The Board of Trustees declared itself favorable to this change, but decided that it had no power to act until the Legislature should take steps in the matter. More about the university will be found under the head "Legislative Session."

Emory College graduated a class of 37 in May.

The number of students at the State Normal School has increased in two and a half years from 23 to 557. The school was opened April 17, 1895. The Legislature grants \$22,500 a year. About \$12,000 of the amount has been used this year for buildings and permanent improvements, only \$7,000 having been specially appropriated for that purpose since the establishment of the school.

A staff correspondent of the Atlanta "Constitution" says: "A roll call of 23 pioneers in April of 1895 has increased to the marvelous proportion of 557 in October of 1897. Coeducation of young women and young men has proved the success of that plan, and what the university has feared to touch for a hundred years has been accomplished here in a day. Co-operation has demonstrated that students may be well housed, well fed, and well instructed for \$7 a month. 'I was driving along a country road to catch an early train,' says School-Commissioner Glenn. 'I passed a field where half a dozen white children were at work, and shortly after came across a party of negro children going to school. The whites in the field, the negroes at school! My heart bled for my race.' 'Riding in a railroad train,' says Mrs. W. H. Felton, 'I saw a well-dressed negro girl who had just laid down a book she was reading. It was one of the Greek

classics in the original tongue, and the girl was reviewing it. Looking out of the car window I saw a white girl whose thin garments but ill concealed her form. She was picking cotton. My mind, in horror, shrank from a contemplation of the contrast of the present as well as that of the future unless there was a change.'"

State Institutions.—The building for negroes at the Insane Asylum was almost totally destroyed by fire Jan. 9, and but little of the furniture was saved. There were about 1,000 inmates, one of whom died in the excitement of removal. The cost of the building was \$90,000 originally, and within the past year two additions have cost \$30,000 each. The insurance is \$71,000.

The Soldiers' Home was ordered sold by decree of court, and in November the trustees advertised for bids. Funds were raised by private subscription and a fine building was erected, with the expectation that the State would accept and maintain it. The State refused, and the building never has been occupied.

At the Academy for the Blind, at Macon, there are 93 in the department for the whites and 23 in that for negro children. The expense for maintenance for each is \$3.80 a month, and the expenditure for clothing is not more than \$5 for the ten months.

A convict camp at Dakota was struck by lightning June 27. The men, to the number of about 150, were at supper. About 50 were struck to the floor, 3 were killed instantly, 2 died from the shock, and 20 were injured.

The Penitentiary convicts number about 2,340.

Convict Camps.—The Governor appointed Philip G. Byrd in the spring to investigate the condition of the county misdemeanor-convict camps of the State. This report, made in August, charges definitely and distinctly that the keepers of the misdemeanor convicts are guilty of these things: Robbing convicts of their time allowances for good behavior; forcing convicts to work fourteen to twenty hours a day; providing them no clothes; no beds; no heat in winter; no ventilation in single rooms in summer in which three score of convicts sleep in chains; giving them rotten food; allowing them to die when sick for lack of medical attention; outraging the women; beating to death old men too feeble to work; killing young men for the mere sake of killing; suborning jurors and county officers whose duty it is to avenge the wrongdoing of guards; cheating the State. The commissioner visited 51 chain-gang camps and inspected 1,793 convicts. These included 25 county camps, 2 municipal camps, and 24 chain gangs operated by private individuals. It is to be understood that this state of affairs applies only to part of the leased convicts. As a rule, those worked by cities and counties are well treated. The leased convicts numbered about 800. A sensation was caused by the publication of the report, and it was further disclosed that the leasing of convicts to private individuals was against the law of the State, which declares that they shall be employed upon public works and not given into the control of private persons. It therefore fell within the province of the courts to see that the private camps were broken up. The judges to whom the Governor forwarded the information gathered by the commissioner acted promptly, and the convicts were generally returned to the custody of public officers.

Militia.—A battalion of naval reserves has been added recently to the State Guard. They held their first encampment in July, on board the old monitor "Passaic," in St. Simon's Sound. There were present 120 men, with officers. The infantry, artillery, and cavalry companies were in camps of instruction in June at Griffin and Meldrim.

Banks.—The State Treasurer examined 116 banks during the year ending Sept. 30. There have been 3 failures and 3 have gone into voluntary liquidation. The Treasurer recommended some legislation for the better protection of depositors and stockholders. In particular, he says the "loans to officers and directors of banks should be in some way restricted and more fully protected. Their own bank stock is not sufficient or proper collateral for such loans, and should not be counted. This is the greatest difficulty with which the examiner has to contend, and is the prime cause of nearly all bank failures."

Since the State Savings Bank went into the hands of a receiver about \$30,000 of the \$108,000 of its indebtedness has been paid, and it is said that the amounts which can be recovered from stockholders under the double-liability clause in the bank's charter will be sufficient to pay the indebtedness in full.

The cashier of the Georgia Savings, Loan, and Banking Company confessed, April 25, to being a defaulter to the extent of \$45,000.

Loan Associations.—The report of the Georgia receivers of the Southern Mutual Building and Loan Association shows the total liabilities to be \$879,208.66, and the assets \$651,262.53. The receiverships in other States have been made ancillary to the Georgia receivership.

A bill for a receiver was filed against the Southern Home Building and Loan Association of Atlanta in November. The association declared that it was absolutely solvent.

Railroads.—Petition was made to the Railroad Commissioners in the summer for a reduction of 25 per cent. on the rates for hauling cotton, on the ground that the rates established some time ago by the commission are unreasonable under present conditions, and that the roads can afford the reduction. Hearings were given to the petitioners and to the roads, and the commission refused to order the reduction, judging from the reports of the companies that they were not in a condition to stand a loss in their revenues. One commissioner dissented from the decision.

Statements made by some of the companies to the commissioners showed their condition as follows: The Western and Atlantic's statement was—Gross earnings, \$9,137,629.52; net earnings, \$2,611,055.97; rental, interest, taxes, \$2,919,993.01; deficit, \$308,937.04.

The net earnings from the operation of the entire Central of Georgia railway system for the year ending June 30, 1897, were \$1,918,883. The company failed to earn within \$35,867.68 of its fixed charges and rentals, and had it not been for revenue derived from other investments of the railway, there would have been a deficit. In addition to this, it was shown that the Central's rates have been falling for years. A reduction of 25 per cent. on cotton rates would cost the Central \$138,255.50 on the basis of the average year's tonnage.

The Oconee and Western protested against the reduction because the company never has made a cent of money in its history. It has not paid any interest on the bonds for more than two years.

The Atlanta and West Point showed that the proposed reduction of 25 per cent. would decrease its revenue from \$7,500 to \$10,000.

The Plant system showed that it made only \$10,000 in Georgia last year above its operating expenses, and a reduction of 25 per cent. on cotton rates would cost it nearly \$29,000.

The Georgia Southern and Florida showed that it could not stand a reduction and keep out of the receiver's hands.

The Southern Railway showed that its lines made \$2,290,000 more in 1891 than in 1896, and this it

attributed to the reduction in rates which has been going on all the time through competition and the orders of railway commissions. Its net earnings have fallen off 15 per cent. in five years.

The rates on fertilizers were reduced 20 per cent. in January.

The Attorney-General, who made a report in October, says he has succeeded in collecting nearly all the taxes due the State by railroad companies now in charge of receivers. The case of the Northeastern was still in the courts.

The Northeastern Railroad was put up at auction in June, in accordance with the action of the Legislature of 1896, but there were no bids. The upset price was \$287,000.

Products.—The State produced 1,236,323 bales of cotton in 1896.

Georgia is said to have the best fire clay in the United States, and a bed of it has been found extending across the State from Columbus to Augusta, passing just south of Macon and near Milledgeville. The bed varies in width from 5 to 15 miles, and follows an irregular line. G. E. Ladd, assistant State geologist, who has been testing them, says: "I was astonished to find these clays the most refractory in the United States. They will stand a greater heat than any clay I have ever tested in America."

The product of gold in 1896 was estimated at \$155,000. None of the mines of Georgia have been worked to any considerable depth, no mine around Dahlonega being as deep as 200 feet. The Creighton (Franklin) mine, in Cherokee County, is the deepest in the State, being nearly 500 feet deep. The general run of the ore averages between \$8.50 a ton.

Okefinokee Swamp.—This tract, comprising nearly 300,000 acres, was placed in the hands of a receiver in June, on account of the insolvency of the Suwanee Canal Company, by which it was bought from the State about six years ago at 26 cents an acre. The design was to open a canal to St. Mary's river, and the work was begun, but was found to be impracticable after it had been carried several miles, as the sandy desert in the center of the swamp became a barrier. The sand accumulated in the bed of the canal as fast as it could be shoveled out, and hence the canal was abandoned and a railroad was constructed from the end of the canal to the Savannah, Florida, and Western main line, and a boat was operated upon that bed of the canal which had been built. A large boat was secured, with which the trees were pulled up by the roots. As the work of draining the swamp progressed the owners saw a fortune in cypress timber and the supply appeared to be inexhaustible. Many sawmills were purchased and put into operation, and the cypress was placed on the market. Gradually the trees disappeared in the vicinity of the mills, and it became necessary to go farther out into the swamp to get the timber. This increased the expenses of operating. Large sums were advanced, and, now that most of the timber accessible is cut away, it is not deemed advisable to carry the work further.

Cotton-Growers' Convention.—The cotton growers of six Southern States met in Atlanta Dec. 14, and took steps toward the organization of a Southern Cotton-Growers' Association, the object of which shall be the protection of the industry in the South. The convention unanimously declared in favor of reduced acreage as the most feasible means of raising the price of the staple; against the present system of gambling in cotton futures; heartily approved the American Cotton-Growers' Protective Association; declared in favor of making farms self-sustaining; determined to avoid poli-

ties; and decided to perfect an organization of cotton growers, extending into every State, county, and district of the cotton-growing regions.

Labor Strike.—In August the Fulton Bag and Cotton Mills in Atlanta employed 20 colored women and put them at work in the mills. In consequence, more than 1,400 operatives employed there went out on strike. It was settled in a few days, the superintendent promising to remove all negroes in direct contact with white labor, and to hold no operatives responsible for the present condition.

Lawlessness.—Several cases of lynching occurred during the year. One of these was that of Dr. W. L. Ryder, who murdered a young lady at Talbotton because she refused him. A local newspaper says: "The affair was so open that there was never for a moment a suggestion of doubt as to Dr. Ryder's guilt. He was brought to trial, and after a hard-fought legal battle, was convicted and sentenced to be hanged. Then began the usual contest for saving the life of the condemned through technicalities. The case was taken to the Supreme Court, and a new trial secured. A called term of the lower court was convened for the purpose of hearing the case. There were presented certain reasons why the trial should go over until another term of the court, and a continuance was granted. About fifteen months had passed since the commission of the crime when this last stay was granted. The prisoner was on his way from Talbotton to Columbus to be held for safe keeping, when a mob seized him and carried to its conclusion, without the right of law, the sentence of death that was imposed upon him at his first trial."

The newspapers generally laid the blame for the crime upon the law's delays.

Legislative Session.—An adjourned session of the General Assembly began Feb. 3. Its special object was to receive the vote on the report of an investigation that had been held of charges made by Senator Carter against Judge Seaborn Reese, of the Northern circuit, and Judge Joel L. Sweat, of the Brunswick circuit. The special committee reported that there was no ground for impeachment proceedings.

A resolution passed the House providing for the appointment of a committee of five to investigate all the departments of the State government and all the State institutions, and to report to the next General Assembly the expense of maintaining each of said departments and institutions, and recommending such reforms and rules of retrenchment as in its wisdom may be admissible without injury to said department or institution.

The Legislature convened for its regular session Oct. 27. The Governor devoted much space in his message to the subject of lynchings, urging action to prevent them. In reference to the lynching of innocent men he said: "I feel the more deeply upon this question because, from the best information I can secure, I believe that during my administration there have been in this State several men lynched who were not guilty of the crimes with which they were charged. I am informed that one man, whom the mob believed to be guilty, was shot down. A question then arose as to his identity, and he was salted down like a hog, shipped to the location of the crime, and found to be the wrong man—an innocent man. During my term of office one man who was rescued from the mob was accorded a trial, which resulted in showing that he was not guilty. Another fled from the mob to the executive office and asked for protection and a trial by jury. They were given him, and it developed that he was not guilty of the charge for which the mob endeavored to take his life."

The following resolutions were introduced the first day and passed:

"Whereas, In the town of Hogansville, State of Georgia, the President of the United States has seen proper to appoint to the office of postmaster a man whose appointment was opposed by 90 per cent. of the property owners and responsible citizens of that community; and,

"Whereas, In no other section of the United States would the President make, or permit to be made, an appointment of like character—on the Pacific slope the President would not dare appoint as postmaster of any town a Chinaman over the protest of 90 per cent. of its property owners and responsible citizens, nor would he dare in any town in the North or East appoint to a local office one who was opposed by 90 per cent. of the best people of the locality; and,

"Whereas, On the night of Sept. 16, 1897, unknown parties are said to have shot and attempted to kill the said appointee; therefore,

"Resolved by the House of Representatives of the General Assembly of the State of Georgia, That if said attempt to shoot said appointee be true, which we have reasons to disbelieve, we condemn in unmeasured terms the lawless conduct of the would-be assassins.

"Resolved, That we deplore this and similar appointments as exhibitions of petty spite and narrow sectional hate, unworthy the high office of chief magistrate of this great nation.

"Resolved, That we appeal to impartial public opinion to enter its powerful protest against presidential appointments to office for the manifest purpose of affronting and humiliating a community of American citizens for no other reason than a difference in party affiliations."

Resolutions were also adopted asking Congress to enact a national quarantine law, and favoring a constitutional amendment providing for the election of United States Senators by the people.

The committee appointed at the adjourned session, of which A. O. Blalock was chairman, began its work June 8, and reported to the Legislature Nov. 3. One member of the committee, J. D. Little, presented a minority report.

The majority report criticised the management of the university, or rather of the funds appropriated by the National Government for agricultural education, recommending that the College of Agricultural and Mechanic Arts be separated from the university. It was held by the committee that the agricultural department was of no value whatever, and was maintained merely for the purpose of securing the appropriations.

An extract was given from the catalogue for 1896-'97, in which it is said that farming is practically taught, and elaborate details of the instruction are given, and it is said that the college farm is conducted as a model, that it is designed that the students in agriculture shall take actual individual part in all the operations on the farm. The committee's report says: "We visited this model farm. There was no diversity of crops thereon. We did not observe any evidence of skill or care in its management. It was pronounced by the committee and all who referred to the farm in our presence as a failure. It has not been visited in several years either by faculty, trustees, or students, therefore the glowing results in the catalogue are not and could not be realized, and this failure of beneficial results is mainly chargeable to the absence of interest, purpose, and effort on the part of those in control."

It was found, according to the committee, that the taxable values of the State are constantly shrinking; that between 1891 and 1896 there was a

shrinkage of approximately \$51,000,000. The cause was set down to the present system of levying and collecting tax.

The committee reported the work of the geological department unsatisfactory, and recommended that no appropriation be made for its support the coming year. No field work to amount to anything has been done, it is said.

Criticism is made of the management of the agricultural department. Unnecessarily large rates had been paid for fertilizer tags, according to the report, and the oil inspectors, who are appointed by the Commissioner of Agriculture, had been paid, one at the rate of about \$50 a day for time actually spent, and the other at about \$25.

Reductions of salaries of the Railroad Commissioners and other officials and their assistants were recommended.

In consequence of the report on the State University the Legislature listened to addresses by the President of Emory College and a representative of Mercer College, both of whom urged the repeal of legislation favoring the State University and giving it an advantage over the denominational colleges. The faculty of the university replied to that part of the committee's report alleging that the faculty was hostile to the agricultural department, denying any such sentiment. The chancellor of the university addressed the Legislature, protesting against the proposed separation of the Agricultural College, and advocating the admission of women to the university.

The State geologist made a defense of his department, reviewing the work of issuing bulletins of interest and advantage to the people, mentioning those on marbles, corundum deposits, water powers, phosphates, and marls; on cotton, artesian wells, good roads, and other questions of interest; the examination of mineral deposits and forestry resources, the building up of the State Museum, the preparation of the exhibit for the Tennessee Exposition, and other work. The House committee resolved on the reorganization of the department.

The subject of convict labor took up much time in the Assembly, some better way than the existing lease system being urgently called for. A prison commission was created, consisting of three members, to serve at \$2,000 a year. The full term is five years.

A bill to prohibit prize or match games of football, or any other games of like character, was introduced at the preceding session, sent to a committee, and not reported. It was recalled to the attention of the Assembly by the death on the football field, Oct. 30, of R. V. Gammon, a member of the State University team. The occurrence called out general condemnation of the game on account of its brutality, and the Legislature passed the bill but it was vetoed by the Governor.

Among important bills introduced were the following:

Providing for the Australian ballot system.

Prohibiting any agent of a whisky firm going into a county where local option has prohibited whisky and taking orders for whisky.

To enlarge the power of exemption from taxation of all places of religious worship or burial and also all property belonging to colleges and incorporated schools, and to provide for the proper ratification by the people, etc.

Providing for repayment of insurance premiums to the policy holder, where a company has contested and won the suit.

Providing that the wages of all journeyman mechanics and day laborers in excess of \$1 a day shall be subject to garnishment.

To abolish the fee system.

For establishing a library commission.

Making attempt at rape a capital offense.

Allowing half-blood brothers and sisters on the maternal side to inherit equally with those on the paternal side in the estate of an intestate brother or sister.

For a tax on life insurance policies.

Providing for the establishment of a board of dental examiners, and making it unlawful for any person to engage in the practice of dentistry in the State without a license from the board, except such as have the right at the time of the passage of the act under existing laws.

Making the birthday of Jefferson Davis a legal holiday.

Removing the capital of DeKalb County to Stone Mountain.

Prohibiting the sale of cigarettes to minors.

Imposing a penalty for adulteration of foods.

Appropriating \$10,000 for establishing a textile department at the technological school, at Atlanta. The money is not to be available until an equal amount is given in cash or machinery by private subscription.

Among the measures defeated were these: For uniform school text-books throughout the State; providing for establishing a dispensary system in counties having no prohibition, if a majority of the voters should so desire; to abolish child labor; for a constitutional convention; to legalize prize fighting; providing for punishing any one who hires out misdemeanor convicts to private parties, or any such party receiving them; and an "anti-barroom" bill.

Political.—Serious trouble arose over the appointment of a negro postmaster at Hogansville. The former postmaster refused to resign the office, and continued to receive and distribute the mail, supported by the white people of the town, who had boycotted the President's appointee; and the latter was shot by some one unknown, and badly but not fatally hurt. Postal inspectors were sent to the town, and the ex-postmaster was threatened with prosecution for handling the mails without authority. It is said that probably 900 of the 1,500 inhabitants of the town are negroes. The new postmaster was educated in the public schools, and graduated at Clark University.

Great indignation was expressed at the appointment of a negro as collector of internal revenue for Georgia. Ten of the deputy collectors and storekeepers resigned as soon as he came into office.

The Savannah Cotton Exchange and Board of Trade adopted emphatic resolutions, Dec. 20, against the appointment of negroes to Federal office. The feeling in regard to these and similar appointments is expressed in the resolutions passed by the General Assembly, given under the heading "Legislative Session."

The People's party held a convention in Atlanta, June 22, and delegates were chosen to the national conference of the party held at Nashville, July 4. "That we condemn and disapprove of fusion as practiced in the past" was one of the resolutions adopted.

GERMAN EVANGELICAL SYNOD. The statistics of this body for 1897 give it 1,130 churches, 878 ministers, and 194,618 communicants, and show an increase of 29 churches, 12 pastors, and 8,618 communicants. The synod supports one of the very few homes for epileptics in the United States, at Emmaus, near Marthasville, Mo. Another institution has been founded near St. Charles, Mo., for treatment of less severe cases. One hundred home missionaries were supported during the year. The sum of \$10,000 was contributed for the

relief of sufferers from famine in India, chiefly in the provinces of Birsampur, Chandkari, and Rairpur, where the missions of the Synod are situated. Much was done for Sunday schools by numerous conventions and otherwise, and interest in them is represented to be much larger than heretofore. A plan for a Union of all the Young People's Societies has been proposed, but thus far it has not yet been carried out.

GERMANY, an empire in central Europe composed of the federated German states. The King of Prussia is German Emperor, and as such has supreme charge of political and military affairs, with power to conclude peace and, in case of an attack on the territories of the empire, to declare war; for an offensive war he must have the consent of the federated governments. The legislative bodies are the Bundesrath, or Federal Council, and the Reichstag, or Imperial Diet. The acts on which they agree become law on receiving the Emperor's assent and being countersigned by the Chancellor of the Empire. The Bundesrath has 58 members, appointed by the governments of the federated states. The Reichstag has 397 members, 1 to 124,500 inhabitants, elected by universal manhood suffrage and by secret ballot for the term of five years.

The German Emperor is Wilhelm II, born Jan. 27, 1859, eldest son of Friedrich III of Prussia, whom he succeeded on June 15, 1888. The Chancellor of the Empire is Prince Hohenlohe-Schillingfurst, appointed Oct. 29, 1894, on the retirement of Gen. Caprivi. The following were the imperial ministers at the beginning of 1897: Minister of Foreign Affairs, Freiherr A. Marschall von Bieberstein; Minister of the Interior, Dr. Karl Heinrich von Bötticher; Minister of Marine, Vice-Admiral Hollmann; Minister of Justice, A. Nieberding; Minister of the Treasury, Graf A. von Posadowsky-Wehner; Secretary of State for the Imperial Post Office, Dr. von Stephan.

Area and Population.—The area of the German Empire is 208,670 square miles. The population on Dec. 2, 1895, was 52,279,901, having increased in five years from 49,428,470, in ten years from 46,855,704, since 1837 from 31,589,547, and since 1816 from 24,831,396. In the total population in 1895 there were 25,661,250 males and 26,618,651 females. The population dependent on agriculture, forestry, etc., on June 14, 1895, numbered 18,501,307; the industrial population, 20,253,241; the number depending on trade and traffic, 5,966,845; on domestic service, 886,807; on the army and public service, 2,835,222; without occupation, 3,326,862; total enumerated, 51,770,284.

The number of marriages in 1897 was 408,066; of births, 1,904,297; of deaths, 1,207,423; excess of births, 696,874. The number of emigrants in 1895 was 37,498, of whom 32,503 went to the United States, 1,405 to Brazil, 2,359 to other South American countries, 886 to Africa, 134 to Asia, and 211 to Australia. During twenty-five years the total emigration to the United States had been 2,370,958, and to Brazil 48,444.

Finances.—The imperial revenue is derived from customs, certain excise duties, stamps, the profits of the post office, telegraphs, and railroads, and assessments made on the states in proportion to their population to cover the deficiency. The ordinary revenue for 1897 was estimated at 1,219,714,000 marks and extraordinary receipts from loans, etc., at 28,159,000 marks, making a total of 1,247,873,000 marks. The ordinary expenditures were calculated at 1,227,169,000 marks, the extraordinary expenses for military and other purposes at the amount of the extraordinary receipts; total, 1,255,318,000 marks. The receipts from customs

and excise were estimated at 634,665,000 marks; stamps, 61,000,000 marks; posts and telegraphs, 33,914,000 marks; printing office, 1,525,000 marks; railroads, 23,464,000 marks; Imperial Bank, 5,618,000 marks; departmental receipts, 18,476,000 marks; interest of Invalid fund, 28,862,000 marks; various receipts, 1,582,000 marks; Federal contributions, 410,605,900 marks. The ordinary expenditure under the various heads was estimated as follows: Reichstag, 654,900 marks; Imperial Chancellery, 154,900 marks; foreign affairs, 10,606,500 marks; interior, 33,567,800 marks; army, 479,074,000 marks; navy, 55,382,300 marks; justice, 1,974,100 marks; imperial treasury, 392,509,900 marks; railroads, 355,500 marks; debt of the empire, 75,942,500 marks; audit, 737,300 marks; Pension fund, 56,562,100 marks; Invalid fund, 28,862,500 marks. The actual expenditure was 1,995,700 marks less than was anticipated in the budget. There was a saving of 4,372,000 marks in the estimated expense of the army and of 3,637,000 in the amount required for the debt, while the navy required 454,000 marks more than was estimated, the colonial department of the Foreign Office 1,973,000 marks more, the Ministry of the Interior 1,000,000 marks more, and the postal and telegraph services 1,131,000 marks more. The revenue receipts were 76,471,145 marks above the estimates. The receipts from customs and tobacco exceeded the estimates by 78,000,000 marks. The law of March 29, 1897, required 50,000,000 marks of the surplus revenue to be applied to diminishing the imperial debt, after deducting which there was still a surplus of 28,467,115 marks.

The funded debt of the empire on March 31, 1895, amounted to 2,081,219,800 marks, paying 3, 3½, and 4 per cent. interest. There were in addition 120,000,000 marks of treasury bills. The Invalid fund amounted at the same date to 447,708,500 marks, and the war treasure of 120,000,000 marks in gold was preserved in the fortress of Spandau.

The following table gives, in marks, the ordinary budgets and the debts of the several German states for 1897, or, in the case of a few, for 1896:

STATES.	Revenue.	Expenditure.	Debt.
Alsace-Lorraine.....	52,441,216	51,007,881	24,395,100
Anhalt	23,065,600	23,065,600	975,579
Baden	79,168,591	86,551,695	335,998,769
Bavaria	345,356,505	345,356,505	1,386,875,020
Bremen	18,748,544	27,985,237	135,161,850
Brunswick	12,930,000	13,726,900	27,916,738
Hamburg	72,273,218	73,371,167	325,827,281
Hesse	27,352,964	27,563,830	49,337,748
Lippe	1,194,318	1,194,318	.....
Lübeck	4,684,748	4,684,748	19,597,621
Mecklenburg-Schwerin	4,040,000	4,040,000	111,015,000
Mecklenburg-Strelitz.....	.....	.....	6,000,000
Oldenburg.....	9,210,571	10,445,551	46,614,244
Prussia.....	1,939,258,169	1,939,258,169	6,476,691,805
Reuss-Greiz	1,332,418	1,332,418	91,050
Reuss-Schleiz.....	2,386,900	2,379,734	1,040,550
Saxe-Altenburg	4,057,798	4,056,189	887,450
Saxe-Coburg-Gotha ...	2,012,182	2,647,190	3,238,086
Saxe-Meiningen	2,827,993	2,207,480	9,485,558
Saxe-Weimar	9,656,218	9,656,218	4,870,943
Saxony.....	77,604,250	77,604,250	669,521,350
Schaumburg-Lippe....	931,281	931,281	360,000
Schwarzburg-Rudolstadt	2,757,700	2,757,700	3,907,088
Schwarzburg-Sondershausen	2,964,755	2,964,755	3,042,344
Waldeck	1,401,428	1,401,428	2,068,800
Württemberg	70,900,447	71,744,325	468,051,000

The Army.—The Kaiser is the supreme chief of all German troops, though Bavaria, Saxony, and Württemberg have separate military organizations. He has the right to erect fortresses at any point, to declare any district in a state of siege, and to con-

trol all appointments and all matters concerning the organization, administration, or employment of the troops of any of the states. All the German troops swear to give absolute obedience and fidelity to the Emperor. Every German is liable to service in the army, and no substitution is allowed. There are about 360,000 able-bodied young men who reach the age of twenty every year, and of these the required number are drawn by lot for service in the active army, while the rest are attached to the reserve troops and receive some drill. The peace strength of the regular army for 1897 was 22,687 officers and 562,207 men, with 97,378 horses. The infantry consisted of 173 regiments of the line, 19 rifle battalions, and 228 district commands, numbering altogether 12,948 officers and 383,314 men. There were 93 regiments of cavalry, numbering 2,352 officers and 65,375 men. The 43 regiments of field artillery had a numerical strength of 2,671 officers and 58,321 men. Of foot artillery there were 17 regiments and a battalion, numbering 869 officers and 22,824 men. The pioneers, railroad regiments, and balloon detachment numbered 736 officers and 19,085 men. Of train there were 21 battalions, numbering 307 officers and 7,654 men. Special formations numbered 496 officers and 3,409 men. Of staff and non-regimental officers there were 2,308.

The Navy.—The German navy, built, partly built, and authorized up to the beginning of 1896, counted 5 first-class battle ships, 5 of the second class, 4 of the third class, 20 port-defense vessels, 1 first-class cruiser, 10 of the second class, 24 of the third class, 101 first-class torpedo craft, and 4 of the second class. The *personnel* in 1897 consisted of 960 officers and engineers, 5,069 petty officers, and 15,592 men and boys, making a total of 21,835 men, including surgeons, paymasters, etc. The Government subsidizes 7 of the Atlantic steamers as auxiliary merchant cruisers, each of which in case of war will be fitted with an armament consisting of 8 5-9-inch, 4 4-9-inch, 2 3-1-inch, and 2 2-2-inch Krupp guns.

The first of the 5 new second-class cruisers, the "Hertha," was launched at Stettin on April 14, 1897. She is built entirely of steel, has a displacement of 5,650 tons, is driven by 3 engines of 10,000 horse power, capable of producing a speed of 18½ knots, and carries 34 guns and 3 torpedo ejectors, a more formidable armament than the "Kaiserin Augusta" has. The first armored cruiser, the "Fürst Bismarck," was launched at Kiel on Sept. 25. The vessel has a displacement of 10,650 tons, a coal capacity of 1,000 tons, 4 9-6-inch guns in armored turrets, 12 6-inch guns in casemates on small revolving turrets, 10 3-6-inch guns, 10 machine guns, and 6 torpedo tubes. The maximum speed is 19 knots. The ironclad "Kaiser Wilhelm II" was launched at Stettin on Sept. 14. She is a sister ship to the "Kaiser Friedrich III," launched on July 1, 1896, is built entirely of German steel, has a displacement of 11,050 tons, is protected by a belt of 12-inch armor, is driven by triple screws of 13,000 horse power at the extreme speed of 18 knots, and is armed with 18 quick-firing 6-inch guns, 12 guns of 3½-inch caliber, 12 revolver guns, 8 machine guns, and 4 torpedo tubes.

The Emperor having become sponsor for the policy of a substantial increase in the naval forces as a condition of colonial expansion and a future world empire, and a safeguard against attempts, especially on the part of England, to crush the growing commerce and shipping of Germany, the naval estimate for 1898 was much larger than that for 1897. The permanent expenditure was set down as 58,925,277 marks, an advance of 3,542,971 marks, and the nonrecurring expenditure, chiefly

for shipbuilding and armaments, was more than doubled, being placed at 70,500,000 marks. The vessels built in pursuance of the programme of 1888 had raised the empire to the rank of a first-rate naval power, but these, including the four completed battle ships and the two under construction, were intended rather for coast defense and the exigencies of a European war than for the needs of colonial policy and the protection of commerce in distant seas. Of 10 small armor-clads specially designed for coast defense 8 were completed, and then this type was abandoned. Eight cruiser corvettes with triple screws were planned, but only 1 of the first class was completed, the "Kaiserin Augusta"; the 2 others that have been built fall below the requirements. Of the "Bussard" class of small cruisers all 5 have been built, as well as the torpedo-boat destroyers and dispatch vessels of the original programme. In the naval budget of 1896 there was an advance of 5,298,532 marks in the recurrent expenditure, 4,029,450 marks in the ordinary nonrecurring charges, and 3,111,600 marks in the extraordinary expenditure. To replace the old "Leipzig" a powerful first-class armored cruiser of 10,500 tons was laid down, and 3 deck-protected cruisers armed wholly with quick-firing guns were begun. The new ships sanctioned in the budget of 1897 are a battle ship to take the place of the "Friedrich der Grosse," 2 second-class cruisers, a fourth-class cruiser, a torpedo division boat, and several torpedo boats. The plan of construction for 1898 included 2 more second-class cruisers, making 7 in all, some smaller cruisers, another modern battle ship, the seventh, the reconstruction of the 4 of the "Sachsen" class, and an addition to the torpedo flotilla, besides 2 division boats or destroyers. The Reichstag voted the sum demanded for the building of a new battle ship according to the earlier programme, but the new programme of the Emperor, involving world-wide schemes and boundless expenditures, was condemned by the Center, the Radicals, and the Social Democrats, by whose votes the sums required for two new cruisers were struck out of the estimates. On the reassembling of the Reichstag, the new naval plan was presented, after it had been approved by the Bundesrath. It contemplated the total expenditure of 410,000,000 marks, to be spread over seven years, 50,000,000 marks in 1898, and a little over 60,000,000 marks a year for the succeeding years till 1905. The Liberals would not hear of a fixed credit in advance for the whole period, a septennate for the navy, such as they once tenaciously opposed for the army. The contemplated expenditure was for the construction of more than 20 vessels, of which 10 should be large ships.

Commerce and Production.—Of the total area of Germany 91 per cent. is productive and 9 per cent. unproductive. There are 26,376,000 hectares of arable land, vineyards, and other cultivated lands, 8,789,000 of meadow lands and pasture, 13,956,827 of woods and forests, and 4,927,201 of waste land. There were 5,893,596 hectares sown to rye in 1896; to wheat, 1,930,830; to barley, 1,690,592; to oats, 4,028,692; to potatoes, 3,049,718; to the sugar beet, 406,837; to vines, 116,137; to hops, 42,074. Forestry is conducted by the state on scientific principles, and the forests, covering a fourth of the surface of the country, yield a large public revenue. The value of the mineral products of Germany in 1895 was 706,000,000 marks. The quantity of coal mined was 79,163,600 tons, not counting 24,713,200 tons of lignite; of iron ore, 12,349,600; of zinc ore, 706,300; of lead ore, 158,300; of copper ore, 633,300 tons. The production of pig iron in 1894 was 5,380,039 metric tons, valued at 231,570,000 marks. The value of the zinc prod-

uct was 41,813,000 marks; of lead, 19,050,000 marks; of copper, 21,870,000 marks; of silver, 38,615,000 marks. The finished iron produced was 5,901,229 tons, valued at 692,282,875 marks. Prussia, Alsace-Lorraine, Bavaria, and Saxony are the iron-producing countries. Woolen manufacturing is carried on in some of the Prussian provinces, but has its chief seat in Saxony. Westphalia and Silesia produce linens; cotton goods are manufactured in Alsace-Lorraine, Baden, and Württemberg; and the silk textile industry is followed in Rhenish Prussia, Alsace, and Baden. Glass, porcelain, and earthenware are produced in Silesia, Thuringia, and Saxony; clocks and wooden wares in Württemberg and Bavaria; beer in Bavaria and Prussia; and sugar in Prussia, Brunswick and Anhalt. There were 1,769,331 metric tons of raw sugar and 347,090 tons of molasses obtained in 1895 from 14,521,050 tons of beet root. The product of refined sugar was 992,136 tons.

The total value of the special imports in 1895 was 4,246,111,000 marks. The value of the domestic produce and manufactures exported was 3,424,076,000 marks. The values, in marks, of the various classes of merchandise imports and exports in 1895 are given in the following table:

MERCHANDISE.	Imports.	Exports.
Live animals.....	205,357,000	27,243,000
Animal products.....	109,762,000	25,012,000
Articles of consumption.....	1,184,393,000	388,738,000
Seeds and plants.....	48,412,000	31,490,000
Fuel.....	113,507,000	149,078,000
Fats and oils.....	242,891,000	28,870,000
Chemicals, drugs, etc.....	279,814,000	338,953,000
Glass, stone, and clay goods....	56,747,000	126,487,000
Metals and metal goods.....	296,308,000	481,666,000
Timber and wood manufactures	226,617,000	114,648,000
Paper materials and manufac-		
tures.....	19,004,000	102,181,000
Hides, leather, and leather goods	244,473,000	251,777,000
Textile materials and manufac-		
tures.....	1,068,981,000	939,073,000
Rubber and rubber goods.....	36,183,000	26,318,000
Machinery and instruments.....	60,193,000	201,816,000
Hardware.....	19,701,000	81,732,000
Books and objects of art.....	33,768,000	107,982,000
Miscellaneous.....		1,012,000
Total.....	4,246,111,000	3,424,076,000

The total value of dutiable merchandise imported was 2,177,493,000 marks, on which 409,126,000 marks of duties were collected, giving an average rate of 18·8 per cent. of the value of the imports subject to duty. The value of imports free of duty was 2,068,618,000 marks. The imports of horses were 74,843,000 marks in value; of hogs, 28,823,000 marks; of wheat, 144,545,000 marks; of rye, 80,043,000 marks; of barley, 89,845,000 marks; of coffee, 202,522,000 marks; of petroleum, 61,640,000 marks; of hides and skins, 143,954,000 marks; of raw cotton, 231,479,000 marks; of wool, 247,989,000 marks; of woolen yarn, 119,355,000 marks; of raw silk, 99,069,000 marks. The values of the principal domestic exports were as follow: Sugar, 192,867,000 marks; woolen fabrics, 150,700,000 marks; coal and coke, 142,534,000 marks; hosiery, 106,355,000 marks; mixed silk and cotton piece goods, 102,071,000 marks; haberdashery, 89,843,000 marks; leather goods, 89,570,000 marks; paper, 64,010,000 marks; cotton cloth, 63,642,000 marks; aniline dyes, 63,156,000 marks.

The gold and silver imported in 1895 had a total value of 104,495,000 marks; exports, 105,630,000 marks. The participation of the various countries in the commerce of the German customs union is shown in the following table, which gives the values, in marks, of the imports from and the exports to each country in 1895:

COUNTRIES.	Imports.	Exports.
German free ports.....	14,609,000	37,991,000
Great Britain.....	578,726,000	678,890,000
Austria-Hungary.....	525,431,000	435,766,000
Russia.....	568,795,000	220,881,000
Netherlands.....	164,331,000	245,133,000
France.....	229,922,000	202,769,000
Switzerland.....	144,516,000	219,029,000
Belgium.....	179,194,000	159,186,000
Italy.....	145,942,000	83,375,000
Norway and Sweden.....	78,241,000	118,951,000
Denmark.....	73,031,000	100,877,000
Spain.....	28,607,000	31,158,000
Balkan countries.....	74,362,000	83,192,000
Portugal.....	13,539,000	13,054,000
British India.....	162,128,000	44,661,000
Other countries of Asia.....	105,605,000	77,605,000
Africa.....	79,352,000	42,887,000
North America.....	564,825,000	411,413,000
South America.....	394,212,000	192,751,000
Australia.....	118,506,000	23,362,000
All other countries.....	2,237,000	1,145,000
Total.....	4,246,111,000	3,424,076,000

The rapid development of the industry and export trade of Germany during a quarter of a century, more rapid than that of the United States, which is not burdened with military armaments, and much more rapid than that of England or France, is attributed in England largely to the system of technical and practical education in Germany, which has converted the Germans into an ingenious and enterprising industrial nation at the same time that they have maintained and developed their great military establishment. More than any other people they have solved the problem of science applied to industry, constantly revising their processes and making daily progress. They have gained a high place in metallurgy, and in chemical industries the leading position. As merchants the Germans take more pains than the English or the French to study the requirements of their customers and to adapt their mercantile methods and the character of their goods to all tastes, good or bad, and to the customs and national prejudices of the people among whom they trade, never trying to school the habits and consumption of their customers. Considerable sums are set apart in the Prussian budget of 1898 for the extension of technical schools of spinning and weaving, the establishment of new ones, the education of teachers of spinning, weaving, dyeing, and dressing, the acquisition of model machinery, and the erection of laboratories. There are six schools devoted to the education of manufacturers and factory managers. The schools in the different industrial centers are occupied chiefly with the branch of manufacture predominating in each locality, as silk and velvet in Crefeld, linen in Sorau, cloth in Aix-la-Chapelle, mixed woollens in Berlin, mixed jute and cotton in Mühlheim, etc. More than twenty schools give instruction in the cottage industry of hand-loom weavers, which is still flourishing in Prussia.

The expansion of the German export trade has been effected without relaxing the high tariff protecting the home market. The commercial treaties, of which ten have been made since 1891, have lowered special duties for favored nations in order to secure reciprocal reductions or prevent the increase of foreign tariffs to the disadvantage of German exporters, but the policy of the empire has remained strictly protective, and the tariffs in force fulfill its conditions. Under such tariffs, by their aid or in spite of them, the relative positions of Germany and Great Britain have been to a considerable extent reversed of late years. Formerly the principal exports of Great Britain to Germany were manufactured articles; latterly they have consisted largely of raw materials, of which a goodly proportion is returned in the shape of manufactured goods, not

only for re-exportation, but actually for British consumption. Of these exports to Great Britain the principal ones are manufactured articles similar to what the English themselves produce, in some cases the counterparts of England's staple products, such as woollens and worsteds, underwear, manufactured garments, printed and dyed cottons, hardware, corner and angle iron, paper, and glass. Great Britain is Germany's best customer, taking in 1895 about 20 per cent. of the total exports. The label, "Made in Germany," intended to discredit the rival goods as compared with the English make, has come to be regarded as a recommendation by the customers of English merchants in distant continents and islands. The domestic exports of Germany increased in value from \$715,000,000 in 1885 to \$835,000,000 in 1895, while those of British home produce fell off \$190,000,000 from the highest mark attained in 1890, being valued in 1895 at \$1,130,000,000. In quantity the German exports of domestic produce and manufactures increased from 18,814,000 metric tons in 1885 to 28,839,000 in 1895. The effect of German competition has produced alarm in France as well as in England. The German exports in 1895 were 20 per cent. greater in value than those of France, which, however, is less than Germany's excess in population, this being 25 per cent. Woolen textiles constitute at present Germany's chief export, and after beet sugar come cotton goods as third in importance, silk manufactures ranking fourth, coal fifth, machinery sixth, ironware seventh, and clothing and underwear eighth. In most of these the English formerly controlled the markets of the world. The export of coal was 10,360,000 metric tons in 1895, valued at 108,000,000 marks. The production of the coal mines has risen from 26,000,000 tons in 1870 to 76,000,000 tons. The United States buys the largest share of German exported woolen piece goods—17 per cent. of the whole—but England takes 16 per cent. of these, and nearly all the woolen hosiery. Of cotton piece goods the United States takes 21 per cent., while England is second, taking 17 per cent. of these, and of the cotton hosiery more than half. The development of the cotton industry has been phenomenal, especially since 1887. In 1895 there were over 4,672,000 spindles, nearly a third of which were in Alsace-Lorraine. The German exports of angle, bolt, and rod iron increased 142,000 metric tons in ten years, during which the English exports declined 19,000 tons, and in the same period German exports of bar iron increased 100,000 tons, while English exports fell off 101,000 tons.

Navigation and Shipping.—The number of vessels entered at German ports during 1894 was 71,453, of 15,856,968 tons, of which 60,732, of 14,755,743 tons, were with cargoes and 10,721, of 1,101,225 tons, in ballast. The total number cleared was 71,965, of 15,873,923 tons, of which 53,625, of 10,733,498 tons, were with cargoes and 18,340, of 5,140,425 tons, in ballast. There were 43,827 German ships, of 7,597,466 tons, and 16,905 foreign ships, of 7,158,277 tons, entered with cargoes and 8,260 German ships, of 674,146 tons, and 2,461 foreign ships, of 427,079 tons, entered in ballast. Of the total number cleared, 41,529, of 6,683,352 tons, were German and 12,096, of 4,050,146 tons, foreign vessels carrying cargoes and 11,119, of 1,622,756 tons, were German and 7,221, of 3,517,669 tons, foreign ships in ballast. Of the foreign vessels entered with cargoes, 5,196, of 4,607,622 tons, were British; 4,818, of 828,329 tons, Danish; 3,351, of 695,084 tons, Swedish; 1,842, of 243,560 tons, Dutch; 934, of 413,384 tons, Norwegian; and 508, of 163,464 tons, Russian. Of the total number cleared with cargoes, 2,966, of 2,177,171 tons, were British; 4,495,

of 689,682 tons, Danish; 2,094, of 490,524 tons, Swedish; 1,475, of 210,726 tons, Dutch; 654, of 267,745 tons, Norwegian; and 246, of 88,068 tons, Russian.

The merchant navy of Germany on Jan. 1, 1896, comprised 2,524 sailing vessels, of 622,105 tons, and 1,068 steamers, of 879,939 tons; total, 3,592 vessels, of 1,502,044 tons. Of the sailing vessels 551, of 95,020 tons, belonged to Baltic and 1,973, of 527,085 tons, to North Sea ports, and of the steam vessels 381, of 144,346 tons, belonged to Baltic and 687, of 735,893 tons, to North Sea ports. The number of sailors manning the merchant navy was 39,997. Of the sailing vessels 450 and of the steamers 1,061 were constructed entirely of iron or steel. There were 22 sailing vessels and 114 steamers of over 2,000 tons, 215 sailing vessels and 223 steamers between 1,000 and 2,000 tons, 132 sailing vessels and 196 steamers between 500 and 1,000 tons, 443 sailing vessels and 261 steamers between 100 and 500 tons, and 1,712 sailing vessels and 274 steamers under 100 tons. Although shipbuilding is a comparatively new industry in Germany, the yards are greatly increasing their output and have had more orders than they could execute. In 1894, out of 71 ships built for the British merchant navy, 54 were constructed in German yards. The total tonnage built in Germany was less by 6,000 tons in 1895 than in 1894, being 110,400 tons, but it showed a remarkable advance from 48,200 tons in 1892 and 66,470 in 1893. The German shipbuilders have lately agreed to use German in preference to English materials, even though the former should be for a time more costly, and the German iron manufacturers have promised to increase largely their establishments and output in order to supply the demand, and to work without a profit or even at a slight loss at first, while the state railroads will co-operate by making special low freight charges on shipbuilding materials. In 1895 8 war vessels were built in German dockyards for the navies of Norway, Austria-Hungary, Brazil, and Turkey. In 1896 9 ships of war were constructed for nations abroad in Stettin, Elbing, and Kiel, including 3 armored cruisers and 4 torpedo boats for China and 2 torpedo cruisers and a remodeled ironclad for Brazil.

Communications.—Out of 28,237 miles of railroads in operation at the beginning of 1896 only 3,032 miles were in the hands of private companies. The Imperial or state governments owned all the rest. The total capital invested in German railroads was 11,260,120,000 marks. The receipts in 1895 were 1,416,951,000 marks, and the expenses 864,775,000 marks, leaving a net profit equal to 4.90 per cent. on the capital. There were 244,679,000 metric tons of goods and cattle transported, paying 937,780,000 marks, and 542,746,000 passengers, paying 378,675,000 marks.

There are 5,830 miles of navigable rivers, 1,371 miles of canalized rivers, and 1,391 miles of canals, not including the Kaiser Wilhelm or Elbe Ship Canal connecting the North Sea and the Baltic. This canal, begun in June, 1887, and opened for traffic on June 19, 1895, is 72 feet broad at the bottom, 213 feet broad at the surface, and 29½ feet deep. The total cost was about 156,000,000 marks. The canal was built primarily for naval purposes, but was expected to pay a profit from tolls levied on merchant vessels, especially steamers. However, the traffic of the Baltic canal for the first two years has fallen considerably below the estimates of the Government. During the first year 16,834 vessels, of 1,505,983 tons, passed through, and in 1897, the second year, 22,081 vessels, of 2,036,861 tons. The official estimates were based on an expected traffic of 18,000 vessels, of 5,500,000 tons, yielding over 4,000,000 marks. The actual receipts were 897,451

marks for 1896 and 1,086,432 marks for 1897. Sailing vessels have taken to the canal, while the steamers that use it are relatively few. A proposal to widen and deepen the canal in order to attract the profitable steamer traffic is under consideration.

The imperial post office in 1895 forwarded 1,169,394,536 letters, 429,133,082 postal cards, 542,455,419 circulars, books, etc., 34,452,576 samples, 918,084,972 newspapers, and 21,320,215,318 marks of money remittances; the Bavarian post office, 122,525,720 letters, 28,964,700 postal cards, 46,380,795 circulars, etc., 2,867,490 samples, 143,285,329 newspapers, and 1,843,928,114 marks; the Württemberg post office, 49,611,884 letters, 16,329,118 postal cards, 27,379,566 circulars, etc., 1,216,384 samples, 47,831,467 newspapers, and 878,108,725 marks; total, 1,341,532,140 letters, 474,426,900 postal cards, 616,215,780 circulars, etc., 38,536,450 samples, 1,109,201,768 newspapers, and 24,042,252,157 marks. The receipts of the imperial post office were 287,049,616 marks and the expenses 261,781,081 marks, leaving a surplus of 25,268,535 marks, which is increased by the surplus of the Bavarian and Württemberg post offices to 29,781,646 marks.

The telegraph lines belonging to the imperial post office have a total length of 70,281 miles, with 269,088 miles of wires. The Bavarian lines have a length of 8,554 miles, with 26,998 miles of wire; the Württemberg lines a length of 3,084, with 8,288 miles of wire. The number of domestic messages sent over the imperial lines in 1895 was 23,037,772; over the Bavarian lines, 1,999,532; over the Württemberg wires, 1,230,358; total, 26,267,662. The number of foreign messages on the imperial lines was 10,333,809; on the Bavarian, 545,418; on the Württemberg, 201,066; total, 11,079,293.

Regulation of Stock and Produce Exchanges.

—The Bourse bill of June 22, 1896, took effect at the beginning of the new year. The immediate supervision of the Berlin Stock and Produce Exchanges was intrusted to a committee of the Mercantile Guild and the management was placed in the hands of a Bourse committee of 32 members, of whom 24 must be active dealers and the others senior members of the Mercantile Guild. The committee of the Produce Exchange must include 5 representatives of agricultural interests and 2 of the milling trade, and at least 2 of the agricultural representatives must be present whenever prices of grain, flour, malt, sugar, etc., are fixed, in order to restrain dealers from unduly depressing the prices of agricultural products. Prices are fixed for each day according to the sworn information of brokers appointed for the purpose. In the Stock Exchange official quotations settled by the Bourse committee are made once a day for stocks and bonds, and for foreign exchange at least three times a week. At the end of each month the monthly average of prices for grain, oils, spirits, and other produce is published. The chief feature of the Bourse bill is the total prohibition of time bargains in grain, in mining stocks, and in the shares of companies of less than 20,000,000 marks capital. Firms engaging in the traffic in futures and differences in other shares and commodities must be registered. In Halle the Produce Exchange was dissolved. In Brunswick, Stettin, and other towns the members of the exchanges organized free associations for the purpose of carrying on their business independently of the Bourse regulations. In Berlin the Bourse conformed to the regulations. The Produce Exchange members started a Free Commercial Union in a neighboring building known as the Fairy Palace. The mercantile community was so incensed against the law that none of the seniors of the Merchants' Guild would accept nomination to the Exchange committee, while the Produce Exchange

members, who had all deserted their own halls, declined to elect their quota. Free commercial unions were instituted all over the country. They refused to give out any reports of transactions or quotations of prices, so as to avoid being treated as bourses, and established an organization of the German grain and produce trade, with its center in Berlin. A supplementary bill was brought before the Federal Council by Prussia to meet the situation. The traffic in futures still continued, the contracting parties relying on each other's good faith. In May the Minister of Commerce notified the free associations that they were bourses in the meaning of the Bourse law, and must prepare and submit to the Government authorities their statutes and regulations. The produce dealers of Berlin, when their independent exchange was closed by the police in June, appealed to the courts.

The Session of the Reichstag.—The prospects of reform of the military courts, for which there was a strong popular demand, were not advanced by the introduction in the bill for the amendment of judicial procedure in the civil courts of modifications intended to give the measure a more liberal character. In consequence of this action of the Reichstag the minister withdrew the bill. Prince Hohenlohe promised to the Reichstag that the growing abuse of dueling in the army would be restricted by submitting quarrels and insults to the absolute decision of courts of honor. Such a court of honor consists of all the officers of a regiment or battalion and a council of honor of a captain and a first and a second lieutenant. On Jan. 1, 1897, an imperial edict was issued, providing that all private quarrels must be submitted to the councils of honor for settlement or for further reference to a court of honor, from which one or both parties may appeal to the Emperor. Quarrels between civilians and officers must also be referred to the council of honor, which has the same power to enforce its decision upon the officer in such a case as when two officers are involved.

The new commercial code for the empire was adopted on April 7. It constitutes the second part of the scheme of monumental legislation inaugurated by the passing of the civil code on July 1, 1896, and goes into force with this at the beginning of 1900. The commercial code contains but few entirely fresh legal enactments. It consists rather of a comprehensive collection of existing commercial laws, with such additions or alterations as were rendered necessary by the adoption of the civil code or were deemed expedient in the interests of modern German trade and commerce. The code is the product of long consideration and prodigious labor. Before it received the form in which it was laid before the Reichstag the first draft was submitted to a commission composed of eminent jurists and of representatives of trade and industry and of agrarian interests. Clauses affecting special branches of trade and industry were in every case subjected to the criticism of representatives of the interests concerned. The work of codifying commercial laws was begun as early as 1839 by the Government of Württemberg, and was carried on later by the Prussian Government and the North German Confederation, resulting in a code that was put in force throughout the empire. This body of law was the basis of the new code, being subjected to a thorough revision by legal experts and submitted to the criticism of mercantile communities. The experience of a third of a century had brought to light many shortcomings, and the new conditions of commerce made it desirable that whole sections should be recast in order to frame a measure embodying the most modern ideas and usages. New varieties of trades, the position of women in

trade, the existence of new classes of commercial agents, the creation of instruments passing to bearer by mercantile usage, warehouse and wharfing's certificates, the multiplication of companies, new forms of contracts, especially in the stock and produce markets, and the extension and diversification of the banking business were some of the subjects demanding a revision of provisions that represented well enough the conditions of business intercourse in 1870, though the improvement and systematization of German commercial laws was already so advanced that other countries in remodeling their laws have borrowed from German legislation.

The introduction of the associations bill in the Prussian Diet led to interpellations and discussions in the Reichstag, which passed a bill to permit the union of political associations. The Social Democrats moved the repeal of the *lèse-majesté* paragraphs in the criminal code, in order to expatiate on the frequency of trials for this crime and the punishment of editors for their comments on public questions and of private persons for words uttered in the bosom of their families, and to draw a comparison between the expressions regarded as criminal and those recently uttered by the Emperor, such as the term "unpatriotic crew" applied to opponents of the extraordinary naval credits.

The Government carried through an emigration bill in furtherance of its policy to deflect the stream of emigration from the United States to countries of South and Central America, where large agricultural and industrial colonies will develop autonomous institutions, preserve their language and customs, and preserve a commercial and political connection with the fatherland; or to the Transvaal or other regions where the colonists can advance the political prestige of the empire; as far as possible also to German transmarine possessions. Companies undertaking to settle such colonies will be aided by grants of money and by political protection wherever required. Such a company was organized in Hamburg to take over a tract of 1,700,000 fertile acres in the Brazilian State of Catarina, with a railroad leading to the German colonies already established there. Permission to transport German emigrants will have to be obtained after April 1, 1898, from the German Chancellor, acting with the assent of the Federal Council, and can only be granted to German subjects or companies operating in German territory. A license granted to a navigation company or emigration agent can be canceled by the same authorities. The bill provides that consuls shall be appointed in ports of debarkation approved by the Government to protect the interests of emigrants; that the Government shall facilitate the discharge of their military obligations by Germans living abroad; that an official bureau of information shall be instituted to direct the stream of emigration to territories where the conditions are favorable for prosperity, and where there is the best prospect of the German nationality being perpetuated and relations to the mother country being maintained. The Government issued a decree permitting a sojourn of only a few weeks or months to German-Americans visiting their old home, although the treaty of 1868 was believed to grant the privilege of staying in Germany for an unlimited period to naturalized American citizens not guilty of military dereliction. The German Government protested against the differential duties imposed by the American tariff act on sugar from bounty-paying countries, but resisted the pressure brought by the Agrarians to precipitate the reprisals against the United States which were threatened in the diplomatic note. The Reichstag brought to an end

on June 25 the longest session on record. It began on Dec. 2, 1895, and was made continuous in order to secure the passing of the judicial procedure amendment bill, which was not passed after all, because the Government, after accepting the principle of an appeal in criminal cases, refused to constitute an appellate court. The imperial civil code and the commercial civil code were passed. The Agrarians carried a margarine law for protection of the butter industry, prohibiting in towns the sale of butter and margarine on the same premises, requiring margarine to be mixed with oil of sesamum seed as a means of identification, and requiring the packages to have red bands. At the instance of the Conservatives also a measure was enacted partly restoring the mediæval system of the compulsory incorporation of trades in guilds. This is the handicrafts law, establishing and encouraging the organization of the trades and handicrafts in guilds. Elaborate bills for amending the workmen's insurance laws had to be dropped for want of time. A bill for prolonging the subsidy to the North German Lloyd mail steamers, and one for increasing the grant to the Asiatic line, met with such opposition from rival interests that they were abandoned. A vote of 44,000,000 marks for the introduction of quick-firing artillery was approved by all parties except the Socialists.

The Prussian Diet.—The budget presented by Dr. Miquel for 1898, making the total income 2,046,031,385 marks, ordinary expenditure 1,955,855,029 marks, and nonrecurrent expenditure 90,176,356 marks, provided the promised increase in the salaries of 73,500 officials, including professors and school-teachers. The accounts for 1896 had been closed with a surplus of 60,000,000 marks instead of the expected deficit of 30,000,000 marks. The growth of the revenue to the unprecedented sum of two *milliards* being due to the great development of the railroads and industrial undertakings of the state, the Minister of Finance adhered to the principle of further building up these enterprises by extraordinary outlay and creating a reserve fund to meet years of depression. The extraordinary and unexpected prosperity of trade and traffic had occurred so suddenly that it could not possibly have been anticipated. He has sought to carry out this latter policy in regard to the general finances of Prussia, and has laid before the Chamber proposals for a permanent fund for balancing the budget which would place the country in the position to contemplate with equanimity the advent of measures of progress involving an expenditure impossible to estimate even approximately beforehand, and thus smooth the path for any kind of legislation directed to the social and political development of the nation. The increase in official salaries involves a permanent augmentation of 20,000,000 marks and the new school law 9,000,000 marks more, the main part of which in future years will be met by the saving to be effected by the conversion of the Prussian 4 per cents. It was only the middle class of officials, receiving less than 12,000 marks a year, that was benefited, except undersecretaries of state, who were placed on the same footing with those of the empire, and provincial presidents, whose posts involved such expenses that only rich men could accept them without an increase in the emoluments. The state railroads in 1897 were expected to bring in an increased profit of 30,000,000 marks, customs an additional yield of 25,000,000 marks, state mines over 8,000,000 marks, direct taxes 2,500,000 marks, stamps 3,000,000 marks, and the surplus at the end of the year would amount to over 80,000,000 marks. The enforced conversion of the 4-per-cent. consols to 3½ per cents. was to be completed by Sept. 30, 1897, when the new rate of interest began. The

saving in interest on 3,590,000,000 marks is 18,000,000 marks per annum. The Agrarians, who calculated on a corresponding reduction in the interest on agricultural mortgages, wished to have the rate lowered to 3 per cent.

The King, speaking in Brandenburg in February, spoke of having undertaken a battle against revolution, saying that "the party which ventures to attack the foundations of the state, which revolts against religion," must be vanquished, and pledging himself not to weary "in the struggle to rid our land of this disease which not only infects our nation, but also seeks to undermine the life of the family," and even assails the position of the sovereign. The Chancellor in the previous session had kept the Reichstag, while discussing the civil code, from abrogating the paragraph that prohibits the coalition of political societies by saying that the states of the empire contemplated taking such action individually. The extreme Conservatives, who had more influence over the King than his ministers, and who had persuaded him that the Social Democrats menaced the existence of the state and must be put down lest they sweep away the throne and the altar and uproot the foundations of society, resisted the proposal to permit political associations to unite one with another unless it should be coupled with police powers enabling the Government to dissolve assemblages and societies dangerous to the state, or to prohibit meetings which promote the campaign against the existing order of the state and of society. Prince Hohenlohe and Baron Marschall von Bieberstein were reluctant to associate their names with a reactionary revision of the law of association and public meeting that was repugnant to their principles, was probably unconstitutional, and was not likely to pass even the Prussian Chamber, while in the Reichstag it would create insuperable difficulties for the Government. Nevertheless, when the majority of the Prussian ministry voted for such a measure, they would not yield up their offices to the reactionary element that was trying to oust them. The bill was brought in on May 13. Under its provisions the police would have authority to break up meetings and to dissolve societies which contravene the criminal law or endanger the public safety, especially the safety of the state or the public peace; minors are forbidden to become members of political societies or attend meetings where politics are discussed, and any society or meeting in which persons under twenty-one years of age are found, unless such persons are instantly removed, or any society counting such persons among its members, could be peremptorily dissolved by the police. There were severe penalties attached to managing, promoting, belonging to, or renting premises to prohibited societies. A subsection redeemed the Chancellor's promise, declaring that the union of political societies one with another is permitted, but no union with a non-German society without the consent of the Minister of the Interior. The proposed law left it to police agents to decide what were to be considered associations dangerous to the safety of the state, intrusting them with functions belonging to the judicial power. All the parties except the Conservatives manifested their opposition to the bill. The Reichstag by 207 votes to 53 passed an emergency bill providing simply that associations of every kind may enter into union one with another, and repealing all laws to the contrary in the different German states. This action, which could not have the force of law without the concurrence of the Bundesrath, was intended as a direct vote of censure upon the Government. Cheers arose from four fifths of the benches when Herr Richter, the Radical leader, uttered the reminder "that the German Empire as such has no

native dynasty, and that the imperial dignity itself is in Germany no older than the Reichstag." The Minister of Justice affirmed in the Diet that the Prussian Constitution would have to be altered to make the bill a valid law. The Clericals and Radicals would not accept the bill on any terms. The National Liberals would only consider the question of excluding minors from public meetings. By the aid of their votes it was enacted that minors shall not take part in meetings where political subjects are to be discussed, or become members of political societies. The bill was cut down to this in committee, and passed on May 31. As the bill, even in its amended form, involved an alteration in the Constitution of Prussia, both Chambers adjourned in order to allow the prescribed period of twenty-one days to elapse before taking final action on the measure. The National Liberal party condemned its representatives for making the compromise they did with the reactionaries. Meetings were held and petitions signed protesting against the bill. The Socialists determined henceforth to make their influence felt in Prussian elections, not by putting forward candidates of their own, who under the three-class system of indirect suffrage could not be elected, but by voting for those who are free from reactionary sentiments.

On June 30 the upper house passed the bill with amendments providing that Social-Democratic or anarchistic agitation shall form sufficient ground for the dissolution of a public meeting or an association by the police, and then adjourned to allow the prescribed interval to elapse before again voting on the measure. On July 22 it was passed again by 112 votes to 19. On July 24 this antirevolution bill for Prussia alone, this "little Socialist law," as it was popularly called, came before the Chamber, which finally rejected it by the majority of 209 votes to 205.

Ministerial Changes.—A latent and chronic ministerial crisis in Prussia and in the empire dragged through many months. The Prussian Cabinet was divided on all the principal questions that arose. There were strong influences brought into play for the elimination of the Liberal ministers who were least in sympathy with the pet schemes of the Kaiser, such as the "boundless naval plans" and the associations bill. The trial of the journalists Leckert and von Lützow before the beginning of the year, and that of Major von Tausch, an officer in charge of the political police, which was concluded in June, revealed enough to show that the political spies and the "reptile press" employed in Prince Bismarck's time to carry out his schemes of statecraft have since been used as corruptly by jealous and discordant ministers to undermine the position and assail the reputation of each other. Baron Marschall von Bieberstein, who had been maligned and who attempted to bring into the light of publicity these dark methods, was the first to have his official position made too uncomfortable. He and Prince Hohenlohe are believed to have offered their resignations to the Emperor before the associations bill was brought in. Admiral Hollmann, after making a statement in the Reichstag of the naval plans, which Prince Hohenlohe immediately afterward declared to be without the authority of the ministry, received leave of absence, and Rear-Admiral Tirpitz, the supposed author of the "boundless naval plans," was designated as his successor when he finally resigned, on June 16. A few days afterward Baron Marschall took indefinite leave of absence on the plea of ill health, and Bernhardt von Bülow, the ambassador at Rome, was appointed to fill the post of Secretary of State for Foreign Affairs vicariously. On June 29 Dr. von Bötticher resigned the office of Imperial Secretary of State for the In-

terior, also the vice-presidency of the Prussian ministry and the general representation of the Imperial Chancellor in the Reichstag. Count von Posadowsky-Wehner, previous to this Secretary of the Imperial Treasury, succeeded as Secretary of the Interior in the imperial Cabinet, with membership in the Prussian ministry without a portfolio. Dr. von Miquel, who had accomplished his great reforms in Prussian finance and was popularly dubbed "the Kaiser's man," assumed the vice-presidency of the Prussian ministry and the office of representing the Chancellor in the Prussian Diet, while Count von Posadowsky was his representative in the Reichstag. These changes were announced on July 1, together with the appointment of Lieut.-Gen. Podbielsky as Secretary of State for the Imperial Post Office in succession to the late Dr. von Stephan. Baron von Thielmann, German minister at Washington, was appointed Secretary of the Imperial Treasury. In October Baron Marschall von Bieberstein resigned and Herr von Bülow was appointed full Minister of Foreign Affairs.

GIFTS AND BEQUESTS. The following list comprises the most notable gifts and bequests for public purposes, of \$5,000 each and upward in amount or value, that were made, became operative, or were completed in the United States during 1897. It excludes the ordinary denominational contributions for educational and benevolent purposes, and all State and municipal appropriations to public and sectarian institutions. The known value of the gifts and bequests enumerated exceeds \$45,000,000. Beyond the scope of the list and deserving of mention in the benevolent movement of the year are the following: In January the New York Court of Appeals affirmed the judgment of the lower court and terminated the litigation over the will of Daniel B. Fayerweather (see obituary in the "Annual Cyclopædia" for 1890). Under this decision, the residuary estate, originally amounting to \$2,100,000, but in 1897 aggregating about \$3,000,000, will be divided among the 20 universities and colleges mentioned in the ninth section of the will. Acting under the will of Baron Maurice de Hirsch de Gereuth (see obituary in the "Annual Cyclopædia" for 1896), as well as from her own choice, the Baroness de Hirsch forwarded to trustees several installments of the funds designated by her husband and set aside by herself for benevolent work among the Jews in the United States. The amount apportioned for the work projected in New York city was \$1,850,000, and the baroness pledged whatever additional amount the local board of trustees might deem necessary.

Adriance, John P., family of, Poughkeepsie, N. Y., gift to the city, a memorial public library; cost, \$75,000.

Aiken, Albert J., Pawling, N. Y., gift to the Society of Friends of that place, productive property, a church edifice, a free library building, and more than \$120,000 in cash, the whole estimated at nearly \$500,000.

Alvord, Mrs. Susannah, New York city, bequests to local charities, \$10,000.

Andrews, Samuel W., New York city, bequest to St. Luke's Methodist Episcopal Church, \$5,000.

Aram, James, Delevan, Wis., bequests for a home for indigent Methodist clergymen, \$20,000; for a public library, \$20,000; to each church in the city, \$1,000; for a cemetery fund, \$2,000—in all, over \$50,000.

Archbold, John D., New York city, gift to Syracuse (N. Y.) University, \$16,000.

Astor, William Waldorf, New York city and London, England, gift to the New York Children's Aid Society, for the Avenue B school, opened March 27, 1897, \$50,000.

Atwater, John P., D. D., Poughkeepsie, N. Y. (born Carlisle, Pa., March 4, 1813; died June, 1897), bequests to Yale University, land valued at \$40,000.

Babcock and Wilcox Company, New York, gift to Columbia University, two wrought-steel boilers, valued at \$8,000.

Bacon, Mrs. F. C., Hartford, Conn., bequests to Old People's Home, \$6,000; and, conditionally, to Hartford Hospital, Hartford Branch of the Woman's Board of Foreign Missions, and American Missionary Association, \$35,000; and the Congregational Home Missionary Society, an indefinite fund.

Bacon, Mrs. Maria A., New York city, bequest to Home for Consumptives, \$5,000.

Barbour, Levi, Detroit, Mich., gifts to Michigan University, toward an art building, \$15,000, and toward a woman's gymnasium, \$10,000.

Barr, Mrs. Nancy, West Manchester, N. H., bequests to local, State, and Congregational institutions, an aggregate of \$7,500.

Baxter, Josiah, Quincy, Mass., bequest to the city hospital, \$5,000.

Benedict, Mrs. Bathsheba A., Central Falls, R. I., founder of Benedict College, Columbia, S. C., bequests to American Baptist Missionary Union and American Baptist Home Mission Society, each \$10,000; First Baptist Church, Pawtucket, \$5,000; and the residue of her joint estate to the endowment fund of Benedict College.

Benedict, H. H., New York city, gift to Hamilton College, Hall of Languages; cost, \$30,000.

Bertram, Susan H., Suffolk County, Mass., bequests to Roman Catholic institutions, and, conditionally, to the city of Salem and hospitals, an aggregate of \$100,000.

Beverly, Mass., anonymous gifts to Old Ladies' Home and Beverly Hospital, each \$8,000.

Bogart, Elbert, Roslyn, Long Island, N. Y., bequests to Dutch Reformed Church at Manhasset, Jones Institute, town poorhouse at Norwich, and School District No. 4 of North Hempstead, his estate of \$100,000.

Borden, M. C. D., New York, gift to Boys' Club, Fall River, Mass., ground, building, and equipment; cost, \$85,000.

Bourne, Miss Emily, New Bedford, Mass., gift to the town of Bourne, Mass., a public library; accepted July 21, 1897.

Boyce, Julia Ann, Lynn, Mass., bequests to eight institutions, an aggregate of \$8,500.

Boyce, Rev. Richard, Hempstead, Long Island, N. Y., bequests to Roman Catholic institutions, \$8,200.

Bradlee, Rev. Caleb Davis, D. D., Brookline, Mass., bequests to Tufts College, Gale College, Wisconsin, and other institutions, \$10,000; and to the American Antiquarian Society, the bulk of his valuable library.

Bradley, Miss Abbie A., Hingham, Mass., gift to Harvard University for the Arnold Arboretum, \$20,000.

Brown, John Nicholas, Providence, R. I., gift to the public library of that city, \$200,000.

Brunet, Mrs. Felix B., Pittsburg, Pa., gift to Board of Foreign Missions of the Protestant Episcopal Church, a fund to build and endow a hospital for lepers in China.

Burgess, Prof. John W., Columbia University, gift to the city of Montpelier, Vt., a fireproof building for the Wood Art Gallery. See Wood, Thomas W.

Butler, Rosalie, New York city, bequest to State Charities Aid Association, \$50,000.

Capeu, Barnabas D., Sharon, Mass., bequests to Massachusetts Baptist Association, \$82,200; and Baptist Home Missionary Association of New York, \$30,000.

Carnegie, Andrew, gift to Church of Divine Paternity, New York city, an organ; cost, \$20,000.

Chappell, Anson, West Hartford, Conn., bequests to American Home Missionary Society and American Missionary Association, each \$6,000; Washburn College, Topeka, Kan., and Hampton Normal Institute, each \$3,000; and the residue of his estate to American Missionary Association.

Christian, Mrs. Elmira, Brooklyn, N. Y., bequest to Brooklyn Church Society of the Methodist Episcopal Church, property valued at \$15,000.

Clark, Mrs. Alfred Corning, Cooperstown, N. Y., gift for a model kindergarten in New York city, a preliminary fund of \$500,000.

Clark, Susan S., Hartford, Conn., bequests to Trinity College, \$10,000; Hartford Hospital, \$10,000; Hartford Orphan Asylum and Union for Home Work, each \$5,000; Church Home and Connecticut Humane Society, each \$3,000; and Firemen's Benevolent Society and Protestant Episcopal Church, each \$2,000.

Cleveland, Mrs. Maria Elizabeth, New York, bequests to Home for Incurables at Fordham and the Sheltering Arms, each \$5,000; Institution for Relief of Respectable Aged and Indigent Females, \$1,000; and Board of Relief for Disabled Ministers and Widows and Orphans of Deceased Ministers of the Presbyterian Church, a contingent share in a large trust fund.

Colby University, Waterville, Me., gifts of friends for the endowment fund, to secure \$10,000 offered by the American Baptist Educational Society, \$50,000.

Colburn, Eliza A., Dedham, Mass., bequests to Massachusetts Society for Prevention of Cruelty to Children, \$15,000; Home for Aged Couples, Home for Aged Men, and Home for Aged Women, each \$10,000; and Perkins Institute for the Blind and Massachusetts Charitable Eye and Ear Infirmary, each \$5,000.

Colgan, Very Rev. Peter, Corning, N. Y., bequests to charitable and religious institutions in Buffalo and Corning, \$30,000; to St. Bonaventure's College, Allegheny, and Niagara University, each \$5,000.

Colgate, Samuel, Orange, N. J., bequests to Baptist Educational Society, \$10,000 and reversion of \$5,000; Orange Orphan Home, \$5,000; New York Society for Suppression of Vice, \$2,500; and Colgate University, his collection of Baptist reports and literature, about 40,000 titles, in several languages.

Columbia University School of Mines, New York, gift from a friend toward Alumni Hall fund, \$5,000.

Colvill, Catherine, New York, bequests to House of the Holy Family, \$3,000; Home for Aged of the Little Sisters of the Poor, \$2,500; and other Roman Catholic institutions, \$2,800.

Conley, John C., Columbia, Mo., bequest to the poor of the city, \$20,000. Under a recent act of the Legislature, and in a suit between his heirs and the trustees of the Missouri University, the judge of the probate court assessed the estate \$25,000 for the benefit of the university.

Contoit, Charles H., New York (died Dec. 5, 1897), bequests to the following institutions in equal parts, his residuary estate, chiefly in city real estate, estimated to yield each of the (19) institutions about \$100,000; General Theological Seminary of the Protestant Episcopal Church in the United States, Domestic and Foreign Missionary Society of the Protestant Episcopal Church in the United States, New York Bible and Common Prayer Book Society, Protestant Episcopal Missionary Society for Seamen in the Port of New York, New York Protestant Episcopal City Mission Society,

St. Barnabas's House, St. Luke's Hospital, St. Luke's Home for Indigent Christian Females, Orphans' Home and Asylum of the Protestant Episcopal Church in the city of New York, the Sheltering Arms in the city of New York, Home for Incurables, House of Mercy, St. Mary's Hospital for Children, Midnight Mission, House of Rest for Consumptives at Tremont, Church Mission for Deaf-Mutes, Home for Old Men and Aged Couples, New York Society Library, and the New York Free Circulating Library.

Cooper, Miss Julia, New York city, bequests to Cooper Union, \$200,000; the Adirondack Sanitarium, \$50,000; and the New York Infirmary, \$25,000.

Cope, Edward Drinker, Ph. D., Philadelphia, Pa., bequest to University of Pennsylvania for a chair of Vertebrate Paleontology in the Philadelphia Academy of Natural Sciences, the greater part of his estate of over \$100,000.

Corrington, Washington, Peoria, Ill., establishment of a trust, in July, 1897, by which property worth between \$1,000,000 and \$1,500,000 is to be applied to the erection and endowment of a university in that city.

Coxe, Mrs. Eckley B., Drifton, Pa., gift to Lehigh University, the technical library of her late husband, which contained the complete library of Prof. Julius Weisbach, of Freiburg, and comprised about 8,000 volumes.

Crosby, Prof. H. C., Plymouth, N. C., bequest to Shaw University, his estate of \$7,500. Prof. Crosby was a colored man, educated at Shaw, and for twenty years was principal of North Carolina State Normal School at Plymouth.

Crozer, Lewis, Upland, Pa., bequests for a homœopathic hospital with a home for incurables, \$500,000, and for a public library, \$250,000, both to be erected in Chester, Pa.

Cuban Relief Fund, anonymous contributions through the United States Department of State, \$5,000.

Curtis, John B., Deering, Me., bequests to local charitable institutions and the Paine Memorial Corporation, Boston, an estate estimated at \$2,000,000, excepting a few personal legacies.

Daniels, Frank W., Winchester, Mass., bequest to Dartmouth College, his estate, excepting \$1,000.

Darling, Alfred B., New York, bequests to Mary Hitchcock Hospital, Hanover, N. H., \$10,000; St. Johnsbury (Vt.) Academy, \$10,000; East Burke (Vt.) Congregational Society, the land and buildings occupied by it and \$10,000; and the Lyndon (Vt.) Literary and Biblical Society, \$2,500.

De Peyster, John Watts, Tivoli, N. Y., gift to Franklin and Marshall College, Lancaster, Pa., a library building; cost, \$25,000.

Diekinson, Samuel H., Hatfield, Mass., bequests to American Home Missionary Society and American Board of Commissioners for Foreign Missions, each \$25,000, and Doane College (Nebraska) and the French-American College, Springfield, each \$1,000.

Doane, Thomas, Charlestown, Mass., bequest to Doane College, Crete, Neb., the reversion of an estate valued at \$150,000 to \$200,000.

Draper, Francis E., White Plains, N. Y., bequest to General Theological Seminary of the Protestant Episcopal Church, New York, for scholarships, the reversion of \$40,000.

Duke, Benjamin N., and **James B. Duke**, joint gift to Guilford College (N. C.), for a hall of science, \$10,000.

Edward P. Allis Company, Milwaukee, Wis., gifts to Columbia University, a model triple-expansion Corliss engine and an air compressor, together valued at \$150,000.

Edwards, George K., Baltimore, Md., bequests to Princeton University, \$55,000.

Edwards, Dr. George R., Princeton, N. J., bequests to Princeton University for a chair in American History or fellowships in American history, \$50,000; to the same for specific purposes, \$5,000; and to Presbyterian missions, \$5,000.

Elder, Henry L., Atlantic City, N. J., bequest to Christ Church, Philadelphia, Pa., the reversion of the greater part of an estate valued at \$300,000.

Elmira College, Elmira, N. Y., friends of, gifts toward endowment, \$65,000.

Epworth League, New York District, Methodist Episcopal Church, gift to St. Christopher's Home, Dobbs Ferry, N. Y., a hospital building.

Evans, Dr. Thomas Williams, Paris, France, bequest for founding a museum and institute in Philadelphia, Pa., all excepting \$250,000 of an estate estimated at \$8,000,000 to \$12,000,000. See OBITUARIES, AMERICAN, in this volume.

Farnham, Luther, Boston, Mass., bequests to Children's Hospital, American Bible Society, Congregational Home Missionary Society, Board of Foreign Missions of the Presbyterian Church, and Missionary Society of the Protestant Episcopal Church, each \$2,000; other institutions, \$3,500.

Field, Mrs. John White, Albany, N. Y., bequests to the University of Pennsylvania, \$80,000; American Home Missionary Society, \$10,000; House of Mercy, Washington, D. C., \$10,000; other institutions, \$8,000; and residue of estate to University of Pennsylvania.

Field, Marshall, Chicago, Ill., gift to Kenwood Presbyterian Church, ground valued at \$50,000, as site for a new church.

Field, Mrs. Mary Bradhurst, New York and Rome, Italy, bequest to St. Paul's American Protestant Episcopal Church in Rome, for support of aged women, \$30,000.

Fiske, Mrs. Josiah M., New York city, gift to Barnard College for a memorial hall, \$140,000.

Fitzsimons, James, New York, bequests to four Roman Catholic institutions in New York, the reversion of \$25,000.

Fleischmann, Charles, Cincinnati, Ohio, bequests to Associated Charities and Hebrew Relief Union, each \$2,000; Jewish Home, \$1,500; and Catholic, Protestant, and Colored Orphan Asylums and Jewish Hospital, each \$1,000.

Flint, Harriet N., Wakefield, Mass., bequests to the town for a soldiers' monument, \$10,000; to four Baptist missionary societies, each \$5,000; to other institutions, \$24,000; and to Baptist church at Wakefield and Newton Theological Institution, the residue of her estate after the payment of \$53,000 in legacies.

Flower, Reese Wall, Philadelphia, Pa., bequests to University of Pennsylvania, 100 acres, two miles from the city, an astronomical observatory, and a telescope with an 18-inch lens.

Flower, Roswell P., New York city, gift to New York State Veterinary College, for a library, \$5,000.

Fosdick, Charles B., New York, bequests to Home for Indigent Christian Females and Home for Old Men and Aged Couples, each \$2,000, and the Bethlehem Day Nursery, Training School for Nurses at Bellevue Hospital, Barnard College, the Sheltering Arms, Home for Incurables, and Protestant Episcopal City Mission Society, each \$1,000.

Foster, John, Boston, Mass., bequests to the city for a statue of William Ellery Channing, \$30,000; Young Men's Christian Union, Massachusetts General Hospital, and Massachusetts Institute of Technology, each \$10,000; the town of Warner, N. H., and the Congregational Society there, each \$8,000; other institutions, each \$5,000—in all, \$121,000.

Frelinghnysen, Frederiek, Newark, N. J., gift to Rutgers College, \$5,000.

Freneh, Mrs. J. H., Beloit, Wis., bequest to American Humane Educational Society, \$10,000.

Gareelon, Mrs. Catharine, Oakland, Cal. (died in 1891), bequests made available in 1897 by a decision of the United States Supreme Court, to the city of Oakland for a hospital, \$600,000, and to Bowdoin (Me.) College, \$400,000.

Garvey, Andrew Jeffries, formerly of New York city (died in London, England, April 5, 1897), bequests to 6 hospitals in New York city an aggregate of \$75,000, and to 12 hospitals and 5 other institutions the income of a fund estimated at \$300,000.

Ginter, Lewis, Richmond, Va., bequests to local charitable institutions, \$120,000.

Glover, G. B., New York, bequest to the Smithsonian Institution a collection of Asiatic coins, consisting of 2,025 pieces, and representing the coinage of China from 770 B. C. to the present day; said to be the most complete in existence.

Goldenberg, Simon, New York, bequests to various Hebrew institutions, an aggregate of \$37,000, and for the founding of some nonsectarian charitable or educational institution in New York, his residuary estate.

Goodrich, C. C., Newport, Vt., bequest for the establishment of a public library, his estate of \$75,000.

Goodwin, Mrs. Hannah B., bequest to Wellesley College, \$5,000.

Gould, Alice L., daughter of the late Prof. Benjamin Apthorp Gould, of Harvard University, gift to the National Academy of Sciences, \$20,000.

Gould, Miss Helen, New York, gift for the Memorial Temple at Chautauqua, N. Y., \$5,000.

Gove, Ebenezer, North Hampton, N. H., bequests to missionary and educational institutions, a total of \$10,500.

Grace, William R., Lillins G. Grace, and Joseph P. Grace, New York city, joint gift for founding a manual training school for young women, New York city, \$200,000.

Graves, Nathan F., Syracuse, N. Y., bequests to Syracuse University, \$10,000, and to the city for a home for indigent aged people, \$400,000.

Gurley, Lewis E., Troy, N. Y., bequests to Baptist missionary societies, \$13,000, besides liberal sums to six institutions.

Hall, Mrs. Angeline P., Saratoga, N. Y., gift to Judson Memorial Church, New York, \$20,000.

Havemeyer, Mrs. Mary Louise, Stamford, Conn., bequests to institutions in New York and Stamford, \$7,000.

Haven, Charlotte M., Portsmouth, N. H., bequests to Harvard University, \$25,000; Dartmouth College, \$6,000; Portsmouth Public Library, \$6,000; other institutions, \$17,000.

Haven, Eliza A., Portsmouth, N. H., sister of the preceding, bequests to Harvard University, \$25,000; Dartmouth College, \$9,000; other institutions, \$14,000; and to the city for a public park, the family estate.

Hawley, Mrs. Mary R., Franklin County, Pa., bequests to charitable institutions in Baltimore and to the Congregational Home Missionary Society, the American Missionary Association, the Congregational Church Building Society, and Colorado College, \$100,000.

Hayes, Francis B., Boston, Mass., bequests to Massachusetts Horticultural Society, \$10,000, and his residuary estate of about \$300,000.

Healy, A. Augustus, President of Brooklyn (N. Y.) Institute of Arts and Sciences, gift to the institute, Albano's marble statuary group "The Rebel Angels"; cost, \$20,000.

Heinz, H. J., Pittsburg, Pa., gift to the University of Kansas City, \$10,000, supplementing a previous gift of \$50,000.

Hendrie, John W., South Beach, Conn., gift to Yale Law School, \$15,000, making \$50,000 in all.

Herrmann, Mrs. Esther, New York, gift to Young Men's Hebrew Association, \$10,000.

Higgins, Mrs. Elizabeth P., New York, bequests to Red Cross Society, King's Daughters, Brooklyn Nursery and Infants' Hospital, Brooklyn Home for Aged Colored People, Free Home for Destitute Girls, and Woman's Guild of New York, an aggregate of \$246,000.

Hobart, Garret A., Vice-President of the United States, gift to Rutgers College, \$5,000.

Hoffman, Rev. Charles Frederick, D. D., New York, bequests to St. Stephen's College, Annadale, N. Y., \$50,000, the principal part of his large library, and his private communion service; parochial fund of the Protestant Episcopal Church, four lots and the buildings thereon adjoining All Angels' Church for support of the church; and to All Angels' Church, a remission of all debts due him from it.

Holbrook, Sarah J., Quincy, Mass., bequests to American Board of Commissioners for Foreign Missions, Congregational Home Missionary Society, Congregational Church Building Society, and American Missionary Association, each \$10,000; Woman's Board of Missions, American Education Society, and Woman's Home Missionary Association, each \$5,000; and other institutions, \$6,000.

Holmes, Samuel, Montclair, N. J., bequests to American Board of Commissioners for Foreign Missions, American College and Education Society, American Missionary Association, and American Home Missionary Society, each \$5,000, and Montclair Congregational Society for a church, two valuable tracts of land.

Hood, Mrs. Margaret E., Frederick, Md., gift to the Woman's College in that city, \$20,000.

Houghton, Elizabeth and Clements, Boston, Mass., gift to Wellesley College, a chapel.

Houghton, George H., D. D., New York, bequest to Church of the Transfiguration ("The Little Church around the Corner"), the reversion of \$50,000.

Huntington, Collis P., New York city, gift to the Metropolitan Museum of Art, a painting of George Washington by Charles Wilson Peale.

Hyde, Isaac P., Southbridge, Mass., bequests to the town of Stafford, Conn., available on the death of his widow, \$60,000.

Ingraham, William I., Brooklyn, N. Y., gift to Seney Hospital, \$5,000.

Iselin, Adrian, Sr., New York, gift to St. Gabriel's Roman Catholic Church, New Rochelle, N. Y., for an academic building; the gymnasium he presented to the public several years ago at a cost of \$100,000. Mrs. ELEANORA ISELIN purchased property for \$5,650 and began the erection of a colonial cottage for the academy teachers.

James, Miss Jane, New York city, gift to Park Avenue Methodist Episcopal Church, property valued at \$25,000.

Jermain, James Barelay, Albany, N. Y., bequests for a church in West Troy, \$100,000; to Fairview Home for Friendless Children in Colonie, release of all mortgages and obligations, all real estate occupied by it, and \$100,000; to Jermain Presbyterian Church, \$75,000; to Williams College for a professorship, \$50,000; to the Home for Aged Men at Watervliet, N. Y., \$50,000; to the Middlebury College for a chair of Political Economy and International Law, \$30,000; and to the Young Men's Christian Association of Albany, the cancellation of its mortgage.

Jesup, Morris K., President of American Museum of Natural History, New York, gift to the museum, a fund estimated from \$50,000 to \$75,000 to defray the expense of a series of expeditions designed to cover a period of six years and to secure anthropological material with special reference to the origin of the ancient population of this continent and its relation to the ancient inhabitants of the Old World.

Johnson, Mrs. Mary, New York, bequests to St. Joseph's Seminary, Yonkers, N. Y., \$152,000; Church of All Saints, \$150,000; Roman Catholic Orphan Asylum, Society for Protection of Destitute Women and Catholic Children, and Mission of the Immaculate Virgin for Protection of Homeless Children, each \$53,000; other institutions, \$12,725—in all, \$473,725. Will contested.

Jones, Jacob P., Philadelphia, Pa. (died in 1885), bequest to Haverford College, his residuary estate. The bequest became operative by the death of his widow in 1897, and deeds to real estate valued at \$900,000 were turned over to the college.

Kean, Thomas, Philadelphia, Pa., gift to Law School fund of University of Pennsylvania, \$100,000.

Kelly, Eugene, New York, family of, gift to St. Vincent's Hospital, \$20,000, supplementing his bequest of \$30,000.

Kemp, Juliet Augusta, New York, bequests to Teachers' College, New York, and National Church of the New Jerusalem, Washington, D. C., each \$10,000; Babies' Hospital, New York School of Applied Design for Women, and Calhoun Colored School, each \$5,000; and the Teachers' College Kindergarten, her residuary estate.

Kennedy, John S., New York, gift to Metropolitan Museum of Art, Leutze's painting "Washington crossing the Delaware," for which he paid \$16,100.

King, William Louis, Morristown, N. J., bequests to Morristown Library and Lyceum, \$30,000, and Home for Destitute and Worthy Women and Girls and the Female Charitable Society, each \$5,000.

Kingsley, Chester W., Cambridge, Mass., an equipped building for the Kingsley Scientific Academy, Worcester, Mass.

Lambert, Col. Joliet, Ill., gifts to the city for a library, \$27,000, and to two hospitals, each \$3,000.

Lampson, William, Le Roy, N. Y., bequests to Yale University for a commencement hall, \$150,000, and, after payment of personal legacies aggregating \$29,000, the residue of his estate valued at \$1,500,000, for a fund to be applied to the endowment of professorships of Latin, Greek, and English Literature, each professor to have \$4,000 per annum. Will contested and affirmed.

Lawrence, Charles F., New York, bequests to the town of Pepperell, Mass., for a public library and art gallery, \$100,000 and all his pictures and books.

Lee, Bridget, New York, bequests to Roman Catholic institutions, \$6,000.

Leghorn, Isabella, New York, bequests to churches and societies in New York, Newburg, and New Windsor, \$5,000.

Lehman, Emanuel, President of Hebrew Benevolent and Orphan Asylum Society of New York, gift for endowment of an industrial and provident fund for graduates, \$100,000.

Lehman, Mayer, New York, bequests to Mount Sinai Hospital, \$15,000; Hebrew Benevolent and Orphan Asylum, \$7,500; Montefiore Home for Chronic Invalids, \$5,000; and to other institutions in New York and New Orleans, \$21,000—in all, \$48,500.

Levering, Joshua, Baltimore, Md., gift to South-

ern Baptist Theological Seminary, Louisville, Ky., for a gymnasium, \$10,000.

Lichtenstein, Benjamin, New York, bequests to Hebrew Orphan Asylum, Mount Sinai Hospital, Hebrew Technical Institute, and Montefiore Home for Chronic Invalids, each \$2,500.

Little, Henry Stafford, Matawan, N. J., gift to First Presbyterian Church, a memorial fund of \$5,000.

Lyman, Arthur T., Boston, Mass., gift to Radcliffe College, \$5,000.

Lyman, Theodore, Brookline, Mass., bequests to Harvard University and Boston Asylum and Farm School, each \$10,000.

McKim, Charles Follen, New York, gift to Metropolitan Museum of Art, the bronze group "Bacchante," by Frederick William MacMonnies; estimated value, \$30,000.

Manson, Augustus D., Bangor, Me., bequests to Bangor Public Library, \$10,000 and his private library; Children's Home and the Home for Aged Women in that city, Perkins Institute for the Blind, Boston, and Hampton Normal and Industrial Institute (Va.), each \$5,000.

Marett Fund, in Connecticut. In 1897 the State abandoned the contest for this fund, and the Probate Court ordered its distribution as follows: Yale University, Connecticut State Hospital, New Haven, and the city of New Haven for its poor, each \$20,000; and the New Haven Orphan Asylum, St. Francis Orphan Asylum, and the New Haven public library, each \$10,000.

Marquand, Henry G., New York, gift to the Metropolitan Museum of Art, a collection of bronzes dating from three or four centuries before the Christian era to the time of Caracalla, and containing one piece, the Goddess Cybele in her lion-drawn chariot, for which \$28,000 was offered. The cost of the gift is estimated to be at least \$50,000.

Marshall, Mrs. Ann, New York, bequests to five Presbyterian missions and institutions, each \$3,000.

Martin, Miss Sarah, Pittsfield, Mass., bequests to the Congregational Home Missionary Society, \$5,000; Hampton Normal and Industrial Institute (Va.), Carlisle Indian Industrial School (Pa.), and American Board of Commissioners for Foreign Missions, each \$2,000; and Burrell School, Selma, Ala., \$1,000.

Martin, Miss Winifrede, Baltimore, Md., bequests to Roman Catholic churches and charities in Maryland and California, an estate estimated at \$500,000, of which \$50,000 is for a home for old ladies in Baltimore and \$16,666 to the Catholic University in Washington, D. C.

Mather, Roland, Hartford, Conn., bequests to Congregational Home Missionary Society of New York and American Board of Commissioners for Foreign Missions, each \$15,000; and American Missionary Association and Hampton Normal and Industrial Institute, each \$10,000.

Milbank, Joseph, New York, gift to Teachers' College, New York, Milbank Hall; cost, \$250,000; completed in 1897.

Milliken, Mrs. Richard, New Orleans, gift for a children's hospital in that city, \$75,000.

Minturn, Mrs. John W., New York, gift for scarlet-fever and diphtheria patients, a hospital building and equipment; cost, \$125,000.

Moen, Mrs. Philip L., Worcester, Mass., bequests to Hartford (Conn.) Theological Seminary, \$10,000, and to many educational and religious societies, sums ranging from \$2,000 to \$100 each.

Monroe, Mrs. Virginia M., gift to Pequot Library Association, Southport, Conn. (building erected by her late husband), an investment of \$30,000.

Moody, Dwight L., Northfield, Mass., gifts from

friends on his sixtieth birthday, \$30,000, which he applied to the erection of a chapel for the Mount Vernon School for Boys.

Morgan, John Pierpont, New York city, gifts to New York Lying-in Hospital, for a new building, \$1,000,000; Metropolitan Museum of Art, an altarpiece of silver *repoussé* and enamel, valued at \$10,000.

Morgan, Mrs. Josephine Wharton, Philadelphia, Pa., bequests to St. James's Protestant Episcopal Church, New Bedford, \$5,000; three institutions in Philadelphia, each \$1,000; and conditionally to four other institutions there, \$9,000.

Morrill, Miss Mary G., Boston, Mass., bequests to Boston Museum of Fine Arts, \$50,000; Massachusetts Charitable Eye and Ear Infirmary, \$10,000; Children's Hospital, \$20,000; and Massachusetts General Hospital, \$70,000—the three last available on the death of her brother-in-law, and to the three foregoing institutions, her residuary estate.

Museum of Fine Arts, Boston, Mass., acquisition by purchase from an unrestricted sum of \$100,000 in the bequest of Harvey D. Parker, the collection of 23,000 prints formed by the late Henry F. Sewall, of New York, appraised at \$78,000.

New York University, New York city, gift to the public, a double drinking fountain on the new university grounds; cost, \$10,000.

New York University, six friends of, through Prof. Prince, gift to the Semitic department, a valuable collection of ancient Babylonian tablets, discovered in 1895, comprising 204 pieces and including a very uncommon black baked-clay cylinder inscribed in old Babylonian characters, said to date as early as 3000 B. C.

Noble, Mrs. William D., Washington, D. C., gift to Harvard University to establish a course of religious lectures, \$20,000.

Northwestern University, Evanston, Ill., gift by purchase with funds from friends, 2,700 volumes, embracing standard and complete editions of nearly all the classical and romantic writers of Germany from the middle of the last century, several hundred volumes of the sixteenth century, and a manuscript by Eyb, written in the fifteenth century.

Noyes, Crosby S., Brunswick, Me., gift to Bowdoin College, \$5,000.

Nutter, E. S., Concord, N. H., bequests to six institutions, each \$1,000.

O'Donohue, Joseph J., New York, bequests to Roman Catholic charitable institutions, \$8,250.

Otis Elevator Company, New York, gift to Columbia University, an elevator for the engineering building; cost, \$25,000.

Paige, John C., Boston, Mass., bequests to Stockbridge Association, Hanover, N. H., Dartmouth College Hospital, Hanover, and Insurance Library Association, Boston, each \$5,000; and to Boston Public Library his residuary estate of about \$225,000.

Palma, Swante, Swedish vice-consul at Austin, Texas, gift to the University of Texas, a collection of 25,000 books, valued at \$100,000.

Palmer, Francis A., New York, gift to Legrand College, Eldora, Iowa, \$20,000, in consideration of which the name of the institution was changed to Palmer College.

Parker, James, Chicago, Ill., gift to U. S. Grant University, Chattanooga, Tenn., for a building fund, \$100,000. The name of the institution was changed to Parker College.

Parsons, John E., New York city, gift to Trinity parish, Lenox, Mass., a parish house; cost, \$30,000.

Pearsons, Daniel Kimball, M. D., Chicago, Ill., gifts to Colorado College on the raising of \$150,000 by its friends, \$50,000, and to Beloit (Wis.) College, a woman's dormitory; cost, \$30,000.

Phillips Exeter Academy, Exeter, N. H., gift from an anonymous friend, \$6,000.

Pierce, Henry Lillie, Boston, Mass. (see obituary in "Annual Cyclopædia" for 1896). The settlement of this estate in 1897 indicated that the five residuary legatees would receive more than \$700,000 each, in addition to the specific bequests to them of \$50,000 each.

Plankington, Miss Elizabeth, Milwaukee, Wis., gift to Milwaukee Downer College, \$5,000.

Pope, Albert A., Hartford, Conn., gift to New England Hospital for Women and Children in Boston, Mass., a dispensary building with equipment.

Pringle, Samuel M., New York city, bequest for a home for aged and indigent men, available on the death of his brother-in-law, \$75,000; with his sister, **Margaret P. Fenton**, reversionary bequests for a home for respectable invalids and aged and indigent men in New York State, \$200,000.

Pullman, George Mortimer, Chicago, Ill., bequests to thirteen local charitable institutions, each \$10,000. He also directed his executors to set aside \$1,200,000 for the founding and endowment at Pullman, Ill., of a free school of manual training for the children of persons living and employed there.

Randall, Miss Belinda L., Roxbury, Mass., bequest to trustees for distribution to worthy institutions, a fund apportioned as follows: Foxcroft Club of Cambridge, \$70,000; Massachusetts Institute of Technology, \$50,000; Children's Aid Society, \$50,000; Hampton (Va.) Normal Institution, \$25,000; Radcliffe College, Cambridge Prospect Union, and Tuskegee (Ala.) Institute, each \$20,000; Calhoun (Ga.) University, \$10,000; and reserved for a probable trade school, \$95,000.

Raymond, Mary Frances, New York, bequests to the Home for the Aged of the Little Sisters of the Poor, Brooklyn, \$5,000; Elizabeth Home for Girls, New York, \$5,000; and Carmelite sisterhood, New York, \$3,000.

Reynolds, Mrs. Mary Esther, gift to University of Chicago, \$225,000.

Rhineland, Miss Serena, New York, gift to St. James's Protestant Episcopal parish, New York, ground and a group of buildings comprising a church edifice, rectory, and parish house; total value \$500,000.

Richardson, Joseph, New York, bequest to Central Park Baptist Church, \$17,500.

Roby, Warren C., Wayland, Mass., bequests to Wayland public library, ground and money for a building.

Rockefeller, John D., New York city, gifts to Vassar College, a fully equipped hall; cost, \$100,000; to American Baptist Missionary Union and Baptist Home Missionary Society together, \$250,000; to Vassar College library, nearly 3,000 volumes on Greek art and literature; to Mount Holyoke College, for a dormitory, \$40,000.

Root, Elihu, New York city, gift to Hamilton College, a Hall of Science; cost, \$31,000.

Rotch, Miss Edith, Boston, Mass., bequests to Shelter for Homeless Girls, Syracuse, and kindergarten for the blind, each \$10,000; Lawrence Scientific School, St. Luke's Hospital, and Massachusetts Society for Prevention of Cruelty to Animals, each \$5,000.

Rousmaniere, John Louis, Boston, Mass., bequest to Massachusetts Homœopathic Hospital, \$5,000.

Rouss, Charles Broadway, New York city, gifts to University of Virginia, a scientific building; and to the city of New York, a replica of Bartholdi's bronze group of Washington and Lafayette in the Place des États-Unis, Paris; cost, \$30,000.

Rowan, Andrew K., Trenton, N. J., gift to New

Jersey Methodist Conference for a home for aged women, his residence property in Trenton.

Rowe, W. H., and family, Troy, N. Y., gifts to Humane Society, a memorial building; cost, \$30,000; and to Salvation Army, a memorial temple; cost, \$25,000.

Sage, Dean, Albany, N. Y., and **Sage, William H.**, Ithaca, N. Y., gifts to Cornell University, for a students' hospital, the residence of the late Henry W. Sage, valued at \$80,000, a full equipment, and an endowment of \$100,000.

St. Augustine Roman Catholic Church, Brooklyn, N. Y., joint gift of three friends, three altars of native and Siena marble, comprising more than 10,000 pieces, and costing over \$50,000.

Schaffer, Miss Elizabeth, Philadelphia, Pa., bequests to Lutheran churches and institutions, the greater part of an estate of \$300,000.

Schiff, Jacob H., New York, gifts to Young Men's Hebrew Association, a building valued at \$20,000, and for enlargement of the equipment of the organization, \$30,000.

Scholle, Jacob, Orange, N. J., bequests to five Hebrew charitable institutions in New York and one in San Francisco, each \$2,500.

Schultz, Carl H., New York, bequests to German Hospital and Dispensary and Schultz Benevolent Association, each \$5,000.

Senff, Charles H., Long Island, N. Y., gift to Flushing Hospital, \$10,000.

Sheldon, Judge B. R., Rockford, Ill., bequests to Williams College and Hampton Institute (Va.), each \$100,000.

Shepherd, Mrs. Anne, Brooklyn, N. Y., gift to Vassar College, \$8,000.

Sloan, Samuel, New York, gift to Rutgers College, \$5,000.

Sloane, Mrs. Thomas C., New York, gift to Yale University, an installment of \$160,000 of a special legacy of \$200,000 left her by her first husband, on condition that the entire legacy should go to the university in case she remarried, which she did.

Smeltz, Mrs. George, Hampton, Va., gift to Richmond College, \$5,000.

Smith, Mrs. Elizabeth H., New York, bequests to two branches of Industrial School Association in Brooklyn, each \$10,000.

Smith, E. D., Menasha, Wis., gift to the city for a park, land worth \$25,000, and for a library, \$25,000.

Snell, Robert, New York, gift to Rutgers College, \$5,000.

Sonth, George W., widow and daughter of, Philadelphia, Pa., gift to Pennsylvania Diocese of the Protestant Episcopal Church, the Church of the Advocate, on Eighteenth and Diamond Streets, Philadelphia; cost, \$1,000,000.

Stanford, Mrs. Leland, San Francisco, Cal., gift to the trustees of Leland Stanford Junior University, by deed to take effect at her death, her mansion in San Francisco, with all its furnishings, paintings, and other works of arts; value of ground and building, \$250,000; of contents \$750,000. She also signed a contract with a New York life insurance company by which her life was insured for the benefit of the university to the minimum amount of \$1,000,000. Should she live and continue her annual payments for ten years, the university will receive \$2,000,000 instead of \$1,000,000 at her death.

Starr, Egbert, New York city, bequests to Middlebury College (Vermont), for a library building, \$50,000; and to Presbyterian missions, \$6,000.

Stevens, Mrs. Edwin A., Hoboken, N. J., gift to Stevens Institute, real estate of present value, \$30,000.

Stokes, Rev. Ellwood H., D. D., President of Ocean Grove Camp Meeting Association, bequests to

Methodist institutions, \$5,700, and the residue of his estate to the loan fund of the Methodist Church Extension Society and Ocean Grove Association.

Stranahan, Mrs. James S. T., Brooklyn, N. Y., gift to Noble Hospital, Westfield, Mass., \$5,000.

Strauss, Levi, San Francisco, Cal., gift to the regents of the University of California, a fund yielding more than \$3,500 a year.

Syracuse University, Syracuse, N. Y., gifts from friends for a new Hall of Physics, \$25,000.

Talman, Miss Mary, New York city, bequests to institutions of the Protestant Episcopal Church aggregating \$141,000; she had previously erected the Church of the Beloved Disciple, a vestry house, rectory, and school, and endowed the church and school with \$100,000.

Tammany Hall, Executive Council of, New York, gifts for the poor of New York city, \$20,000; for relief of Cuban insurgents, \$20,000.

Taylor, Frederick, New York, bequests to the Five Points House of Industry, New York Ladies' Home Missionary Society, Children's Aid Society, Society for the Prevention of Cruelty to Children, St. John's Guild, Working Girls' Vacation Society, Auxiliary Society of the Working Girls' Association, Society for befriending Working Girls, Free Home for Destitute Girls, and the Female Guardian Society and Home for the Friendless, an aggregate of \$100,000.

Teachers' College, New York, gifts from three friends, each \$25,000, and from others money to cancel a mortgage of \$125,000.

Thayer, Alexander Wheelock, South Natick, Mass., and Trieste, Austria, bequest to Harvard University, \$30,000.

Thayer, Edward C., Keene, N. H., gift to the city of Worcester, Mass., a home for nurses employed in the city hospital, cost, \$35,000.

Thayer, Mrs. Nathaniel, Boston, Mass., bequests to Massachusetts General Hospital and Domestic and Foreign Missionary Society of the Protestant Episcopal Church, each \$25,000; Perkins Institution and Massachusetts School for the Blind, New England Hospital for Women and Children, Massachusetts Society for the Prevention of Cruelty to Children, Massachusetts Eye and Ear Infirmary, Boston Lying-in Hospital, and Boston Museum of Fine Arts, each \$10,000; 12 institutions, each \$5,000; and other charities, smaller sums—in all nearly \$200,000.

Thorn, Mrs. Emily A., New York city, bequests to local charities, \$8,000.

Thrall, Mrs. S. Maretta, Middletown, N. Y., bequests to the hospital built by her, \$20,000, and to the city for a library, \$30,000.

Thurston, Ellen, Brooklyn, N. Y., bequests to Hampton Institute, \$10,000; Brooklyn Industrial Home, Brooklyn City Mission, American Board of Commissioners for Foreign Missions, and American Missionary Society, each \$5,000; and other institutions, \$23,000.

Todd, William C., Atkinson, N. H., gift to the city of Boston, Mass., for purchase of newspapers, \$50,000.

Vanderbilt, Cornelius, New York city, gift to St. Bartholomew's Home, presented to St. Bartholomew's Church by Mrs. William H. Vanderbilt, an addition as large as the original building; cost, \$250,000.

Vanderbilt, William K., New York city, a founder's gift to the New York Zoölogical Society, \$5,000.

Van Nest, Mrs. Mary, New York city, bequests to Free Home for Destitute Girls and Ladies' Christian Union, each \$5,000.

Van Nostrand, Mrs. Sarah, New York, bequests to Yale University for Sheffield Scientific School,

\$25,000; General Theological Seminary of Protestant Episcopal Church, \$5,000; and Holland Society of New York, \$1,000.

Vihlein, Henry, Milwaukee, Wis., gift to National German Seminary in that city, \$5,000.

Walker, Edward C. R., Roxbury, Mass., contingent bequests to Massachusetts institutions, an aggregate of more than \$220,000.

Walker, Mrs. James, New York city, gift to New York Infirmary for Women and Children, \$30,000.

Warren, Joseph D., Stamford, Conn., gifts to Universalist Convention, \$5,000, and Universalist societies, \$5,000.

Watson, Stephen, London, Ohio, bequest to Ohio Wesleyan University, \$35,000.

Webb, Mrs. W. G., Salem, Mass., gift to Salem Hospital, \$10,000.

Werner, Max, Germany (died in Los Angeles, Cal., 1897), bequest to Open-Air Fund of New York, available on the death of his mother, \$50,000.

White, Charles, New York city, bequests to Ladies' Helping Hand Association of New York, \$4,000, and Library Association of Brooklyn, Conn., \$3,000.

Widener, Peter A. B., Philadelphia, Pa., gift to trustees of Free Library of Philadelphia, his magnificent city residence for a branch; estimated value, when equipped, \$600,000. He also agreed to place in the branch library a gallery of choice specimens of purely American art, valued at \$400,000. Mr. Widener, desiring to create an institution that will include a free art gallery, free museum of science and art, and a free library, also offered to bequeath to the city his art collection, estimated to be worth \$750,000, on condition that the city provide a suitable fireproof building and keep it always free to the public. He also promised that the collections of his partner, W. L. Elkins, and John G. Johnson should be added to his own, making the total value of the art gifts nearly \$1,500,000. The city made prompt provision for a building in West Philadelphia, and Mr. Widener, W. L. Elkins, Edwin H. Fidler, and Daniel Baugh subscribed \$30,000 each toward its construction.

Wilder, Charles T., Wellesley, Mass., bequests to American Board of Commissioners for Foreign Missions, Armenian Missionary Association, Robert College at Constantinople, Armenian School for Girls at Constantinople, Colorado College, Whitman College, and Carleton College, each \$10,000; Amherst College, \$15,000; the Mount Hermon School for Boys, at Northfield, \$10,000; Kimball Academy, Meriden, N. H., and Mary Hitchcock Hospital, Hanover, N. H., each \$5,000; and the residue of his estate for distribution among charitable, educational, and religious institutions.

Willard, Charles, Battle Creek, Mich., bequests for a library building for the local public schools, \$40,000; for Young Men's Christian Association, \$40,000; and to the Baptist College at Kalamazoo, \$40,000.

Wilson, Mrs. Lanra H., Lowell, Mass., bequests to John Street Congregational Church, \$5,000; Worthen Street Baptist Church, \$3,000; Lowell Young Men's Christian Association and Home for Young Women and Children, each \$1,000; other institutions, \$250.

Withers, Mrs. Sarah, Bloomington, Ill., bequest for a library in Nicholasville, Ky., \$30,000.

Wood, Ambrose, New York, bequests to Women's Hospital, \$10,000, and Allerton Wesleyan Chapel, Yorkshire, England, \$15,000.

Wood, Thomas W., President of the National Academy of Design, gift to the city of Montpelier, Vt., an art gallery containing many famous paintings, friezes, and statuary. See BURGESS, JOHN W.

GREAT BRITAIN AND IRELAND, a monarchy in western Europe, formed by the union of the Kingdom of Great Britain (composed of the Kingdom of England, the Principality of Wales, and the Kingdom of Scotland) with the Kingdom of Ireland, holding supreme dominion over the Empire of India and dependencies and colonies of various kinds—self-governing colonies, colonies administered by the Crown, and protectorates under native rule—the whole constituting the British Empire. The reigning sovereign is the Queen-Empress Victoria, born May 24, 1819, the daughter of Edward, Duke of Kent, who was the fourth son of George III. The heir apparent is Albert Edward, Prince of Wales, born Nov. 9, 1841, whose only surviving son, George, Duke of York, born June 3, 1865, of his marriage with Alexandra, Princess of Denmark, is next in succession.

The power to legislate for the United Kingdom and, except so far as is delegated to local legislative authorities, for the whole British Empire is vested in the British Parliament, consisting of the House of Lords and the House of Commons. Members of the House of Lords are royal princes, spiritual lords, who are the metropolitan bishops of ancient sees in England, hereditary peers of England, Great Britain, and the United Kingdom, law lords and life peers created by the sovereign on the advice of the ministers, and representatives elected from the Scotch and the Irish peerages. There were 575 peers on the roll in 1896. The House of Commons numbers 670 members, of whom 495 represent English, 72 Scotch, and 103 Irish counties, boroughs, and universities. All elections, according to an act passed annually by Parliament, are by secret ballot. The number of electors who voted in 1895 was 3,190,826 in England, 447,591 in Scotland, and 220,506 in Ireland; total, 3,858,923. Minors, clergymen of the English, Scotch, and Roman Catholic churches, Government contractors, sheriffs and returning officers, English and Scottish peers, Irish representatives, and all paid officials under the Crown are disqualified from sitting in the House of Commons. The committee of ministers called the Cabinet, representing the actual majority in the House of Commons, exercises in fact the executive authority in the United Kingdom and in the empire that is nominally vested in the Crown. The Prime Minister, who when a member of the House of Commons usually fills the post of First Lord of the Treasury, has the selection of his colleagues and a large degree of control over the administrative and legislative policy of the Government. The Cabinet formed on June 25, 1895, by the Marquis of Salisbury consisted in the beginning of 1897 of the following members: Prime Minister and Secretary of State for Foreign Affairs, Lord Salisbury; Lord President of the Council, the Duke of Devonshire; Lord High Chancellor, Lord Halsbury; Lord Privy Seal, Viscount Cross; Chancellor of the Duchy of Lancaster, Lord James of Hereford; First Lord of the Treasury, Arthur J. Balfour; Secretary of State for the Home Department, Sir Matthew White Ridley; Chancellor of the Exchequer, Sir Michael E. Hicks-Beach; Secretary of State for the Colonies, Joseph Chamberlain; Secretary of State for War, the Marquis of Lansdowne; Secretary of State for India, Lord George Hamilton; First Lord of the Admiralty, G. J. Goschen; President of the Local Government Board, Henry Chaplin; President of the Board of Trade, C. T. Ritchie; Lord Lieutenant of Ireland, Earl Cadogan; Lord Chancellor of Ireland, Lord Ashbourne; Secretary for Scotland, Lord Balfour of Burleigh; First Commissioner of Works, A. Akers-Douglas; President of the Board of Agriculture, W. H. Long.

Area and Population.—The area of the United Kingdom is 120,979 square miles. The estimated population in 1896 was 39,465,720. England and Wales, with an area of 58,309 square miles, contained 30,731,092; Scotland, area 29,785 square miles, 4,186,849; and Ireland, area 32,583 square miles, 4,547,779. The population of inner London in 1896 was 4,421,492, and of the outer ring 1,756,421; total for greater London, 6,177,913. The population of the principal English municipal boroughs in 1896 was as follows: Liverpool, 632,512; Manchester, 529,561; Birmingham, 501,241; Leeds, 402,449; Sheffield, 342,278; Bristol, 230,623; Nottingham, 229,775; Bradford, 228,809; Kingston-upon-Hull, 220,844; Newcastle, 212,223; Salford, 210,707; Leicester, 198,659; Portsmouth, 178,639; Cardiff, 162,690. In Scotland, Glasgow had 705,052 inhabitants in 1896; Edinburgh, 276,514; and Dundee, 161,620. Dublin, in Ireland, had 361,891 inhabitants in 1891; Belfast, 255,950.

The number of marriages in England and Wales in 1895 was 227,865; of births, 921,860; of deaths, 568,578; excess of births, 353,282. In Scotland the number of marriages was 28,380; of births, 126,454; of deaths, 81,864; excess of births, 44,590. The number of marriages in Ireland was 23,120; of births, 106,113; of deaths, 84,395; excess of births, 21,718. From 1815 to 1895 the emigration from the British Islands was 14,259,860. The emigration of persons of British or Irish origin between 1853 and 1895 was 8,100,540, of whom 2,390,748 were English, 2,585,005 Irish, and 449,670 Scotch. Of the total number, 5,425,423 emigrated to the United States. The number of Irish who emigrated from Ireland from 1851 to the end of 1895 was 3,651,128; the number who left Ireland in 1895 was 48,703. The number of emigrants, natives and foreigners, who left the United Kingdom in 1896 was 296,053, of whom 154,497 went to the United States, 22,629 to British America, 10,645 to Australasia, and 54,141 to other countries. The emigrants of British and Irish origin numbered 161,939, of whom 102,803 were English, 42,257 Irish, and 16,879 Scotch. The total emigration in 1895 was 271,772, and the immigration was 175,674, leaving a net emigration of 96,098. The number of emigrants of British and Irish origin in 1895 was 185,181, from which 109,418 immigrants of British or Irish origin must be deducted to find the net native emigration, which was 75,763.

Finances.—The estimated revenue for the year ending March 31, 1896, was £96,162,000, and the estimated expenditure was £98,498,496. The actual receipts amounted to £101,973,829, and the actual disbursements to £97,764,357, leaving a surplus of £4,209,472, compared with one of £765,341 in 1895 and a deficit of £169,436 in 1894. The net receipts from customs were £20,762,413, of which tobacco paid £10,748,522, tea £3,746,194, rum £1,985,105, brandy £1,311,728, other spirits £920,088, wine £1,254,994, currants £109,102, coffee £167,673, raisins £221,680, and other articles £297,227. The excise receipts were £26,826,754, of which £15,603,680 came from spirits, £10,718,719 from beer, £238,539 from licenses, £259,342 from railways, and £6,474 from other sources. The yield of the estate duty was £7,727,532; of the probate duty, £90,323; of the legacy duty, £2,730,861; of the succession duty, £1,051,512; of the corporation duty, £39,672; total, £11,639,900. Stamps brought in £7,339,231; the land tax, £1,020,801; the house duty, £1,486,948; the income and property tax, £15,982,843. The total yield of taxes was £85,058,890, and the revenue from other sources £17,076,106, making the total net receipts £102,134,996. Of the nontax revenue, £11,465,370 came from the post office, £2,885,749 from telegraphs, £519,068 from Crown

lands, £689,525 from interest on Suez Canal shares, and £1,566,394 from miscellaneous sources.

The expenditure under the three main heads for the year ending March 31, 1896, was £26,601,357 for the consolidated fund, £38,184,000 for the army and navy supply services, and £32,979,000 for civil and miscellaneous services, including the cost of collecting the revenue. The national debt charges were £25,000,000, of which £16,110,274 represented interest on the funded debt, £6,442,138 terminable annuities, £118,367 interest on unfunded debt, £176,447 management of debt, and £2,152,774 the new sinking fund. Other charges on the consolidated fund were £408,022 for the civil list, £305,312 for annuities and pensions, £81,276 for salaries, £515,714 for courts of justice, and £291,033 for miscellaneous expenses. The expenditure on the army was £18,460,000; on the navy, £19,724,000; for civil services, £19,800,000; for customs and inland revenue, £2,702,000; for the post office, £7,018,000; for the telegraph service, £2,744,000; for packet service, £715,000; total expenditure, £97,764,357.

The revenue for the year ending March 31, 1897, was £103,950,000, which was £3,470,000 more than the estimate. The total sum raised was £112,199,000, of which £8,249,000 went to the relief of local taxation, an increase of £883,000 over the preceding year, due to the agricultural rating bill and kindred legislation. There was a falling off of £95,000 in land taxes, owing to the recent remission, and of £770,000 in the estate duty, due to the transfer of a part of the proceeds by recent legislation. There were increases under all the other heads. The miscellaneous revenue was £547,000 more, gross post-office receipts £480,000 and telegraph receipts £70,000 more. Income-tax receipts showed an improvement of £550,000. The customs receipts were £21,254,000, an improvement of £498,000 over the preceding year, due to increased consumption of tobacco, rum, tea, and champagne. The excise receipts were £27,460,000. The death duties produced £13,963,000. There was a noticeable decrease, ascribed to the growing tendency of rich men to avoid paying duties by making over their property to their heirs and to substitute gifts for legacies. Stamps produced £7,350,000, the loss in transactions on the Stock Exchange being made good by increased receipts from deeds and joint-stock companies.

The estimated expenditure for 1897 was £100,046,000, and the supplementary estimates were £2,279,000, making a total of £102,325,000. The actual expenditures were £101,477,000, of which £799,000 was the advance to the Egyptian Government on account of the Dongola expedition, £145,000 was due to the expenses of the Indian garrison at Suakin, and £487,000 to increases in the army, navy, and education votes. The expenditures of the Government have grown 12 per cent. in four years, while the increase in revenue, apart from new taxation, has been only 9 per cent. The navy expenses have increased 40 per cent. and the education votes 43 per cent. The surplus of £2,437,000 left at the end of 1896 was devoted to the military-works act.

The expenditure for 1898 was originally estimated at £100,925,000 for the exchequer and £8,979,000 for local-taxation account; total, £109,904,000. The relief of necessitous board schools, increased wages for post-office employees, etc., increased the amount to £101,791,000. The revenue was estimated at £103,360,000, leaving a surplus of £1,569,000, which, however, was swallowed up in supplementary navy estimates, amounting to £500,000, the expense of maintaining an increased garrison in South Africa, which is £200,000 a year, and the cost of improving postal facilities.

The funded and unfunded debts on April 1, 1896, amounted to £648,474,143, or, including other capital liabilities, to £652,540,105, of which £589,146,878 represented the funded debt, £49,351,465 the capital value of terminable annuities, £9,975,800 the unfunded debt, and £4,065,962 liabilities under various acts of Parliament. The liquid assets of the Government were £22,627,000 of Suez Canal shares and other assets, making the total £23,666,354, besides £8,975,201 of balances in bank.

On April 1, 1897, the gross liabilities of the Government amounted to £644,956,000, the funded debt having been reduced during the year by £1,448,600, the terminable annuities by £4,363,000, and the unfunded debt by £1,843,000. On the other hand, the temporary loans showed an increase of £70,000, owing to the purchase of the telephones and the Uganda Railroad, making the net reduction of debt £7,584,000.

The Army.—The strength of the regular army, as provided in the estimates for 1897, was 7,534 officers, 1,052 warrant officers, 15,941 sergeants, 3,684 drummers, trumpeters, etc., and 127,963 rank and file; total, 156,174 men of all ranks. The general staff numbered 335 officers; army accountants, 209; chaplains, 85; medical department, 619; veterinary department, 68; noncommissioned officers and men attached to staff, etc., 142; cavalry, 553 officers, 1,368 noncommissioned officers, musicians, etc., and 11,396 men; Royal Artillery, 870 officers, 1,959 noncommissioned officers, etc., and 20,457 men; Royal Engineers, 594 officers, 1,264 noncommissioned officers, etc., and 5,641 men; infantry, 2,804 officers, 6,655 noncommissioned officers, etc., and 79,587 men; colonial corps, 164 officers, 394 noncommissioned officers, etc., and 4,883 men; departmental corps, 199 officers, 1,399 noncommissioned officers, etc., and 3,062 men; army service corps, 246 officers, 818 noncommissioned officers, etc., and 2,792 men; gunnery and musketry instructors, military academies and colleges, regimental schools, and other establishments, 188 officers, 494 noncommissioned officers, etc., and 129 men. The number of horses provided for the establishment was 14,716. This does not include the British army maintained in India at the expense of the Indian Government. The number of troops maintained in the United Kingdom in 1896 was 107,626, comprising 12,340 cavalry, 17,834 artillery, 5,608 engineers, and 71,854 infantry and special corps. The total effective strength of the British army on Jan. 1, 1896, was returned as 222,194 officers and men, of whom 76,393 were in England, 3,735 in Scotland, 25,972 in Ireland, 4,407 in Egypt, 53,644 in the colonies, and 78,043 in India. The total effective of the regular forces at home and in the colonies in 1897 was 145,270; of the army reserve, 77,833; of the militia, 122,115; of the yeomanry, 9,745; of the volunteers, 232,150; making a total of 587,113, or, adding 78,041 British soldiers in India, 665,154 fighting men. Adding to this total the native Indian army, about 146,000 men, the imperial service troops in India, 19,000 men, and colonial troops, about 86,000, with military police, etc., the number of armed men wholly or partly trained that can be counted on for the defense of the empire exceeds 900,000. Of 33,351 British troops in the colonies, the number given in the army estimates, 9,735 were stationed at Malta, 4,924 in Gibraltar, 3,669 in Cape Colony and Natal, 1,669 in Bermuda, 1,620 in Jamaica, 1,459 in Barbadoes and St. Lucia, 1,604 at Halifax, 3,047 at Hong-Kong, 1,520 in the Straits Settlements, 1,076 in Mauritius, 1,063 in West Africa, 134 in Cyprus, and 226 at St. Helena.

The estimates for 1898 provide for the following additions to the army: 1 battery of field artillery, to provide a total strength at home of 45 field bat-

teries, the complement for the 3 army corps authorized for home defense; 11 companies of garrison artillery, for strengthening the garrisons of coaling stations and naval bases, as recommended by the Colonial Defense Committee: 2 battalions of Foot Guards, raising their strength to 9 battalions, 3 of which will be garrisoned in Mediterranean stations, releasing 3 line battalions for home duty; 1 battalion of Cameron Highlanders; 1 battalion for the West India regiment; and 1 battalion for the Malta militia. This involves an increase of 7,835 men, of whom only 2,590 are expected to be raised during the year. The rearmament of the horse and field artillery is proceeding. The number of men to be maintained on the home and colonial establishments in 1898 is 158,774. The number of recruits raised during 1896 was 1,000 less than in the previous year, in spite of a lowering of the standard. Military men have raised an alarm on the subject of the inadequacy of the British military forces. The infantry of the line is organized on the system of linked battalions, and the result is that while the foreign army is largely made up of seasoned and well-trained men, the home army is mainly composed of boys, a great many of them untrained and wholly incapable of going into a campaign. The efficient men are drafted off in increasing numbers to complete the battalions serving abroad, of which there were 13 more than at home in 1897. The condition of the artillery is even worse, all the trained artillerymen being sent to render efficient the batteries abroad.

To provide a training-ground of sufficient extent for manœuvring troops the Government was empowered by the military-works bill of 1897 to purchase 60 square miles on Salisbury plain—new barracks and new rifle ranges with camps attached, accessible to all branches of the service. The same scheme, for which £5,458,000 was voted by Parliament, comprised other works in which the navy was concerned as well as the army, in the nature of further provision for the more effective defense against modern forms of attack of naval bases and coaling stations abroad and at home, and of certain important mercantile harbors in the United Kingdom. At the instance of the Admiralty it was decided to fortify also Berehaven, Lough Swilly, Falmouth, and Scilly, in order to enable trading ships to find protection in the event of war and allow the fleet to act with more freedom in the Atlantic.

The Navy.—The British navy at the beginning of 1897 counted 28 first-class battle ships, besides 5 under construction, 5 second-class, and 9 third-class battle ships, 23 port-defense vessels, 34 first-class cruisers above 5,000 tons and 17 knots, besides 10 building, 11 others of the first class, 54 second-class cruisers, 174 of the third class, 125 first-class torpedo craft, besides 42 building, 4 second-class and 20 third-class torpedo boats. The new programme provided for the laying down during 1897 of 4 battle ships, 3 small cruisers, 2 sloops, 4 gunboats, 8 river gunboats, and 2 torpedo destroyers. There are 13 ocean steamers subsidized to serve as auxiliary cruisers in the event of war, besides many more engaged in case they are needed, but receiving no subsidies. There were 209 ships in commission in November, 1896, of which 46 were armored vessels, 130 unarmored vessels, 6 training brigs and ships, and 27 miscellaneous. The Mediterranean and Red Sea squadrons in the beginning of 1897 consisted of 37 vessels, the Channel squadron of 14, the North American and West Indian squadron of 12, and in the East Indies were 10, on the China station 26, at the Cape of Good Hope and in West Africa 18, in the Pacific 7, on particular service 16, in Australia 12, on the southeast coast of America 4, on surveying service 8, and in the training squad-

ron 4; total on foreign or particular service, 168. The number of officers, seamen, boys, coast guard, and marines voted for 1897 was 93,750. The navy estimates for 1898 add 6,300, bringing up the total to 100,050.

The cruiser "Terrible," of 14,000 tons, in her steam trials made the same record as the "Powerful," with 18,000 horse power, the mean speed being nearly 21 knots: with the full 25,000 horse power she did better than her sister ship, making nearly 22½ knots. In these powerful deck-protected cruisers, much superior to any others afloat, the Admiralty has adopted for the first time the water-tube boiler. These vessels have a very strong and well-protected armament composed of 42 quick-firing guns, besides 9·2-inch bow and stern chasers. Their vital parts are underneath a 4-inch curved steel deck, and are further secured by water-tight compartments. Their bunker capacity is 3,000 tons.

Parliament voted £5,440,000 for shipbuilding during the financial year 1897-'98. Of four battle ships to be laid down, three will be of the "Majestic" class, with some improvements and with lighter draught for passing through the Suez Canal, and one will be like the "Canopus." There are already 9 war ships building of the "Majestic" type, the largest vessels in any navy except the Italian, with a length of 390 feet, 78 feet beam, a mean draught of 28 feet, and 14,900 tons displacement, having a mean speed of 16½ knots, which can be increased to 17½ knots under moderate forced draught, and carrying an armament consisting of 4 12-inch breech-loading guns of new type, mounted in pairs, 12 6-inch quick firers, 16 quick-firing 12-pounders (improved design), 12 6-pounders, and 5 ejectors for 18-inch torpedoes. The heavy guns are mounted in strong barbets, with armored shields attached to the turntables, and are capable of being loaded by hand power in any position as well as by hydraulic power in the loading station. The hull is protected more completely than in the "Royal Sovereign" class, and the armor is hardened by the Harvey process. The "Canopus" has a displacement of 12,950 tons, and, with 12,000 horse power—the same as the "Majestic"—is capable of making 18 knots an hour. The main armament will consist of 4 12-inch guns, mounted in armored barbets, and the quick-firing armament of 12 6-inch guns, 12 12-pounders, and 14 smaller guns, with 5 torpedo tubes. Of this type will be the "Ocean," "Goliath," "Albion," "Glory," and "Vengeance." The programme for 1898 includes 6 light-draught 13-knot screw steamers for river service, and a new royal yacht of 4,600 tons displacement, which will have a speed of 20 knots and great coal endurance, but will not be armed. To keep up with the movement of other naval powers in the direction of providing very strong large cruisers, the Admiralty decided to begin 4 very fast vessels, to cost £700,000 each, capable of taking part in action with fleets and also of guarding lines of communication. They will have a length of 440 feet, a breadth of 69½ feet, a mean draught of 26 feet, a displacement of 11,850 tons, and an armament like that of the "Powerful," consisting of 2 9-inch guns, 12 6-inch quick-firing guns, and 14 12-pounders, and will be protected with the superior armor of the "Canopus." They will be wood sheathed and coppered, so as to keep the sea for a long period, with a continuous speed of 19½ knots, which can be brought up to a maximum of 21 knots. Four new torpedo destroyers were also provided for. In the number and efficiency of these new vessels Great Britain has a long start, but other countries are making vigorous efforts to provide their navies with the fleetest and most formidable of these engines of destruction, destined in the opinion of many to

render obsolete and useless the great armor clads which governments have strained their financial resources to build. Vessels of this type cost £40,000 to build and equip. They carry a crew of 50 or 60 men, and they possess a speed which, from 26 knots in the earlier examples, has risen to 33 knots in the latest. The largest destroyers have a displacement of 400 tons. Provided with torpedoes of the newest type, they would be able by a single successful discharge to disable, if not to destroy, a "Magnificent" or a "Canopus," which a flotilla of the latest destroyers could overtake in five to seven minutes from a distance astern of 2,000 yards. There will be 90 of these destroyers.

A new naval harbor is being constructed at Dover which will afford berths for 20 battle ships, besides smaller vessels. A large dockyard and a deep basin at Hong-Kong, a breakwater to protect the harbor at Gibraltar, and a dock at Colombo are among the new naval works. The annual expenditure on new construction for ten years from 1887 averaged £4,450,000, rising to £7,300,000 in 1897. For 1898 the expenditure will be £9,230,000. The total expenditure on the navy has risen from £14,000,000 in 1888 to £21,838,000 for 1898.

Commerce and Production.—The wheat crop of Great Britain and Ireland in 1896 was 58,164,000 bushels; the barley crop in Great Britain was 70,775,000 bushels, and that of 1895 in Ireland was 6,378,000 bushels. The live stock of the United Kingdom in 1896 consisted of 2,115,557 horses, 10,942,423 cattle, 30,853,809 sheep, and 4,301,328 pigs. The value of the fishery products in 1896 was £7,435,199; the number of men engaged in fishing was 121,978. The exports of fish were £2,274,940, besides £524,780 of re-exports; imports, £2,975,273. The quantity of iron ore raised in 1895 was 12,615,414 tons, valued at £2,865,709, containing 4,394,987 tons of iron, of the value of £10,534,325. The iron ore smelted in 344 blast furnaces was 18,629,337 tons, from which 7,703,459 tons of pig iron were obtained. The imports of pig iron were 93,119 tons and the exports 866,568 tons. The iron and steel exports were £17,603,850 in value, the chief articles being tin plates for £4,239,193, cast and wrought iron for £3,727,607, hoops and plates for £3,014,488, railroad iron for £1,897,036, unwrought steel for £1,948,795, and bar, angle, and bolt iron for £854,017. There were 4,450,311 tons of iron ore imported, chiefly Spanish, valued at £2,977,952. Including tin, lead, zinc, copper, etc., the total value of metals extracted from British ores was £11,472,225. The imports of copper ore and regulus were 191,024 tons; unmanufactured copper, 45,761 tons; lead, 162,924 tons; zinc, 62,525 tons; tin, 41,601 tons. The quantity of coal raised was 189,661,362 tons, valued at £57,231,213. The exports of coal were 33,101,452 tons, valued at £15,433,803, going to France, Italy, Germany, Spain, Sweden, Russia, Egypt, Denmark, the Argentine Republic, Norway, Brazil, and India.

The imports of raw cotton in 1895 were 1,757,042,672 pounds, of which 1,553,758,080 pounds were retained for home consumption. The consumption of cotton in 1896 was 1,644,000,000 pounds; of wool, 616,000,000 pounds; of flax, 240,000,000 pounds. The imports of wool in 1895 were 775,379,063 pounds, and the exports 404,935,226 pounds. Of the imports, 541,394,083 pounds came from Australasia. The exports of cotton piece goods in 1896 were 5,220,000,000 yards; of woollens, 221,000,000 yards; of linens, 174,000,000 yards; of cotton yarn, 247,000,000 pounds; of woolen yarn, 62,000,000 pounds; of linen yarn, 19,000,000 pounds.

The total value of imports of merchandise in 1896 was £441,807,335; of domestic exports, £239,922,209; of exports of foreign and colonial prod-

uce, £56,466,465; total imports and exports, £738,196,009, compared with £702,522,065 in 1895, £682,130,677 in 1894, £681,826,448 in 1893, £715,434,048 in 1892, £744,554,982 in 1891, and £748,944,115 in 1890.

The values of the merchandise imports from and exports of British produce to the colonies and dependencies of Great Britain in 1895 were as follow:

BRITISH POSSESSIONS.	Imports.	Exports.
India.....	£26,431,315	£24,706,569
Australasia.....	33,362,797	17,313,923
British America.....	13,400,570	5,538,585
South Africa.....	5,426,004	10,581,478
Straits Settlements.....	4,645,446	1,970,316
Hong-Kong.....	759,441	1,897,766
British West Indies.....	1,863,673	2,104,374
Ceylon.....	4,524,843	979,460
British Guiana.....	765,111	537,328
Channel Islands.....	1,184,212	943,258
West Africa.....	2,114,504	1,558,804
Malta.....	90,167	668,405
Mauritius.....	97,795	225,410
All others.....	864,332	965,848
Total.....	£95,530,210	£70,001,524

The values of the imports from and domestic exports to foreign countries in 1895 were as follow:

COUNTRIES.	Imports.	Exports.
United States.....	£86,548,860	£27,948,112
France.....	47,470,583	13,869,863
Germany.....	26,992,559	20,580,866
Holland.....	28,419,477	7,374,125
Belgium.....	17,545,636	7,324,871
Russia.....	24,736,919	7,004,537
Spain.....	11,314,518	3,638,453
Egypt.....	9,524,507	3,348,061
China.....	3,343,865	5,253,101
Brazil.....	3,614,155	7,322,986
Italy.....	3,132,720	5,545,947
Sweden.....	8,784,256	3,020,555
Turkey.....	5,751,537	5,347,785
Argentine Republic.....	9,084,497	5,349,091
Denmark.....	9,799,328	2,699,734
Portugal.....	2,491,926	1,461,501
Roumania.....	2,118,505	891,117
Chili.....	3,436,142	3,246,238
Japan.....	1,143,382	4,638,207
Norway.....	3,831,727	1,895,889
Java.....	870,419	1,739,730
Greece.....	1,241,406	806,328
West Africa.....	412,153	819,355
Austria.....	1,221,783	1,715,605
Peru.....	1,371,088	681,401
Central America.....	976,014	1,316,401
Uruguay.....	460,946	1,348,626
Spanish West Indies.....	131,567	943,793
Mexico.....	467,331	1,522,022
Philippine Islands.....	1,606,271	415,803
Colombia.....	434,893	1,227,244
Venezuela.....	53,410	802,964
Algeria.....	549,362	264,905
Morocco.....	404,400	629,783
Ecuador.....	117,957	250,858
Hayti and San Domingo.....	53,216	359,027
Tunis and Tripoli.....	302,255	369,843
East Africa.....	44,852	595,835
Persia.....	175,857	372,770
Siam.....	157,994	139,845
Bulgaria.....	21,283	159,026
Madagascar.....	139,005	66,277
Cochin-China and Tonquin.....	11,044	196,722
All other countries.....	849,843	1,382,490
Total.....	£321,159,448	£155,888,492

The imports of gold in 1896 were £24,468,337 in value, and exports £30,123,925; imports of silver £14,329,116, and exports £15,048,134.

The value of the live animals imported for food in 1896 was £10,438,699; articles of food and drink free of duty, £146,301,708; articles of food and drink paying duty, £25,693,706; tobacco, £4,370,670; metals, £20,464,786; chemicals, dyestuffs, and tanning substances, £6,784,845; oils, £8,446,709; raw textile materials, £74,760,039; raw materials for various industries, £47,240,940; manufactured articles, £81,250,453; miscellaneous articles, £15,-

036,432; imports by parcel post, £1,012,348; total imports, £441,807,335.

The imports of wheat were 16,361,600 quarters of 8 bushels, compared with 19,074,790 in 1895, 14,063,760 in 1890, 12,752,800 in 1880, and 7,131,100 in 1870. Of the total imports of wheat and flour, 30,694,800 hundredweight came from the United States, 17,241,600 hundredweight from Russia, 4,927,600 hundredweight from the Argentine Republic, 5,401,300 hundredweight from Roumania, 1,930,400 hundredweight from Turkey, 1,936,100 hundredweight from Chili, 1,032,910 hundredweight from Germany, 2,112,940 hundredweight from India, 3,617,900 hundredweight from Canada, and 8,500 hundredweight from Australia; total, 70,027,880 hundredweight, of which 5,739,340 was the product of British possessions and 64,288,540 hundredweight was brought from foreign countries. The imports of flour in 1896 were 21,293,220 hundredweight, of which 15,905,100 came from the United States. The imports of breadstuffs from the United States and Canada declined in four years from 14,500,000 to 12,711,000 quarters, or from 64 to 54 per cent. of the total importation, while those from Europe and north Africa increased from 2,400,000 to 6,934,000 quarters, or from 11 to 29 per cent. of the total quantity imported. The aggregate imports of cereals and flour were 189,644,479 hundredweight, against 179,927,460 hundredweight in 1895. The quantity of bacon and hams imported was 6,008,938 hundredweight; of butter, 3,037,947 hundredweight; of margarine, 925,934 hundredweight; of cheese, 2,244,535 hundredweight; of beef, 2,906,967 hundredweight; of fresh mutton, 2,895,158 hundredweight; of preserved meat, 701,970 hundredweight. The cheese imports, which used to come mainly from the United States, are now furnished largely by British colonies. Of 2,234,563 hundredweight imported in the financial year 1897, the colonies sent 58 per cent.; 1,229,374 hundredweight from Canada and 63,530 hundredweight from Australia, compared with 556,756 hundredweight from the United States. The butter imports in 1897 reached 3,086,400 hundredweight, coming from Denmark, France, Sweden, Holland, Australia, the United States, Germany, and New Zealand. The number of cattle imported in 1896 was 562,553; of sheep and lambs, 769,592. The imports of raw sugar were 15,769,226 hundredweight, and of refined sugar 14,778,314 hundredweight. The imports of spirits for consumption were 8,174,296 proof gallons; of wine, 15,861,251 gallons. The tea importation amounted to 227,785,509 pounds, valued at £10,651,253. In 1895 48·31 per cent. of the tea imported came from India, 32·67 per cent. from Ceylon, 15·52 per cent. from China and Hong-Kong, 1·34 per cent. from Holland, and 2·16 per cent. from other countries. The value of the grain and flour imports of 1896 was £52,792,697; of the raw cotton imported, £36,272,039; of wool, £24,958,346; of meat, £24,753,002; of timber and wood, £19,202,961; of raw and refined sugar, £18,383,765; of butter and margarine, £17,842,508; of silk manufactures, £16,707,103; of animals, £10,438,699; of flax, hemp, and jute, £9,236,794; of woollen manufactures, £9,236,794; of oils, £8,446,709; of leather, £7,593,599; of chemicals, dyestuffs, etc., £6,784,845; of seeds, £6,735,999; of wine, £5,951,047; of fruit and hops, £5,747,110; of cheese, £4,900,428; of tobacco, £4,370,670; of eggs, £4,184,567; of coffee, £3,578,947; of currants and raisins, £1,600,051; of iron manufactures, £4,574,588; of iron ore, £3,761,722; of iron bars, £570,413; of copper partly manufactured, £2,882,453; of copper ore, £2,853,300; of tin, £2,289,688; of lead, £1,853,468; of zinc and manufactures thereof, £1,664,450.

The exports of live animals in 1896 were £940,-

645 in value; of articles of food and drink, £11,355,141; of raw materials, £17,692,507; of yarns and textile fabrics, £105,353,592; of metals and metal manufactures, except machinery, £33,572,894; of machinery and mill work, £17,036,899; of apparel and articles of personal use, £10,473,345; of chemicals and chemical and medicinal preparations, £8,243,601; of all other manufactured or partly manufactured articles, £33,583,916; exports by parcel post, £1,669,669; total exports of British produce, £239,922,209.

The value of cotton manufactures exported in 1896 was £59,333,836; of cotton yarn, £10,047,568; total cotton exports, £69,381,404. The total exports of woollen and worsted goods were £18,266,972, and of yarns £5,665,995; total, £23,932,567. The exports of linen manufactures were valued at £5,030,975, and linen yarn at £1,041,814. Jute manufactures were valued at £2,344,700, and jute yarn at £378,560. The exports of apparel and haberdashery were £6,745,670 in value. The total value of iron and steel exports was £23,813,239, made up of £3,565,564 for railroad iron, £2,535,792 for pig iron, £3,691,632 for hoops, sheets, and plates, £3,035,931 for tin plates, £1,104,352 for bar, angle, bolt, and rod iron, £904,103 for wire, £4,724,322 for cast and wrought iron, £338,832 for old iron, and £3,912,711 for steel, steel manufactures, and mixed steel and iron goods. Hardware and cutlery exports amounted to £2,121,268; machinery, £17,036,898. Exports of coal and coke were £15,160,577 in value. Copper and its manufactures were exported for £2,548,898. The exports of chemical products were valued at £8,243,601.

In answer to inquiries sent out from the Colonial Office in November, 1895, the governors of the British colonies made reports touching the displacement of British by foreign goods which showed that in the selected classes of goods in which foreigners compete the values of imports from foreign countries increased from 25·71 in 1884 to 27·82 in 1889 and 31·88 in 1894, and that of the total imports from all sources foreign countries furnished 31·50 per cent. in 1894, compared with 25·79 per cent. in 1884. Excluding Australia, the imports from foreign countries of competing goods into the British colonies and dependencies, including India, was nearly 50 per cent. of the total imports of such goods in 1894. The countries that compete most seriously with Great Britain are the United States and Germany. Belgium is also an energetic competitor in some lines. In the trade of the far East the competition of Japan is rapidly becoming the leading feature. In many places the foreign merchants do more than 50 per cent. of a trade that was undeniably British a few years ago. The returns do not reveal the whole extent of foreign competition, as only the port of shipment, not the country of origin, is given. Cheapness, better finish, better packing, more accommodating terms, the adaptation of goods to the market, and commercial enterprise are some of the reasons given for the preference for foreign goods. The merchandise-marks act is said to have established, instead of discouraging, a demand for the cheaper foreign articles and to have transferred the orders for such goods from London merchants to the countries where they are made. In the best classes of goods the British manufacturers are held to be still supreme, with certain exceptions, such as machinery and tools of certain patterns turned out in the United States, in which Canadian manufacturers are now becoming active competitors. Finished cheap imitations are not made by British manufacturers, who reserve finish for the high grades, and hence when the colonial markets demand cheap articles of finished appearance these must be supplied by the Continent of Europe or the



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Victoria R.I

United States. By taking the trade in cheap goods which British makers refuse to furnish, the foreign competitors obtain a chance to enter into the better class of trade also.

Navigation.—The number of vessels engaged in foreign commerce entered at the ports of the United Kingdom during 1895 was 60,714, of 40,001,000 tons, of which 37,534, of 29,175,000 tons, were British and 23,180, of 10,826,000 tons, were foreign; the number cleared was 60,696, of 40,537,000 tons, of which 37,283, of 29,516,000 tons, were British and 23,413, of 11,021,000 tons, were foreign. The tonnage of vessels entered with cargoes was 31,358,000, of which 22,992,000 tons were British and 8,366,000 tons were foreign; the tonnage of vessels cleared with cargoes was 36,272,000, of which 26,933,000 tons were British and 9,339,000 tons were foreign. Of a total foreign tonnage of 21,847,248 tons entered and cleared, Norway had 4,653,008; Germany, 3,652,788; the Netherlands, 2,293,796; Sweden, 1,960,571; Denmark, 1,940,097; France, 1,832,149; Spain, 1,304,660; Belgium, 1,082,445; the United States, 650,164; Russia, 615,153; Italy, 297,466; and Austria, 196,701. The tonnage entered and cleared at the port of London was 14,546,311; at Liverpool, 10,481,540; at Cardiff, 10,201,127; at Newcastle, 4,601,408; at Hull, 3,763,339; at North and South Shields, 3,513,864; at Glasgow, 3,096,276; at Newport, 2,246,123; at Southampton, 2,748,924; at Middlesbrough, 1,829,044; at Sunderland, 1,732,948; at Leith, Grimsby, Swansea, Grangemouth, and Kirkcaldy, more than 1,000,000 tons each.

The number of British vessels engaged both in the home and foreign trade in 1895 was 16,105, employing 240,486 seamen, of whom 32,335 were foreigners. Their aggregate tonnage was 8,861,848 tons. There were 21,003 vessels registered as belonging, on Jan. 1, 1896, to the United Kingdom, including the Isle of Man and the Channel Islands. The aggregate tonnage was 8,988,450, and they were divided into 12,617 sailing vessels, of 2,866,895 tons, and 8,386 steamers, of 6,121,555 tons. The number of vessels built and first registered during 1895 was 860, of 519,622 tons, divided into 319 sailing vessels, of 54,155 tons, and 541 steamers, of 465,467 tons. Of the total number of vessels belonging to the United Kingdom, 7,495 sailing vessels, of 479,764 tons, and 2,633 steamers, of 406,477 tons, were employed in the home trade and the adjacent seas; 222 sailing vessels, of 26,721 tons, and 329 steamers, of 238,633 tons, were engaged partly in the home and partly in the foreign trade; and 1,765 sailing vessels, of 2,230,285 tons, were engaged in the foreign trade exclusively. The total number of vessels entered coastwise during 1895 was 323,616, of 54,304,703 tons; the number cleared was 289,310, of 47,263,791 tons. The total number of vessels entered at British ports was for that year 384,330, of 94,306,394 tons; the total number cleared was 350,006, of 87,801,274 tons.

Communications.—The total length of railroads open to traffic in the United Kingdom at the beginning of 1896 was 21,174 miles, of which 14,651 miles were in England and Wales, 3,350 miles in Scotland, and 3,173 miles in Ireland. The paid-up share and loan capital amounted to £1,001,110,221. There were 929,770,909 passengers carried during 1895, exclusive of holders of season tickets. The receipts from all sources were £85,922,702; receipts from passengers, £37,361,162; from freight, £44,034,885. The working expenses were £47,876,637, equal to 56 per cent. of the gross receipts.

The number of letters that passed through the post office during the year ending March 31, 1896, was 1,834,000,000, of which 1,559,000,000 were delivered in England and Wales, 163,000,000 in Scotland, and 112,500,000 in Ireland, being 47 per head

of population for the whole United Kingdom, 51 for England and Wales, 39 for Scotland, and 25 for Ireland. The number of postal cards for the United Kingdom was 314,500,000; of book packets, 672,300,000; of newspapers, 149,000,000; of parcels, 60,500,000. The number of money orders was 10,900,963, for the total sum of £29,726,817, of which 9,334,296, for £25,582,236, were inland orders. The number of postal orders was 64,076,377, for the gross amount of £23,896,594. The receipts of the post office, exclusive of the telegraph service, were £11,465,370, and the expenses £8,080,873, leaving a net revenue of £3,384,497. The telegraph receipts of the post office were £2,835,749, and expenses £2,773,536, leaving a surplus of £62,213. The total receipts of the telegraph service, including the valuation placed on work done for the Government, were £2,879,794; the total expenses, including those paid by other departments, were £2,914,581. The interest on the capital invested is £298,888. There is thus a deficit on the operations for the year of £333,675. The number of messages sent during 1896 was 78,839,610, of which 66,436,549 were English, 8,095,581 Scotch, and 4,307,480 Irish. Important postal reforms adopted in 1897 are the free delivery of letters to every hamlet, and, as far as possible, to every house; the penny letter rate extended to 4 ounces, with a halfpenny rate for each additional 2 ounces, books to go at the same rate; the abolition of the sample post; the reduction, subject to the consent of the Postal Union, of foreign letter postage from 2½d. to 2d.; and the free delivery of telegrams within 3 miles.

The Queen's Jubilee.—The diamond jubilee, marking the sixtieth year of the reign of Queen Victoria, was commemorated on June 22. The Queen, escorted by a gorgeous procession, went from Buckingham Palace to St. Paul's Cathedral, where a service of thanksgiving was held, and then back to her palace through a circuit of decorated streets. Besides 14,000 British regulars, Asiatic, and colonial contingents took part in the parade. To every part of the British Empire the Queen-Empress dispatched the telegraphic message: "From my heart I thank my beloved people. May God bless them!" The celebration was planned above all to demonstrate the power of the British Empire and the unity and loyalty of all its constituent members. Celebrations were held simultaneously in all the British colonies and dependencies from the Northwest Territories of Canada to Cape Colony and from Malta to New Zealand. President Krüger chose the occasion as an appropriate one for releasing two Uitlander rebels who had refused to sue for pardon. President McKinley sent a message to felicitate the English Queen on "the prolongation of a reign which has been illustrious and marked for advance in science, arts, and popular well-being." Lord Salisbury, in moving an address congratulating the Queen on "the longest, the most prosperous, and the most illustrious reign," spoke of it as a period marked by "a continuous advance in the frontiers of this empire, so that many races that were formerly alien to it have been brought under its influence, many who were formerly within its boundaries have been made to feel in some degree for the first time the full benefits of its civilization and its educating influence." He dwelt also on the great political change: "The impulse of democracy, which began in another century and in other lands, has made itself felt fully in our time, and vast changes in the center of power and the incidence of responsibility have been made almost imperceptibly without any disturbance or hindrance in the progress of the prosperous development of the nation." Mr. Balfour, in the House of Commons, extolled the virtue of the Queen, an example to every citizen in

her private life, and in her public life an example to sovereigns. "It is," he said, "because she has so well understood the difficult and delicate tasks which fall to a constitutional monarch to perform that the Constitution of this country has during her reign been able to adapt itself, without friction and without shock, to the varying needs of this great community." The Irish Nationalist members protested against the address and refused to take part in the jubilee, holding, as Mr. Dillon said, that in every item of the catalogue of the great advances made by the populations of Great Britain and the colonies since her Majesty came to the throne Ireland has gone back and not progressed," and, as explained by J. Redmond, "in almost every one of the sixty years of the reign there had been some coercion act for the suspension of trial by jury, the suppression of freedom of speech or the freedom of the press, or the abrogation of some part of the Constitution under which Ireland was supposed to live."

The jubilee celebrations lasted over the month. In the naval review of June 26 at Spithead 173 British war vessels were arranged in 4 lines, each about 5 miles in length. On July 1 there was a review of troops at Aldershot, in which 27,359 officers and men, 5,029 horses, and 57 guns paraded.

Relations with the Colonies.—The Premiers of Canada, Newfoundland, New South Wales, Victoria, Queensland, South Australia, Tasmania, New Zealand, Western Australia, Cape Colony, and Natal, representing all the self-governing colonies, went to England to take part in the jubilee celebrations and for an informal discussion of subjects of interest to the empire with the Minister of the Colonies in Downing Street. The Parliament of Cape Colony had in advance empowered Sir Gordon Sprigg to enter into tentative negotiations regarding a contribution of the colony toward the imperial navy. Sir Wilfrid Laurier had proposals to offer from Canada of preferential trade with the mother country. Australia had, in the first instance, offered a contribution in aid of the British navy, besides taking her full share of her military defenses.

The Prime Ministers assembled at the Colonial Office on June 24. Mr. Chamberlain broached the subject of a closer political and commercial union looking toward imperial federation. He suggested a great council of the empire, to which the colonies should send representative plenipotentiaries, which might slowly grow into a federal council. He was anxious to increase the authority of the Judicial Committee of the Privy Council. To this end the Government had secured the appointment as Privy Counsellors of distinguished judges from the courts of Canada, Australia, and South Africa. He proposed that, instead of having in this place judges in active service in the colonies, the colonial governments should appoint and maintain permanently in England judges to assist in the trial of colonial cases brought before the Privy Council on appeal. He desired particularly to hear from the colonial Premiers their views as to what contributions the colonies would be willing to make in order to establish the principle of their participation in the naval defense of the empire. As regards the military defenses, the colonial defense committee of experts had accomplished a great improvement, with the assistance of the colonies; but the organization of the military resources of the colonies was very imperfect, and it was desirable to have a scheme of common defense against any probable enemy, such as already had been prepared in the case of some of the colonies. Uniformity of arms and equipment, some central provision for stores, and facilities for the military instruction of the local forces might be arranged to the advantage of the

colonies. The Colonial Secretary suggested the interchangeability of military forces between the colonies and the mother country and among the several colonies. If colonial regiments were to take up their quarters with the British army for at least a year at a time and British regiments in exchange were quartered in the colonies, the colonial troops would learn the drill, the discipline, and the manœuvres practiced by the regular British army. The future commercial relations between England and her colonies he hoped to see take the shape of a *Zollverein*. He wanted an expression of opinion as to the desirability of denouncing commercial treaties, especially those with Germany and Belgium, standing in the way of preferential trade arrangements with the colonies. Germany and Belgium had already protested against the proposed preferential treatment of British goods by Canada. He mentioned, further, the subjects of the Pacific cable, imperial penny postage, and a common commercial code, and protested against the alien immigration bills excluding all of the Indian subjects of the Queen on account of their color, and even all Asiatics.

The commercial relations of the United Kingdom and the self-governing colonies were first considered and the following resolutions were unanimously adopted:

"1. That the Premiers of the self-governing colonies unanimously and earnestly recommend the denunciation, at the earliest convenient time, of any treaties which now hamper the commercial relations between Great Britain and her colonies.

"2. That in the hope of improving the trade relations between the mother country and the colonies, the Premiers present undertake to confer with their colleagues with a view to seeing whether such a result can be properly secured by a preference given by the colonies to the products of the United Kingdom."

The British Government had already decided to give effect to the first of these resolutions by notifying to the governments concerned its wish to terminate the commercial treaties with Germany and Belgium, which alone of the existing commercial treaties of the United Kingdom were a bar to the establishment of preferential tariff relations between the mother country and the colonies. From July 30, 1898, therefore, there would be nothing to preclude any action of any of the colonies in pursuance of the other resolution. Mr. Chamberlain warned the Premiers that if any colony should wish to extend the preferential treatment accorded to the United Kingdom to any foreign country then the most-favored-nation clause in all the commercial treaties, to which most of the colonies are parties, could be invoked, and the colony would be bound to give the same terms to nearly every important commercial country in the world. This is not applicable to the United States, which declined to include the British colonies in its most-favored-nation clause with Great Britain.

On the question of the political relations between England and the colonies the following resolutions were adopted:

"1. The Prime Ministers here assembled are of opinion that the present political relations between the United Kingdom and the self-governing colonies are generally satisfactory under the existing condition of things.

"2. They are also of opinion that it is desirable, whenever and wherever practicable, to group together under a federal union those colonies which are geographically united.

"3. Meanwhile, the Premiers are of opinion that it would be desirable to hold periodical conferences of representatives of the colonies and Great Britain for the discussion of matters of common interest."

Mr. Seddon, of New Zealand, and Sir E. N. C. Braddon, of Tasmania, dissented from the first resolution because they were of opinion that an effort should be made to render more formal the political ties between the United Kingdom and the colonies. Others of the Premiers were inclined to the view that with the rapid growth of population in the colonies the present relations can not continue indefinitely, and some means will have to be devised for giving the colonies a voice in the control and direction of those questions of imperial interest in which they are concerned equally with the mother country. They recognized at the same time that such a share in the direction of the imperial policy would involve a proportionate contribution to the imperial expenditure, for which, at present, the colonies are not prepared.

The commercial treaties with Germany and Belgium were formally denounced on July 20. Both were terminable on a year's notice. In the treaty with Belgium, signed in London on July 23, 1862, the article referring to colonial trade is worded as follows:

"Articles the produce or manufacture of Belgium shall not be subject in the British colonies to other or higher duties than those which are or may be imposed upon similar articles of British origin."

In the German commercial treaty of May 30, 1865, an article declares that:

"Any favor, privilege, or reduction in the tariff of duties of importation or exportation which either of the contracting parties may concede to any third power shall be extended immediately and unconditionally to the other."

Another article provides that this stipulation shall also be applied to the colonies and foreign possessions of Great Britain, in which "the produce of the states of the *Zollverein* shall not be subject to any higher or other import duties than the produce of the United Kingdom of Great Britain and Ireland or other country of the like kind; nor shall the exportation of those colonies or possessions to the *Zollverein* be subject to any higher or other duties than the exportation to the United Kingdom of Great Britain and Ireland."

The Marquis of Salisbury in his dispatches pointed out that such stipulations were unusual in commercial treaties, and he thought they must have been inserted through an oversight or a want of consideration of the consequences that would flow from them; that the self-governing colonies have for many years enjoyed complete tariff autonomy, and that in recent commercial treaties concluded by Great Britain it has been customary to insert an article empowering the self-governing colonies to adhere or not at will; and, beyond this, these stipulations constitute a barrier against the internal fiscal arrangements of the British Empire that is inconsistent with the close ties of commercial intercourse which subsist and should be consolidated between the mother country and the colonies. The explanatory dispatches contained proposals for the negotiation of new treaties of commerce and navigation, which were accepted by both governments. The German imports from Great Britain in 1895 amounted to £28,900,000, or 13·6 per cent. of the total imports, while the exports to Great Britain amounted to £33,900,000, or 19·8 per cent. of the total exports. Belgium exports annually to Great Britain more than she receives by over £3,000,000.

The Session of Parliament.—Parliament met on Jan. 19. In the programme of legislation the first place was given to the question of primary education. It was known that voluntary schools were to be relieved without having recourse to the

contested principle of rate aid. The second place was given to a measure for the compensation of workmen for accidents. The third place in the programme was assigned to national defenses, pre-emption being given to proposals connected with the army. A water bill was offered to London, and Ireland was to have an agricultural department. The other measures mentioned in the Queen's speech were promised on the condition that time permitted their passage through all the stages. These included a criminal-evidence bill, a land-registration bill, a bill-of-sales bill, a companies bill, an agricultural-holdings bill, a prison-made-goods bill, an inebriates'-reformatory bill, and private bills procedure bills for Scotland and Ireland. In the debate on the address the Irish members raised the question of the financial relations between Great Britain and Ireland. The commission appointed to inquire into this question reported that the taxable capacity of Ireland was one twentieth that of the United Kingdom, whereas the annual tax revenue collected from Ireland was one eleventh of the total revenue. The Irish Unionists joined with the Nationalists in demanding that this arrangement, whereby Ireland was overtaxed at the rate of £2,500,000 a year, should be corrected. The conditions of the act of union gave to Ireland a distinct right to be treated as a separate entity for purposes of taxation, for it was therein provided that Ireland was to pay toward the expenditure of the United Kingdom two parts out of seventeen, subject to revision at the end of twenty years. Mr. Balfour averted a discussion on this subject by promising to give an opportunity for debate later, and announcing the intention of the Government to institute a new inquiry. The royal commission that conducted the previous inquiry was appointed by the Gladstonian Government and was presided over by Mr. Childers and, after his death, by the O'Connor Don. The English Conservatives were inclined to dispute the right of Ireland to be treated as a separate entity under the act of union since the provision to that effect had been ignored for eighty years. Statistics were marshaled to show that, after deducting the sums returned in local expenditures, Ireland contributed only one thirtieth to what could be properly called imperial expenditure. The reference to a new royal commission was made to include an investigation into the amount of the common expenditure of the United Kingdom and into the amounts of the net contributions of England, Scotland, and Ireland toward that expenditure after deducting the outlay on common objects. The commission was further instructed to report "whether, when regard is had to the nature of the taxes now in force, to the existing excemptions, and to the amount of expenditure by the state on local services, then provision in the act of union between Great Britain and Ireland, with regard to the particular exemptions and abatements, calls for any modification in the financial system of the United Kingdom."

Patrick O'Brien moved an amendment, pleading the unanimous desire of the Irish people for the release of the remaining dynamiters undergoing punishment in English prisons "for offenses arising out of insurrectionary movements connected with Ireland." The refusal of the Home Secretary to grant an amnesty was supported by a majority of 204 against 132 votes. The question was brought up again later, when Parliament adjourned for the Queen's jubilee, and the Irish members then urged the example of the Transvaal President who commemorated that event by setting free the last of the Johannesburg conspirators. The Parnellites were joined by some of the Radicals in these assaults, and the Dillonites in their demand for the

reopening of the land question had the same support as well as that of the rival Irish faction. Sir Henry Howorth criticised the Home Secretary's action in releasing the dynamite conspirators who were discharged from prison in 1896, but the House of Commons accepted the explanation that it was done on the ground of medical reports.

The subject of Irish university education was raised by an amendment to the address, and the admission that there was a grievance and that something should be done to remove it was extracted from Mr. Lecky, which drew from Mr. Balfour a reiteration of former promises, which could not be carried out immediately because it was impossible to lay a plan before Parliament until the limits of the Roman Catholic claims were known. Other amendments that were withdrawn or rejected protested against the delay in legislating for Scotch crofters, against adulteration of food products, against undermanning merchant vessels, on the registration laws, and on the deportation of paupers to Ireland. Sir William Wedderburn's proposal for an independent inquiry into the condition of the Irish people gave to Lord George Hamilton an opportunity to explain the famine policy of the Indian Government. Coningsby Disraeli's proposal of a conciliatory mission to the Sultan met with no support from any section of the house. Immediately after the address was voted, on Jan. 26, the house took up the Government proposals for the relief of voluntary schools.

Parliament had been convened three weeks earlier than usual in order to get the voluntary-schools bill and the military-works bill through before the close of the financial year, so that they could receive the necessary allocations from the public funds, and be carried into effect immediately. The financial resolutions authorizing the payment of grants in aid of voluntary schools in England and Wales were moved in committee by Mr. Balfour on Feb. 1. He sought to obviate the objections raised by Liberal Unionists as well as by the Opposition to the exclusion of necessitous board schools by promising that they would be dealt with at an early date by Parliament. The present measure proposed to relieve voluntary schools from rates, to do away with the 17s. 6d. limit, and to increase the grant in aid of 4s. per child in average attendance allowed by the education act of 1896 to 5s., which would make the expenditure on voluntary schools £616,500 instead of £489,000. A distinction was drawn between town and country schools. The Government proposed to encourage the formation of associations of voluntary schools which would advise the Education Department as to how the money could best be expended by enabling the Education Department to refuse any assistance out of the aid grant to schools refusing to join an association, provided no school should be obliged to join an association belonging to a different denomination. When Mr. Balfour expressed a doubt as to the passage of the bill before the close of the financial year, the Liberals proposed an amendment extending the relief to all necessitous primary schools, which was rejected by 355 votes to 150, the Irish Roman Catholics generally voting with the Government on this and on the questions raised later regarding local control and the representation of parents among the managers of aided schools as a condition of the additional grant. Their support more than counterbalanced the defection of Mr. Courtney and other Liberal Unionist friends of the board schools and of the Conservative advocates of rate aid, such as Lord Cranborne and Lord Hugh Cecil. The closure was frequently applied to shut off debate on these points and on the conditions of distribution, on the constitution and functions of the

proposed associations, and on proposals to introduce restrictions on the amount of the grant. The bill was reported without any amendments, and, in spite of the warnings of Mr. Asquith and Mr. Morley, was carried on the third reading, on March 25, by the extraordinary majority of 331 against 131. The House of Lords passed it without amendment, the vote on the second reading being 109 to 15, and it received the royal assent on April 8.

Directly after the voluntary-schools bill was made law the Government introduced the financial resolutions for the promised necessitous board schools bill. A clause in the school act of 1870 sanctions an additional grant to make up the deficiency when the school rate of 3d. in the pound fails to produce 7s. 6d. per pupil. The new bill abolishes this fixed limit and provides for an additional grant, rising on a sliding scale in proportion to the rate required. The effect would be to relieve the majority of the highly rated school districts, and London would probably be the only town in which, owing to the great reserve of ratable value, no relief would be given. The bill was not opposed very earnestly, the only objections being the inequality in the degree and amount of relief to board schools as compared with voluntary schools, and the practical exclusion of London. It passed on the third reading without a division, and became law on June 3. An educational bill for Scotland, passed at the end of the session, confers upon Scotch schools substantially the same advantages secured by the Government measures to English schools of both categories, except that in Scotland the 17s. 6d. limit is preserved. The voluntary associations which were to distribute almost the whole of the grant under the English bill began to organize as soon as the bill became law. The Department of Education allowed them all the scope that it was intended that they should have, announcing that it would not recognize an association unless it extends over a sufficiently wide area and includes a large number of schools. The dignitaries of the Church of England, regardless of the protests of the nonconformists and the denunciations of the Liberals, assumed that the act placed the control of education in their hands. They organized the associations not by county lines, but by the ecclesiastical divisions of dioceses and rural deaneries, and not only did not invite the schools of the dissenters to join, but would not receive them.

The workmen's compensation bill was introduced on May 3 by the Home Secretary, but Mr. Chamberlain, who was its author and the originator and champion of the policy of social legislation of which it is an installment, took the leading part in the debates. Mr. Asquith's employers' liability bill had been rejected by the House of Lords three years before because it withheld, in compliance with the almost universal demand of workmen, the right of contracting out of its provisions. The Liberals exulted therefore when they found that their opponents had reduced this right in their own measure to a hollow sham. The principle of the compensation bill was to throw the ultimate cost of accidental injuries received by workmen in the course of their employment upon industry as a general trade charge to be distributed between employers, workmen, and consumers. The Government professed to believe that the burden would in the end be so distributed, and by an extension of the insurance would become an addition to the cost of production, though it is imposed by the bill in the first place on the employer without inquiry as to whether the fault was his or the injured workman's, or was attributable to neither one. The measure was admitted to be tentative and experimental. It is confined for the present to certain trades, the most

important exceptions being merchant shipping, agriculture, and domestic service. Workshops and building works where no steam power is employed are likewise excluded. For every accident happening to a workman in the course of his employment, in the trades to which the bill applies, the employer is liable to pay compensation, the amount of which is to be fixed by arbitration, within the limits of the scale fixed in the bill. This scale gives, in the case of disablement, half the weekly wages for the period during which the injured workman is unable to work; in case of fatal injury to a man leaving dependents, the employer is obliged to pay for their support either £150 or three years' wages, whichever sum is the larger. The doctrine of common employment is abolished. Contracting out is only permitted when the registrar of friendly societies certifies that the advantages to the men are not less than those offered by the bill. Mr. Asquith criticised the exclusion of any employments from the benefits of the bill and the absence of provisions for the prevention of accidents. Mr. Chamberlain argued that the bill would exercise an effectual, though indirect preventive influence. As to its adoption in agriculture and domestic service, it would probably create hardships in the absence of a more widespread system of insurance, but the Government was willing to consider the possibility of extending gradually in future years the securities now made applicable to the trades in which accidental injuries are most serious and most frequent. The bill passed unopposed into the committee stage, where Mr. Chamberlain showed a willingness to accept amendments proposed on behalf of the employers or the working class, provided the main principles of the bill were left unimpaired. One of these makes the employer liable for an accident caused to a workman in the course of his employment by the act of a stranger, the right to recover from the third party being secured to the master by an express provision. Another gives to an injured workman certain preferential rights against the estate of a bankrupt employer. In the interest of employers an amendment was adopted excluding from the benefits of the act any workman injured through his own serious and willful misconduct. Another requires reasonable notice of a claim, and fixes the limit beyond which none shall be entertained. A third allows the commutation of a weekly allowance into a lump sum, to be settled by arbitration, and not to exceed the aggregate payments of six years. The jubilee festivities interrupted the discussion, and before the bill was reported the Government modified the position it had taken on some points. In one or two cases, such as the inclusion of the shipbuilding industry, Mr. Balfour, who shared Mr. Chamberlain's hope of seeing the scheme embrace all the industries of the country, promised that the subject would be reconsidered in the upper house. The most serious opposition to the bill was offered by the colliery proprietors, who protested that, with the present scant margin of profit and high scale of wages, and with the competition of foreign coal mines in the international trade, it would ruin them to insure against the wholesale accidents that are liable to occur in mines, and that, if the charge were eventually shifted to the consumers, the rise in the price of coal would seriously handicap British manufacturers in the competition that was already sufficiently acute between them and their Continental and American rivals. The Government resisted all such appeals, for after having promised the boons contained in the act and affirmed the principles that it involved it could not retrace its steps without alienating a great part of its working-class

support. The House of Lords did, however, introduce some restrictive amendments of considerable importance. The amendment withholding compensation from workmen injured through their willful misconduct was altered so as to revive the principle of contributory negligence, which Mr. Chamberlain had been anxious to banish from the scope of the act. The provision that the employer should be required to make good the deficiency when the funds under a scheme of insurance proved insufficient to pay the statutory compensation was stricken out. A new clause was substituted in regard to subcontracts, giving practically a right of indemnity to the undertaker against the subcontractor. The House of Lords also postponed the commencement of the act till July 1, 1898. Proposals made by Lord Rathmore to free the employer from responsibility for accidents caused by strangers and by Lord Londonderry to restrict his liability to accidents disabling the workman for at least four weeks, instead of for two weeks, were defeated. Lord Salisbury vindicated the bill from the imputation of Socialism. Lord Kimberley approved of the bill in the main, and argued that it must lead to a system of state insurance. Mr. Chamberlain argued that the Lords' amendments did not diminish the value of the bill to workmen, and nearly all of them were accepted by the House of Commons. The compensation secured to the injured workman by this act will entail no expense either to him or to the employer. It will be settled by agreement between them, or by arbitration, or by the county court judge in the last resort, the cost of adjudication being borne by the state. The act does not deprive the workman of the right that he possesses under the common law to recover damages from the employer for an injury caused by the willful and wrongful act of the latter, or any person for whose act or default he is responsible, but the employer shall not be liable to pay compensation both independently of and also under the act. Mr. Chamberlain estimated that compensation was recoverable under the common law for about 12 per cent. of the accidents that occur in the employments covered by the act, namely, on railways and in factories, mines, quarries, and engineering works.

The surplus in the budget, beyond what was required for the supplementary army and navy votes and the postal reforms, was devoted to assisting Scotch education and Irish technical instruction and to the entertainment of the colonial guests during the jubilee festivities. No abatement of taxation was offered, and all parties accepted the proposals of Sir Michael Hicks-Beach without serious protest, except that the Irish Nationalists endeavored to obtain a reduction in the tea and tobacco duties on the ground that indirect taxes contribute too large a portion of the revenue, while some of the Conservative upholders of property rights, like James Lowther, protested against the retention of Sir William Harcourt's death duties.

The question of the overtaxation of Ireland was brought up again on March 29, when Mr. Blake moved a resolution declaring that Ireland was unduly burdened and required an instant remedy. Mr. Whittaker, an English Radical, moved and an Irish Conservative, Col. Waring, seconded an amendment declaring that the United Kingdom must continue to be regarded as a whole for fiscal purposes. Mr. Balfour, pronouncing the inquiry conducted by the commission in connection with the home-rule bill to have been incomplete and inadequate, would promise no legislation until a supplementary investigation placed the Government in possession of the facts regarding the expenditure to be set off against the excess of taxation. The

Chancellor of the Exchequer denounced the theory of taxing communities on some doctrine of their taxable capacity instead of keeping to the present plan of taxing individuals. Though the Opposition generally voted with the Irish Nationalists, Mr. Blake's motion was lost by a majority of 317 to 157. On May 6 Mr. Knox moved that the relief given to the British farmers by the agricultural rating act of 1896 operated as a bounty in their favor against Ireland, and that perfect equality should be granted. Sir Michael Hicks-Beach and Mr. Goschen, in contending against this proposal, abandoned the ground of perfect unity and equality throughout the United Kingdom, and put forward a plea that the Nationalists hailed as involving Separatist principles. They denied that Ireland was suffering from agricultural depression, although the Land Commission was at the time reducing rents on that very ground, and they insisted on the plan of equivalent grants. The claim of Ireland for equal relief, although it was supported by the entire body of Irish members, Unionist as well as Nationalist, was defeated by a majority of 219 to 127. A few days later Mr. Balfour unexpectedly disclosed an entirely new Irish policy. The Government had till then limited the proposals of Irish legislation for the year to the agricultural-department bill, a poor-law bill, and a measure to reduce the number of Irish judges. The Irish members had exhibited no pronounced satisfaction over the promised agricultural department, which was not sufficiently popular in its basis to suit some, while others complained of the meagerness of the funds to be placed at its disposal. It was to be a department with a parliamentary head to look after Irish agriculture and other industries, and at the same time an independent board with a fixed separate income to institute experiments in the development of Irish resources. The proposal to reduce the number of Irish judges was opposed by Irish members of both parties, and the poor-law bill awakened no interest. The proposal to spend £500,000 in developing the tourist traffic in Ireland was received with satisfaction commensurate with the boon. The accession of the Irish Nationalists to the ministerial majority on the question of the voluntary schools and the defection of the Irish Unionists on questions of Irish finance had created a new situation. The Irish landlords were angrily protesting against the sweeping reductions of rent made by the Land Commission. Many of them were as fiercely denunciatory as the Nationalists in their invectives against England for overtaxing Ireland. When the Chancellor of the Exchequer refused to give Irish agriculture the relief from rates that had been accorded to England a crisis arose that, if not checked, would tend to unite all Ireland under the Nationalist banner. Mr. Balfour had long been pledged to deal with the problem of local government for Ireland. He now showed his mastery of political strategy by rising at once to the exigencies of the situation. The Irish department and poor-law bills were withdrawn, and he announced a more comprehensive policy for the following year by which the Government intended to deal with the rating grievance, and to give relief to the landlords by assuming the half of the poor rate which they now pay, and to the tenants by paying half of the county cess, of which the whole is now paid by the latter. This plan would remove the main obstacles that stand in the way of giving Ireland local governing bodies like those lately established in England and Scotland, and would obviate all necessity for special restrictive and penal conditions, especially as the remaining taxation on owners could not be increased beyond the average of recent charges. The promises contained in Mr. Balfour's statement were hailed with satisfaction

by all parties in the house, and by Irishmen of all shades of opinion, by Conservatives, Liberal Unionists, and Gladstonian home rulers, by Ulster landlords and Ulster tenants, Dillonites, Healyites, and Redmondites. The Irish landlords were willing to abandon their control, which was already doomed, of the local authorities in view of the clear gift of £250,000 a year which they pay in poor rates, which also relieved them of all apprehension regarding the misapplication by the new local authorities of any funds contributed by them; the Nationalists saw in the scheme the promise of a large measure of popular local government capable of expansion in the direction of their aims; and the tenants, beyond gaining control of their local affairs, received a bonus of £400,000 a year, the amount of half the county cess. The Irish landlords obtained the appointment of a commission, presided over by Sir Edward Fry, to inquire into the administration of the land-commission courts, and they brought before the House of Lords their complaints of rent reductions and of the fixing of tithe rent charges out of proportion to the existing value of the land, but they met with no satisfactory response from the Government. When the Nationalists urged the question of a Catholic university for Ireland, Mr. Balfour declared that it was impossible to deal with it during this session, and that the next would be taken up with the Irish local-government measure. The bill for reducing the number of Irish judges was not introduced till late in July, when it was passed, the Irish members on both sides who had threatened to oppose it having been conciliated by the promised concessions, and by a pledge that the economies to be realized by the abolition of three judgeships and the consolidation of courts, amounting to £15,000 a year, would be applied to Irish purposes.

In the middle of July the leader of the House made his calculations as to what part of the uncompleted legislation could be saved and what bills would have to be sacrificed. The fisheries bill and the criminal-evidence bill were abandoned. This latter, a measure for enabling an accused person to be a witness, while it was supported by Sir Edward Clarke and many legal experts, encountered the opposition of other professional authorities. A bill to model the procedure in Scotch private bills on that adopted for provisional orders, which would be cheaper and would afford facilities for local inquiries, was postponed till another year in order to give time for criticism and discussion. The land transfer bill was resented after it had undergone considerable amendment. There have been many bills introduced that had for their object the registration of titles and the simplification of sales of land, but the landowning class have a prejudice against the easy transfer of land, and the solicitors have always fought against measures reducing the difficulties and costs of conveyancing. The act of 1897 is a tentative one intended to give the system of compulsory registration an experimental trial, at first in a single county, to see if it can be adapted to the social and business conditions of England. The bill relating to limited companies was sacrificed. The promised London water bill was not introduced because the Government had decided that further inquiry ought to precede comprehensive legislation on this subject. At the instance of the London County Council eight bills had been brought in for the purchase of water companies' works by a private member. Three fourths of the county boroughs of England already had the water supply in their own hands. The County Council desired to buy out all the companies supplying the metropolis with water so as to secure uniformity in charges, in quality, and in the supply of water as soon as possible. The Government declined to support these

bills, holding the proposed plan to be impracticable. A royal commission would be appointed to inquire into the subject, and in the meanwhile the Government introduced and carried a bill giving increased facilities to an aggrieved consumer to obtain redress from a water company that fails to provide an adequate supply. A Scotch congested-districts bill and a public-health bill for Scotland were finally enacted.

The Duke of Devonshire had in his hands a bill for the conversion of the University of London into a teaching university. It was a compromise measure, dealing with a matter that has been long the subject of public discussion and of negotiations between the various interests involved and the advocates of educational reform in the metropolis. The influence of the defenders of the existing system of examinations was still strong enough to cause the postponement of the measure. The Duke of Devonshire expected also to bring in a bill to promote the organization of secondary education, a subject of still wider discussion, as it is of more general interest; but this bill was not produced. The foreign prison-made-goods bill, prohibiting the importation of goods made in foreign prisons that compete with any products of British industry, was placed on the statute book to please the trade unionists, who had demanded such a measure.

The house affirmed the principle of female suffrage by its division on the second reading of the bill for the extension of the parliamentary franchise to women possessing the same qualifications as men, which obtained a majority of 71. The bill got no further, and later in the session a petition signed by many ladies was presented, setting forth that the petitioners viewed with indignation and alarm the existing procedure that reduced legislation to a game of chance and permitted the repeated and insulting postponement of the consideration and satisfaction of the just claims of women to citizenship, and praying that the house would reform its procedure so as to secure in future the fair consideration of all public questions with some regard to their relative importance. The cause of this indignant outburst, so different from the customary humble petitions as to strike aghast the sticklers for the dignity of Parliament, was that the opponents of woman suffrage in the House of Commons, alarmed at the ease with which the bill reached the second reading, no one on the front benches venturing to oppose it, prevented it from proceeding further by deliberately prolonging discussion on the verminous-persons bill, which provides for washing unclean tramps at the public expense. Parliament was prorogued on Aug. 5.

Labor Questions.—In the early part of the year a local trade dispute was going on in Wales that was of national importance in its political bearings. There was a protracted strike in the slate quarries of Lord Penrhyn, who refused to recognize the trade union. The President of the Board of Trade finally attempted to mediate between the parties to the dispute, acting on the authority conferred by the conciliation act. For this he was fiercely assailed by Tories in Parliament, who were applauded by the majority of their party, while the Opposition sat silent.

The trade unionists found much fault with the Government for its failure to carry out in the naval and military workshops the fair-wages resolution of Feb. 13, 1891, and for retaining on the list of contractors for Government work persons who employed blackleg labor. The use in public offices of American typewriting paper, Bavarian pencils, and similar foreign goods was also objectionable to the unionists, who asked that only goods of British manufacture or production should

be supplied. The fair-wages resolution prescribed that Government and Government contractors should pay the wages current in the trade. The officials were inclined to dispute the contention that the trade-union scale determined the current rates in all localities. A select committee was appointed in 1896 by the House of Commons to report on the manner in which the fair-wages resolution was observed in Government contract work. The committee made its report in July, 1897. It recommended that a common form of contract be used by all the Government departments. As regards the administration of the resolution, it reached the conclusion that the departments had, as a whole, loyally endeavored to carry out its provisions, though in the case of some of them there was a lack of confidence in their ability or desire to enforce the spirit and letter of the resolution, and it was alleged that there was no uniformity of interpretation or of administration. The departments generally interpreted it as meaning the rate of wages generally accepted as current in the district where the work is carried on, and in this the committee upheld them, believing that in no trade is there a general current rate of wages prevailing throughout the country. In regard to other points complained of, such as the undue employment of women, boys, apprentices, and improvers, walking time, etc., the committee stated that the decision must depend on whether the contractor is enforcing conditions not recognized in the trade or departing from the usual conditions of employment. Subcontracting is held to be legitimate where the form of contract is customary in the trade, or where the contractor in the ordinary course of his business sublets that particular part of the work. The committee thought that it would be advantageous if a list of the Government contractors, together with the nature of their contracts, were laid before Parliament from time to time and published, so that the public would know the names of firms doing Government work.

One of the most determined trials of strength between workmen and capitalists ever known in England began early in July. The masters in the engineering trade had formed an Employers' Federation for the purpose of emancipating themselves from the conditions imposed by the Amalgamated Engineers, one of the strongest and richest of the trades unions, having a membership of 90,000 and a fund of £350,000 available for fighting purposes. A contest was inevitable, and the men chose a time when the employing firms had many orders to fill and a prospect of brisk trade ahead. The engineers of London made a demand for an eight-hours day, raising a popular issue which the Employers' Federation could not meet with good grace, especially in that particular locality, for in London a number of them had already granted the eight-hours day without detriment to their business. The employers were aware that the demand for London was the prelude to a general movement, and they took prompt and strong measures. They posted not only in London, but on the northeast coast, and at Glasgow and Greenock, and on the whole west coast, notices for the discharge of 25 per cent. of the men, hoping thus to cut off the supply for the maintenance of the strikers in London. The unions soon retaliated by calling out the remaining 75 per cent. The strike embraced the whole country, stopping the building of ships and most of the dependent trades. The boilermakers, however, refused to take part in the struggle. Both men and employers were confident of victory. The strike and lockout lasted till the close of the year, with disastrous effects on the commercial and industrial business of the country. At first 80,000 men were thrown out

of employment, but in the course of the dispute other trades were involved and many thousands more were affected. The funds of the union and money contributed from other quarters, though well husbanded, at length ran low. Then offers of mediation, previously rejected, were received with favor by the men, but the employers were not disposed to accept any compromise either in substance or in form. The struggle gave new force to the political demand for the compulsory and universal enforcement by law of the eight-hours system, which was upheld by the Trade Union Congress, sitting in Birmingham in September, by the representatives of 923,000 workers against 141,000. The trade unionists confessed to no fears of the power of federations of capital against them, for their own powers of federation were unlimited.

The Trade Union Congress, besides the legal eight-hours day, put forth demands for the payment of jurors and the inclusion of workmen in jury panels, the payment of members of Parliament, the removal of civil disabilities consequent on the receipt of poor relief, the special taxation of ground values, the limitation of the time during which shops are kept open, regulation of the hours of labor for girls and women employed as domestic servants, the abolition of child labor under the age of fifteen and of night labor under the age of eighteen, the prohibition of repairs in paper and textile mills on Saturday afternoon and Sunday, an amendment of the conspiracy acts setting forth the rights of workers in terms that it would be impossible to misconstrue, the insertion of the fair-wages clause in all Government contracts, a bill for the regular inspection of steam boilers by qualified experts, the recognition of waiters as members of a regular trade, a measure empowering school boards to supply food to starving and underfed children, the abolition of half time, and the raising of the school age to sixteen, the provision by the state of such maintenance as will bring secondary education within the reach of all, better training for teachers, the democratic administration of educational grants and endowments, a graduated income tax on all incomes above £300 a year, and graduated death duties.

Colonies and Dependencies.—The British Empire has a total area of 11,334,391 square miles and a total population of 383,488,469. Notices of the minor colonies and naval stations not elsewhere described are given below.

Gibraltar has an area of 2 square miles, with 20,528 inhabitants; revenue, £61,928; expenditures, £55,411; registered tonnage, 5,512; tonnage entered and cleared, 9,078,256.

The area of Malta and Gozo is 119 square miles, and the population 176,231, excluding the military. The imports in 1896 amounted to £885,315, consisting mainly of articles of food. The revenue, which is derived largely from customs, was £313,681 in 1897, the largest ever collected. The expenditure was £308,903. The language of the courts is Italian, but in 1896 an exception was made for British subjects, not native or naturalized Maltese, who on application may be tried in English. The public debt is £79,168. The registered tonnage is 9,365. The tonnage entered and cleared in 1896 was 7,034,207. There is a railroad in Malta 8 miles long. Cyprus is nominally a Turkish island, and is administered by Great Britain under a convention concluded with the Sultan on June 4, 1878. The area is 3,580 square miles; population, 209,286. Over a fifth of the inhabitants are Mohammedans and the rest belong to the Greek Church. The revenue in 1896 was £167,777; expenditure, £113,851. Revenue is derived mainly from tithes, which are paid in kind, and taxes on buildings, trade

profits, military exemption, domestic animals, customs, and the salt monopoly. The sum of £92,000 is paid annually to the Porte. The imports in 1895 were £276,318; exports, £308,716; shipping entered and cleared, 598,295 tons. The chief exports are wheat, barley, carobs, wine, cotton, raisins, silk, cocoons, hides and skins, wool, cheese, live animals, fruit, and vegetables. Under British administration some progress has been made in reforestation. The British Government has contributed £30,000 or £40,000 a year toward the Turkish tribute. The silk culture was carried on successfully till 1894, when the silkworms were affected by a fatal disease. Irrigation works are in contemplation, which will promote the growth of cotton, linseed, and anise, for which the soil is peculiarly adapted.

For British Guiana is claimed an area of 109,000 square miles, with 276,233 inhabitants. The revenue in 1896 was £567,749, and the expenditure £596,493. The debt is £932,704. The imports in 1895 amounted to £1,443,553, and the exports to £1,769,500. The registered tonnage of the colony is 6,339. The vessels entered and cleared during 1895 had an aggregate tonnage of 539,155. There are 23 miles of railroad.

The area of British Honduras is 7,562 square miles, and the population 33,353. The revenue is £52,389, and the expenditure £56,535. The public debt is £34,736. The imports in 1895 were valued at £151,266, and the exports at £244,335. The tonnage registered in the colony is 5,304. The tonnage entered and cleared in 1895 was 315,186.

The area of the Falkland Islands and South Georgia is 7,500 square miles, with a population of 1,953. The revenue is £12,519; expenditure, £13,159. Imports in 1895 were £71,826; exports, £122,988; registered tonnage, 248; tonnage entered and cleared, 70,212.

Mauritius has an area of 705 square miles, with 378,041 population. The revenue in 1895 was £827,362; expenditure, £848,874. The debt is £1,278,535. The imports in 1896 amounted to £1,111,190, and exports to £1,504,300. The registered tonnage is 7,614. The tonnage entered and cleared in 1896 was 687,014. There are 105 miles of railroad. This colony has suffered like the West Indies from the depression of the sugar industry.

St. Helena is 47 square miles in extent, with 3,921 inhabitants. The revenue is £9,762, and expenditure £8,063. The imports in 1896 were £33,744, and exports £4,313. The tonnage entered and cleared in 1896 was 73,888.

Ascension has an area of 35 square miles, with 140 inhabitants.

Aden and Perim have an area of 80 square miles and 41,910 inhabitants. The imports were valued at £27,895,861 in 1895, and exports at £7,147,787. The vessels entered and cleared had a tonnage of 2,682,693.

Ceylon has an area of 25,365 square miles, and a population of 3,298,342. The revenue in 1895 was £1,158,426, and the expenditure £1,187,877. The debt amounts to £3,723,522. The imports were £4,668,213 in value, and the exports £4,278,401. There are 297 miles of railway. The registered tonnage is 13,239. The tonnage entered and cleared in 1895 was 6,543,197. The military contributions from Ceylon has been fixed at $7\frac{1}{2}$ per cent. of the gross revenue. Trade and revenue have steadily increased. Tea exports have risen to nearly 1,000,000 hundredweight, and coffee is recovering an important position among the exports.

The Straits Settlements have an area of 1,472 square miles and 550,145 population. The revenue in 1895 was \$4,266,064, and expenditure \$3,957,262. The imports were valued at \$21,060,695, and ex-

ports at £18,378,590. The registered vessels have a tonnage of 45,032; tonnage entered and cleared, 11,610,444. The native states occupying the greater part of the Malay peninsula are under British protection. The exports of tin, gambier, and pepper have lately declined, while those of gutta-percha, copra, rattan, and timber have increased. The production of tin is likely to decline further, surface mining being no longer possible.

Hong-Kong has an area of 29 square miles, with 263,514 population. The revenue in 1895 was £517,964; expenditure, £580,292. The debt is £640,375. The registered tonnage is 24,228. The vessels entered and cleared in 1896 numbered 80,463, of 16,515,963 tons, of which 6,454, of 8,758,294 tons, were British, 2,893, of 3,575,102 tons, were foreign, and the rest were junks. The Imperial Government proposes to levy a tax of $17\frac{1}{2}$ per cent. on the gross revenue of the colony for military defense.

Labnan has an area of 30 square miles, with 5,853 inhabitants. The revenue is £4,791; expenditure, £7,032; imports, £68,589; exports, £56,662; tonnage entered and cleared, 141,411 tons. The colony is under the administration of the British North Borneo Company. Coal is mined and exported.

North Borneo is administered by a chartered company under British protection. The area is 31,106 square miles, and the population is about 175,000, consisting of Mohammedan settlers on the coast and native tribes in the mountainous interior, with some Chinese traders and artisans. Tobacco is cultivated extensively, and the coffee culture is increasing. Other products are copra, pepper, sago, rice, gums, gambier, gutta-percha, dried fish, and woods. The imports in 1895 amounted to \$1,962,350, and exports to \$1,663,906. The revenue was \$348,947 and expenditure \$324,206. The neighboring territories of Brunei and Sarawak are under British protection. Brunei has an area of 3,000 square miles. Sarawak, ruled by the Rajah Sir Charles Johnson Brooke, has an area of about 50,000 square miles, and a population of 300,000. The revenue in 1895 was \$453,800; expenditure, \$462,382. The imports in 1895 amounted to \$3,089,393; exports, \$3,141,932.

The natives of North Borneo have been turbulent of late. On July 10, 1897, the rebels, under Mat Salleh, burned the town of Gaja, after which the rebellion spread among other tribes.

GREECE, a kingdom in southeastern Europe. The Constitution of 1864 vests the legislative power in the Boule, a single chamber of 207 members, elected by universal male suffrage for four years. The reigning King is Georgios I, born Dec. 24, 1845, son of King Christian of Denmark, elected by the National Assembly in 1863. He married, in 1867, the Princess Olga, daughter of the Russian Grand-Duke Constantine. The heir apparent is Prince Konstantinos, Duke of Sparta, married to Princess Sophia of Prussia, sister of the German Emperor.

The ministry constituted on June 10, 1895, was composed as follows: President of the Council and Minister of Finance, Theodore Delyannis; Minister of the Interior, Kyriakonlis Mavromichalis; Minister of Foreign Affairs, Alexander Skouzes; Minister of Justice, Philip Varvoglis; Minister of Marine, Nicholas Levides; Minister of War, Col. Smolenski; Minister of Public Instruction, Demetrius Petrides.

Area and Population.—The area of Greece is 25,041 square miles, including 5,073 miles, consisting of a large part of Thessaly and a part of Epirus, ceded to Greece by a treaty extracted from Turkey by the powers and concluded on June 14, 1881. The population of the annexed provinces in 1889 was

344,067, and the population of the whole Hellenic Kingdom 2,187,208. A census taken in 1896 makes the total population 2,430,807. The people are a mixture of races, Hellenes, Italians, Goths, Slavs, and Albanians, but their language is Hellenic. The Greeks in the Turkish dominions are much more numerous than those in the kingdom, 400,000 in the islands, 3,500,000 in European Turkey, and 2,000,000 in Asia Minor. The capital of Greece is Athens, with a population of 128,000.

Finance.—The estimated revenue for 1896 was 90,894,541 drachmai, or francs, of which 19,491,074 drachmai came from direct taxes, 31,024,895 drachmai from customs and excise, 17,872,464 drachmai from stamps and dues, 11,760,378 drachmai from monopolies, 3,624,730 drachmai from state property, 972,400 drachmai from sales, 1,044,600 drachmai from repayments, 2,355,000 drachmai from arrears of taxes, and 1,750,000 drachmai from other sources. There are four state monopolies, of which salt yielded 2,454,221 drachmai, petroleum 5,488,380 drachmai, matches 1,035,743 drachmai, and playing cards 274,213 drachmai. The disbursements were estimated at 90,222,347 drachmai, of which 21,892,058 drachmai were for the public debt, 5,491,700 drachmai for pensions, etc., 1,325,000 drachmai for the civil list, 862,920 drachmai for the Boule, 2,129,140 drachmai for foreign affairs, 5,341,060 drachmai for justice, 13,147,385 drachmai for the interior, 5,063,245 drachmai for instruction, 15,999,585 drachmai for the army, 5,599,300 drachmai for the navy, 1,494,017 drachmai for the costs of collection, and 2,885,380 drachmai for various purposes. For 1897 the revenue was estimated at 95,343,939 drachmai, and expenditure at 93,752,569 drachmai, not including 650,000 drachmai of supplementary credits.

The national debt on Jan. 1, 1896, amounted to 655,128,897 drachmai in gold and 167,988,781 drachmai in paper. Negotiations with the foreign creditors for a resettlement of the gold debt were carried on, with many interruptions. Meanwhile the Greek Government, acting under the financial law of March 19, 1894, had suspended the sinking fund and refused to pay more than 30 per cent. of the interest. For 1896 the interest on this basis was 9,411,700 drachmai in gold, while on the paper debt it was 12,280,359 drachmai.

The National Bank had 106,800,000 drachmai of notes in circulation on Sept. 1, 1896, with a reserve in gold and silver of only 1,800,000 drachmai. There was a premium of 7 per cent. or more on coin. Small notes began to be issued in June, 1896. In December, 1884, the Government called in the forced paper currency, but owing to the military preparations against Turkey the notes were reissued in September, 1885, and have never been redeemed.

Commerce and Production.—Agriculture and horticulture are almost the only occupations of the people. It is carried on in a primitive fashion, but the soil is very productive. There are about 350,000,000 pounds of dried currants produced annually, with 16,000,000 pounds of tobacco, 66,000,000 gallons of wine, 15,000,000 pounds of olives, 20,000,000 bushels of wheat and other grain, and 60,000,000 pounds of figs and other fruit. Sheep raising, the silk culture, soap making from olive oil, weaving, and lead mining are considerable industries. Not half enough grain is raised to feed the population. The imports in 1895 were valued at 106,777,050 drachmai in gold, and the exports at 69,054,775 drachmai. The values of the chief exports were as follow: Currants, 21,906,600 drachmai; ores, 18,626,900 drachmai; wine, 4,475,925 drachmai; olive oil, 3,182,775 drachmai; fruit, 3,861,175 drachmai; tobacco, 2,010,925 drachmai. Other exports are silk and cocoons, sponges, olives, cognac, soap, and

hides. The imports, consisting of wheat, textiles, coal, timber, metals, hides, sugar, coffee, rice, etc., come mainly from Great Britain, Turkey, Egypt, Russia, Austria, Germany, and France. Great Britain, the principal market for dried currants, receives nearly a third of the exports, and the rest go to France, Egypt, Turkey, Austria, Belgium, Russia, Italy, Holland, and the United States. There were 3,123,400 drachmai of imports from the United States in 1894, and 2,104,500 drachmai of exports to the United States. The exports of Greece to her nine principal customers have steadily fallen from 110,443,501 drachmai in 1891 to 62,761,981 drachmai in 1895. Exports to Great Britain declined from 49,800,487 to 16,833,009 drachmai. The exports to Germany increased from 2,801,210 to 5,068,449 drachmai, the increase being in wine, cognac, and silk. In 1896 the merchants prospered, although there was little increase in the total value of the exports and imports. Exports of currants, fruits, and wine increased, while those of silk, olives, oil, and cognac decreased. Imports of machinery, hardware, glass, chinaware, and other articles that formerly came from Great Britain are now furnished by Germany, France, and Belgium.

Navigation.—In the mercantile navy of Greece there were 613 sailing vessels on Jan. 1, 1895, of the aggregate tonnage of 167,015, and 107 steamers, of 87,620 tons. Including vessels below 100 tons, there were 6,303 in all, of 320,917 tons.

The total number of vessels entered at Greek ports during 1895 was 5,444, of 2,590,101 tons; the number cleared was 4,888, of 2,541,627 tons. Of those entered, 2,645, of 501,083 tons, were Greek. The trade of the Levantine ports and of the Black Sea is, to a considerable extent, carried on under the Hellenic flag.

Communications.—The railroads in operation in 1896 had a length of 578 miles, and there were 310 miles building, including the line from Athens to Larissa, which was intended to join the European system at Salonica. There were 4,781 miles of telegraphs in 1895, with 5,836 miles of wire. During 1894 there were dispatched 865,870 internal and 197,569 international telegrams. The post-office traffic consisted of 4,124,000 internal and 4,776,000 international letters and postal cards, and 5,031,000 internal and 2,823,000 international newspapers, samples, etc.

The Army.—Every able-bodied Greek is liable to be called into military service from the age of twenty-one till he is fifty years old. The period of active service is supposed to be two years, but after eight months or a year the recruits are allowed to return home on leave of absence. For seven or eight years the men are attached to the reserve after they have completed their time of service with the colors, and after that they belong to the Landwehr. The nominal strength of the army in 1896 was 1,880 officers and 23,453 men, with 3,294 horses and mules and 180 field guns. The strength of the different branches of the service was as follows: War Office, 204 officers and 36 noncommissioned officers and men; infantry, 857 officers and 15,182 men; cavalry, 93 officers and 1,509 men; artillery, 222 officers and 2,065 men; engineers, 101 officers and 1,112 men; departmental services, 206 officers and 295 men; military schools, 54 officers and 168 men; gendarmerie, 143 officers and 3,086 men. The effective peace strength was 15 or 20 per cent. lower than that given in the estimates. The strength of the army mobilized for war with the reserves was estimated at 82,000, and that of the Landwehr, or territorial militia, at 96,000 men: but the territorial army and its reserve exist only on paper, and the war strength of the army never exceeded 66,250 trained men. The infantry company

is 250 men; 4 companies make up a battalion, and 2 battalions form a regiment. On mobilization 15 battalions are added to the 15 existing ones. There are in addition 6 battalions of *euzonoi*, rifles or light infantry. The infantry are armed with the single-loading Gras rifle of 0.433-inch caliber, sighted up to 1,300 yards, with the sword bayonet. The cavalry is organized in squadrons of 150 men, 4 squadrons forming a regiment, of which there are 3 in peace; on mobilization 3 squadrons more are raised. The cavalrymen are armed with swords and the Gras carbine. The artillery batteries are of 6 guns. There are 3 regiments, 2 of them composed of 4 field and 3 mountain batteries, the third having a field battery less. The artillery is armed with Krupp guns, 2 batteries with 12-pounders, the rest with 9-pounders. The guns for the artillery reserves are of old pattern. The engineers include a regiment of 2 field battalions, each of 4 companies, 1 railroad and telegraph company, and 1 pyrotechnic company. A third battalion is formed on mobilization. The war organization was intended to be in 3 corps, each of equal strength. The corps is composed of 5 regiments of infantry in 2 brigades, 5 squadrons of cavalry, 7 field and 3 mountain batteries, a battalion of engineers, a train battalion, and a medical-service company. In 1895 the financial condition of the Government led to a decision to abolish 1 cavalry and 1 artillery regiment. The horses are Hungarian and Algerian, and for the full war footing there was a deficiency of 4,000. The law provides a period of forty days' training for the reserves, but it has never been strictly enforced. Nearly two thirds of the reserve had no training. The kingdom is divided into 3 military districts—Larissa, Missolonghi, and Athens. Four infantry battalions, 1 cavalry regiment, and the bulk of the artillery were stationed at Athens, and there was an equally strong garrison at Larissa, while the rest of the regiments were usually quartered singly in different stations. There were not more than 160,000 Gras and Chassepot rifles in store and in the hands of the troops at the end of 1896. The army was therefore deficient in armament, and was equally so in mobility, as well as weak in its untrained reserve. In December, 1896, when the warlike ambition fomented among the people rendered imminent a war against Turkey, the King proposed the formation of a permanent camp at Thebes and the calling out of the reserves, so that a force of 12,000 men, efficient in all particulars, might be ready to take the field instantly.

The Navy.—The "Basileus Georgios," of 1,770 tons, is an old-fashioned ironclad, built in 1867, armed with 2 10-ton Krupp guns, 4 small cannon, and 2 machine guns, and having a speed of 12 knots. The "Basilissa Olga," an armored wooden vessel of 2,060 tons, built in 1869, is also suitable only for port defense, having a speed of 10 knots, with an armament consisting of 4 5½-ton and 2 3½-ton Krupp guns. Of comparatively modern type are the armored steel cruisers "Hydra," "Spetsai," and "Psara," built in France in 1889 and 1890, each protected by a belt of 11.8-inch steel armor at the water line and a thinner belt above, and armed with 3 10.6-inch and 4 5.9-inch Canet cannon, 7 quickfiring 6-pounders, and 18 lighter cannon and machine guns. Still more modern is the fleet of torpedo boats, of which there are 17 over 86 feet in length, 10 of smaller size, and 2 Nordenfeldt submarine boats, with the torpedo depot and schoolship "Kanaris." Two unprotected cruisers, of 1,000 tons were launched in 1884 and 1885. There are also 2 corvettes, the "Nauarchos Miaulis," of 1,800, and the "Sfaktirea," of 1,300 tons, and 12 gunboats, of which 6, the English-built "Acheloos," "Alphios," "Eurotas," and "Pinios," carrying 2

guns, and the single-gun "Ambrakia" and "Aktion," were built between 1881 and 1884, and the others earlier, besides 3 revenue cutters, a steel yacht, an iron transport steamer, and other craft. The navy was manned in 1896 by 3,165 men, including 185 officers. The men are raised partly by conscription and partly by enlistment.

War with Turkey.—Ever since the war of independence, when Greece was delivered after three centuries of Turkish rule and the kingdom of the Hellenes was established by the London protocol of Feb. 3, 1830, under the protection of England, France, and Russia, the statesmen and people of Greece have aspired to the deliverance of the millions of people of Greek language, religion, and nationality still subject to the Sultan, the overthrow of Ottoman rule in Constantinople, and the restoration of Greek power and civilization throughout the extent of the old Eastern Empire. Military and naval armaments disproportionate to the resources of the nation have been kept up in rivalry with the Balkan states, since whose rise and expansion the Greeks have seen their hopes fading. Overwhelmed by financial embarrassments in consequence of these armaments, forbidden by the powers to strike when the Roumelian revolution reopened the Eastern question and shifted the balance of power in the Balkans, the Greeks concluded that they must take a bold initiative and display a heroic spirit if they would reawaken the sympathy of Europe for their aspirations. The Armenian massacres had roused the indignation of the Christian world, especially the Mediterranean powers, England, France, and Italy, on whose good will Greece chiefly relied, when the political conflict in Crete started anew the movement for the annexation of that island. The patriotic fever inflamed the whole country and excited the old hopes of expansion. The Greeks considered that the whole of Thessaly and Epirus had been promised them, and that the clause in the Treaty of Berlin had not been fairly carried out. The national enthusiasm had been fomented and directed by a powerful patriotic secret society, the *Ethnike Hetairia*, which for years had been collecting large sums of money from Greeks in all parts of the world, and which was recruited from the wealthy and official classes as well as the peasantry, and was able to exercise a dominating influence over the Cabinet and the royal court and finally to combine the Government, the King, and the people in a common policy that led inevitably to war with Turkey. King George, who had long resisted the demand for the dispatch of a fleet and troops to Crete, was in the end compelled to place himself at the head of the national movement for fear of losing his crown.

The *Ethnike Hetairia*, or National Society, was formed at Athens by men of position there in 1895 with the avowed object of promoting and protecting Greek interests in the Hellenic provinces of Turkey and of disseminating literature on the subject. Agents were appointed at various places in Turkey, and large subscriptions were obtained. Military officers and Government officials at Athens joined the society, the secret object of which was to foster an insurrectionary movement among the Greeks of Turkey. In 1896 the leaders of the society determined upon active operations, believing that the time had come for a vigorous attempt to restore to Greece her unredeemed provinces. A secret inner ring was formed and amply provided with pecuniary means by special subscriptions. The society attained such importance that by the end of 1896 neither the King nor his ministers ventured longer to oppose its designs. An irregular force of 1,500 to 2,000 men was formed and equipped, insurrection was organized in the Hellenic provinces,

and a policy of coercing the Government to go to war with Turkey was adopted.

When the powers formally condemned the Greek policy and course of action in Crete and blockaded the coasts of the island, yet still allowed Greek forces to land and organize the rebellion, and when the proposals of the central powers for coercive measures were vetoed by England, France, and Italy, the Greeks had grounds for believing that they would not lack moral support in a military enterprise against Turkey, that in no case would the powers permit the Turks to invade Greece, still less to seize any portion of Greek territory or exact an indemnity. The dissensions among the powers led them to hope that, with the existing feeling in regard to Turkish rule over Christians, a political combination might take form that would compel the Porte to hand over to Greece the territories that she expected to get after the Russo-Turkish War and England virtually promised that she should have. As soon as the powers interdicted, in February, the intervention of Greece in Crete (see CRETE) the Government began to call out the reserves. The Turkish Government summoned the active reserves to arms and prepared to mobilize the *redifs*. The Turks began to construct fortifications at Arta, contrary to the stipulations of the Berlin Treaty, and Greece protested to the powers. The Greek fleet was used to transport troops to the frontier, and simultaneously Turkish forces were moved up to strengthen the garrisons in the frontier provinces. A Turkish army corps was stationed at Salonica. The bands of the *Ethnike Hetairia* crossed the frontier, and in conjunction with insurgent Epirotes and Macedonians skirmished with the Turkish *redifs*. Col. Smolenski, the Minister of War, whose advice to send re-enforcements to Crete had been rejected by the Cabinet, resigned, to take an active command in the army, and on March 3 M. Metaxas was appointed in his stead. The remaining classes of the Greek reserves were called out, which was calculated to give a total force of 129,500 men, including 25,000 in the standing army. The Greek war ships sailed in two squadrons to cruise in the Gulf of Arta and among the islands. The torpedo fleet, under the command of Prince Georgios, was ordered to cruise between Milo and Crete. The vessels in Cretan waters departed when the blockade of the powers was put into force on March 16. A Turkish transport was attacked by a revenue cutter while landing troops and stores at Douro. The Turkish army of precaution concentrated in Monastir was placed under the command of Edhem Pasha, who completed arrangements that would enable him to move 75,000 men over the frontier within a few weeks, including 21 batteries of artillery and 10 squadrons of cavairy. Ricciotti Garibaldi raised 3 regiments of Italian volunteers for service in the Greek army, and English and other foreigners offered their services, while Greek volunteers flocked home from distant countries. A bill was passed by the Boule on March 16 to permit the enrollment of Greek volunteers and the formation of a foreign legion. Two bands of Thessalians, one of 1,000 and the other of 300 men, entered Macedonia from the Larissa and Volo districts, while the Greek forces continued massing on the line within sight of the Turkish blockhouses. The Porte complained to the powers that there were Greek regulars in these bands. The first collision took place between the band of Alexis Takia and the advanced post of Turkish troops at Grevena on March 28. The German Emperor proposed to the powers a joint blockade of the Piræus and Volo, but Great Britain and France declined to take part. The Turkish army, 55,000 strong, moved up to the border, with headquarters at Ellassona. On March 30 the Crown

Prince Konstantinos at Larissa formally assumed command of the Greek army in Thessaly. There were then 50,000 Turkish troops massed at Salonica and on the frontier. The staff, railroad and transport arrangements, medical and ambulance service, and commissariat were organized on European lines, owing to the instruction of Gen. von der Goltz and other German officers. The artillery was abundant, consisting of new Krupp guns, with plenty of ammunition. The mobilization of so large an army within the space of three weeks was itself an achievement that few nations were capable of. The Turkish fleet had been ordered at the same time to be manned, equipped, and made ready for sea, but scarcely one of the vessels could be put into efficient fighting condition, though large sums of money had from time to time been expended upon them. The attempted uprising of the Greek population in the frontier provinces was speedily suppressed after a good many Mohammedan families had been robbed by freebooters. The Christian peasants who had been supplied with weapons by the Ethnike Hetairia were disarmed, and many prominent members of the Greek community were arrested. Turkish and Albanian brigands were also arrested and tried. Some correspondence passed between the Greek and Turkish governments relative to the mobilization of the Greek troops, against which the Turkish minister at Athens, Assim Bey, raised a protest. The Greek Government urged that Turkey take the first step by withdrawing her troops, and, neither party being willing to take the initial step, the negotiations came to an end. After the concentration of troops on the frontier the powers again discussed the question of a blockade of the Piræus, to which Great Britain was still opposed. A final warning was sent to both Greece and Turkey at the suggestion of Count Muravieff, in the form of a collective note, declaring that in the event of an armed conflict on the frontier all the responsibility would rest on the aggressor, and the powers, firmly resolved to maintain the general peace, were determined that the aggressor should not be allowed to reap any advantage from eventual victory. The war spirit in Greece became more and more unmanageable. Bands of volunteers arrived at Athens daily from every part of Greece, adding to the embarrassments of the military authorities, which had not the means to provide them with arms, uniforms, and transport to the frontier, and found difficulty in feeding them. Several thousand Albanian volunteers were enrolled in the Turkish army. The Turks fortified all their positions on the frontier; the Greeks erected no fortifications, but acted as if their plan was to march into Turkish territory, though they lacked all the essentials for long column marches, and had not even taken effective measures to arm and organize the Christian peasantry for a rising in the rear of the Turkish army.

On April 9 a force of 2,600 Greek irregulars equipped by the Ethnike Hetairia crossed the frontier from Kalambaka with artillery and advanced in the direction of Grevena, firing with their guns upon the Turkish blockhouses, from which the garrisons retired to Baltino. The Porte addressed a protest to the powers, declaring that the acts of hostility committed by a regular military force with artillery, commanded by bugle call, virtually constituted a declaration of war, and denouncing Greece as the aggressor. M. Delvannis disavowed all responsibility for the acts of the Ethnike Hetairia. The powers had already come to an agreement for the pacific blockade of the Greek ports, but the admirals of the international fleet at Crete were still discussing the particulars regarding the naval force to be furnished by each power when the incursion of the Greek irregulars changed the situa-

tion. Nothing now could restrain the Greek army. Although the Government had practiced economies and hoarded gold for two years to provide against such an emergency, the expenses of keeping 80,000 men under arms was already a severe tax on its resources, these expenses amounting to 500,000 drachmai a day. The Turkish Government declared that there were Greek regular soldiers in uniform among the raiders and Greek army officers in command. Edhem Pasha had received orders to advance as soon as he found such to be the case; but Turkey, which had a *casus belli* against Greece from the time that Greek gunboats were dispatched to Crete, had no desire to relieve Greece from her critical situation so long as the military positions on the frontier were not in danger. The Greek regulars crossed the frontier at different points in small parties, but would not fire on the Turks, nor would the Turks fire on them, neither side being willing to fire the first shot, lest the other should point to them as the aggressors. The Greek raiders, after capturing three outposts near the border, finally attacked and captured the town of Baltino, which the Turkish garrison had stoutly defended. The main body reached Krania, where it was nearly surrounded by a strong Turkish detachment, which compelled it to retreat and recross the frontier, having lost more than 200 men. Among the filibusters were Italian volunteers led by the Socialist Deputy Cipriani, who bore their part in the first fighting, but many of them could not stand the cold and the hard marching, and therefore decamped at the first opportunity. The Greek frontier outposts were strongly re-enforced. When the Boule reassembled on April 14 M. Delvannis asked for credits amounting to 23,330,000 drachmai for the army and navy, and received instead credits for four months and authority to issue 6-per-cent. bonds for 20,000,000 drachmai in addition to 10,000,000 drachmai already issued. The Premier said in regard to the frontier question: "It owes its origin to the singular conduct of a neighboring state, which brought about the existing complications. We found it our duty therefore to concern ourselves principally with military affairs and to prepare an army which can enter upon a campaign in order to defend the honor and protect the interests of the nation. We can assure the Chamber that we have been able to make good the defects due to the hasty mobilization of the army, and we hope within a few days to remedy them completely, so that our army will be able to fulfill its mission."

The invading bands that were not driven out by the Turks continued their activity in the forests and mountains near Krania, and enlisted many of the inhabitants, who were supplied from the depot at Baltino, for the Turks had not yet reoccupied this part of their frontier. A strong force of Turks from Metsovo advanced on Krania, and attacked a force of 400 intrenched there, driving it into the mountains. They then reoccupied Baltino and the other frontier posts. The failure to stir up a general insurrection in Macedonia was disheartening to the Greeks, who were not less bent on war, deeming it a point of national honor to fight though disaster were certain. The confident hope of victory began to vanish when they confronted the impregnable line of defense for 30 miles on either side of Larissa, and the routes held by the Turks by which they could concentrate their battalions upon the Thessalian capital from several directions.

Both armies were brought up to the front as rapidly as possible. The Greeks constructed blockhouses and earthworks facing the Turkish works. The Turkish general with difficulty restrained the junior officers and soldiers from precipitating a

conflict, which the Greeks tried by every means to provoke, so that the onus of attacking first should rest on the Turks, and they themselves should not be cut off from the territorial advantages to be secured by victory. The *redifs* had been mobilized four times in as many years, and the Turkish military authorities were even more anxious than the Greek army men that there should be a campaign, fearing that they could not preserve the discipline that compelled the peasants of distant Anatolia to leave their occupations and families to fight for the Padishah if they found again that there was no fighting to do.

The troops had left the camp at Ellassona and taken their positions on the mountain line of defense, where it was wet and cold. Edhem Pasha was not ready to attack until he brought up his artillery, for he relied most on this arm to force the mountain passes. Some of the Albanian volunteers, who had been recruited to match the *euzonoi* in mountain warfare had been disbanded and sent to their homes, because their fighting instincts could not be kept in control. The Turkish frontier was much more favorable for attack or defense than the line on the Greek side, and the dispositions made by Edhem Pasha were such as to utilize his topographical advantages to the utmost. The country was peculiarly adapted for artillery, and in this arm the Turkish army was particularly strong and the Turkish generals well versed. The passes of the Khassia mountains are deep gullies traversed by rushing streams and dominated by rocky heights. The gorge in the frontier formed by the valley of the Xeria is the strategic key of the line. Riza Pasha, commanding the Turkish artillery, placed his guns on the ridges commanding the slopes where the Greeks lay encamped, so that they could be moved in the direction of Trikhala on one side or of Turnavo and Larissa on the other, and could rake the flat plain in either direction. There were 180 field pieces in position within this wedge of territory, and behind the guns were 50,000 troops, so that if the Greeks struck from either Larissa or Trikhala they would at once find themselves engaged on either flank. Echeloned along the frontier at other points, from Krania to Arta, were single divisions, averaging 15,000 combatants each, bringing up the total of the Turkish forces now in the field to about 140,000 men, while there were reserves at Salonica and Monastir.

The Turkish transport facilities were very imperfect, but the rapidity with which the Turkish troops were brought to the front and provision routes established dismayed the Greek commanders, whose whole plan of campaign depended on their gaining initial successes and breaking through the Turkish frontier defenses. The extraordinary martial and patriotic enthusiasm of the Greek army led them to expect victories at the start, and this they hoped would encourage the Macedonian population to rise. They planned naval attacks on the Turkish seaports and landings for the purpose of cutting the railroad and other lines of communication, while preventing any transport by sea. If the Turks had to detach large forces to suppress a revolt in their rear and to keep open communications they would no longer be able to oppose the Greek field army with superior forces. The incursion of the irregulars from Kalambaka was a part of the Greek strategic plan, and it partially succeeded, for Macedonian insurgents raised the standard of revolt in the mountains of that section, Turkish telegraphic communications with Arta were severed, and the Epirotes were encouraged to rebel. The Ethniko Hetairia had purchased 150,000 rifles to distribute among Greek rebels in Albania, Epirus, and Mace-

donia, and the Greeks planned a vigorous campaign at Arta, in order to establish communications with the Greek populations of Turkey in the rear of the Turkish army and organize a revolt among them. The Greek forces in Thessaly and Epirus were estimated at 80,000 regulars and 20,000 volunteers, but the recruits drawn from the plains and towns were no match for the seasoned Turkish troops either in stamina and endurance or in military training and knowledge, while they betrayed a singular incapacity for obedience and discipline. At the eastern end of the line, where the main armies confronted each other, the Greeks held in force their end of every pass: Rapsani, through which the roads from Krania and Nezero pass; the southern end of the Maluna pass, through which leads the direct road from Ellassona; Turnavo, the terminus of this road, and the Reveni pass, in the gorge of the Xeria, affording an alternative passage; Zarkos, where they had their artillery posted and where a branch of the high road through the Xeria gorge terminates; Trikhala, which is west of the roads that are practicable for considerable movements of troops; and Kalambaka, at the western end of this line of defense, which covered a front of from 50 to 60 miles, and the terminus of the railroad from Volo. Their headquarters and reserves were at Larissa.

On the evening of April 15 the Greeks moved forward to occupy the height of Analipsis, which dominates the pass leading into Macedonia at Nezero, which lies at the foot of Mount Olympus, about 12 miles from the seacoast at Platamona. They suspected that the Turks were about to seize the summit, which is disputed territory, and since 1886 has by agreement been regarded as neutral ground. The Greek and the Turkish reports differ as to which first crossed the frontier. The Turks tried to repel the Greeks, but the latter were in greater force, and were able to capture the summit and plant mountain guns there, by the aid of which they captured the Turkish posts at Katroni.

On April 16 the Council of Ministers at Constantinople decided on war and telegraphed to Edhem Pasha instructions to assume the offensive. The Turkish Government presented his passports to Prince Mavrocordato, Hellenic minister at Constantinople, and Assim Bey, the Turkish minister at Athens, took his leave, delivering a note, which said that in consequence of hostilities having been begun by Greece diplomatic relations were broken. Hellenic merchants and subjects in Ottoman territories were warned to leave Turkey within fifteen days, but this decree was not stringently enforced. In a circular dispatch to Turkish diplomatic representatives abroad the Turkish Minister of Foreign Affairs referred to the passing over of the previous frontier incident as a proof of the efforts of the Ottoman Government to maintain peace and a justification of defensive measures, for which Greece, as the aggressor, must be held responsible, having by her action in Crete and great military preparations on the frontier compelled the Ottoman Government to call under arms a large proportion of its *redifs*, imposing upon itself heavy sacrifices for their mobilization, and dealing a severe blow to its agriculture and trade. Now Greek regular troops in considerable numbers had crossed the frontier in the direction of Bairakdar, Godoman, and Predika, and had begun hostilities. The minister reiterated the assurance that the Turkish Government cherished no idea of conquest against Greece; it found itself in the position of legitimate defense, owing to the opening of hostilities by the Hellenes. It accepted the war only for the protection of its most sacred rights and its integrity, but would cease its military movements in order to give the world a fresh proof of its pacific intentions if the Hellenic Government

would at once withdraw its troops from the frontiers and from Crete. A part of the Greek population in Turkey placed themselves under French protection, the rest under American. The German representative at Athens assumed charge of the interests of subjects of the Sultan in the Hellenic kingdom. The Bulgarian Government declined to dismiss the Greek consuls at the demand of the suzerain power. The Greek note, delivered on April 18, said that Greece, far from proceeding to acts of hostility, had suffered repeated acts of aggression on the part of the Turkish army at several points of the frontier; that the Turkish army had without provocation marched forward on April 16 to take possession of the frontier post of Analipsis, and had failed in this attempt to violate neutral territory only because of the resistance which it encountered there. M. Delyannis, in his statement to the Boule, asserted that the Turks had in reality begun hostilities; that war was not an object in itself, but a means of arriving at an object in view, and Greece, having exhausted all means and lost all hope of arriving at the desired object by peaceful means, had prepared for war, and, since the neighboring state had declared war, must accept it, relying on Greeks in all parts of the world to come to the aid of the nation that had instructed the Eastern and the Western world in the principle of truth and justice, and on the army to do its duty, and gladly to face death before allowing this sacred land to be dishonored. The Greek Government requested the powers to withdraw their forces from Crete, in order not to hamper the action of the Hellenic troops in Turkish territory. The powers decided to continue the blockade and their joint occupation of the Cretan ports.

The fighting at Analipsis continued all night and all the next day, and when war was declared it extended along the line as far as Damasi. The Greeks advanced in force through the Maluna pass, which was held by a Turkish division, while another division prepared to enter the pass of Reveni. The Maluna pass became the center of the struggle, and there 20,000 men were engaged on the morning of April 18. Riza Pasha did splendid execution with the artillery. The Greeks who first entered the pass and surrounded the Turkish blockhouse were driven back at the point of the bayonet, and the Greek blockhouses, which were obstinately defended, were finally carried by assault after several charges. They were retaken by the Greeks, captured again, and once more retaken. The Turkish infantry held the Greeks in check by an incessant fire from behind sheltering rocks. In the night the *euzonoi* had four times descended the slopes toward the plain of Ellassona, but as the Turkish battalions gradually came up they were driven back over the ridges, so that the summit of the pass and the blockhouses standing there marked the line of the battle front. The capture of Skumpa early in the day, but few troops being engaged, enabled the Turks to plant field guns there, which silenced the Greek batteries and covered the Turkish infantry struggling for the possession of the crest. The fight for the summit of the pass was for a long time uncertain, one side and the other alternately gaining possession. Masses of infantry fought along the tops of the hills all the way to Skumpa. It was not until the Turkish batteries in the plain below found the range of their intrenchments that the Greeks finally began to retire. The particular battery that was directed by Riza Pasha at a range of 3,000 yards dropped shells into the Greek positions only 50 yards in front of the Turkish troops. The shrapnel fire from the Turkish batteries at a range of nearly two miles was irresistible. Though the

Greeks defended their positions with the greatest courage, they could not stand up against the slow but steady advance of the Turks, and before evening they asked them to cease their shell fire and surrendered three of their outworks. The whole of the upper pass, except one position, was then in the possession of the Turks. The principal fighting done by the Turkish infantry was at Skumpa and Dumenie, to the right of the pass. The Greeks had made small fortifications of earth and stone, and, as they were superior in numbers, the Turks had great difficulty in capturing the positions. The largest of the Greek blockhouses, being in an exposed position, fell early. The next one, farther up, was defended with magnificent courage, as were all the principal positions of the Greeks. The charges of the Turkish infantry were also splendid feats of courage. The advance of the Turks in skirmishing order to within 40 yards of the earthworks, regardless of their comrades falling at their sides, demonstrated the insensibility to fear and scorn of death that struck foreign newspaper correspondents as a peculiarity of the Turkish soldiery. One of the slain was Hafiz Pasha, eighty years old, who, never having dismounted in the war with Russia, insisted on riding to the assault at the head of his command. The Turkish artillery was handled with the utmost effectiveness. The shells exploded at exactly the right moment. The Turkish troops engaged at the battle of Maluna pass were nearly 24,000 infantry, or 30 battalions, besides 14 field batteries. At Karya and in the neighborhood of Damasi an equal number were fighting at the same time. The Turkish commanders at Maluna were Nechat, Memdoukh, and Haidar Pashas, under the chief command of Edhem Pasha. He directed the operations with the utmost coolness, and had a numerous staff, composed of the *élite* of the army. The service of ammunition was prompt and plentiful, as there was an unlimited supply of mules. The ambulance service between the field and the hospitals at Ellassona was remarkably expeditious. The infantry, as soon as they got under fire, extended and advanced in skirmishing order, keeping their line well while making good use of cover and taking aim before firing. The Turkish discipline was exemplary. At six o'clock the fire slackened, a shell bursting in one of the Greek blockhouses having driven the last detachment off the ridge. The height of Livadho, above Skumpa, was taken earlier, and the Turkish infantry between the two passes gradually drove the Greeks down the slopes beyond Ligaria and back toward Turnavo. Marshal Edhem Pasha then ordered a heavy fire from all the artillery engaged, which had the effect of rolling back the Greek right, leaving the Turks in possession of the entire line of hills. During the night the Turks fortified the positions they had taken, and when morning broke they found that the Greeks had retreated to the plain, with the exception of the rear guard, which was posted on a hill. The troops had fought for thirty-six hours without rest or nourishment, but in the night seven fresh battalions and several batteries of horse artillery came up to relieve the tired Turks. During the morning the Turkish artillery shelled with deadly execution the retreating columns on the plain below, scattering their formations when they made feeble attempts to reply to the harassing fire. At noon Haidar Pasha sent four battalions to drive the rear guard from its position. The Greeks made but a feeble resistance, and many of them surrendered. Toward evening the Turks began to bombard Turnavo. They camped at night on the plain in the tents abandoned by the Greeks. The Greeks established themselves on the last height near Turnavo, where

they planted several pieces of artillery that had been brought up, but these were speedily put out of action when the Turkish batteries opened fire on the morning of April 20. Riza Pasha had not been able to bring into play more than half his artillery. The horse artillery could not be brought up during the battle for the heights and defiles of the pass. Afterward the guns were dragged over the mountains. The Greek rear guard was forced back slowly, taking a stand wherever the ground was adapted for defense. The inhabitants of Turnavo fled on April 19, while the Greeks still held Mount Kritiri. The village of Mati, on the north, they did not evacuate till the evening of April 23, after a hard-fought engagement.

Another desperate battle was fought in the Reveni pass. The first Turkish attack, on April 18, was easily repelled by the superior Greek force. On the following day Edhem Pasha brought up more than 10,000 men. Col. Smolenski was also re-enforced by the division of Col. Mavromichali. The Greeks finally repelled the Turkish attack, and began an advance upon Damasi, supported by Col. Demopoulo's division, which crossed the frontier five miles northeast at Bogazi. The Turks crossed the frontier at five different points. They occupied Gritzovali, which Col. Mastrapas had abandoned, believing that a general retreat had been ordered. The Greeks rallied at Mati, after suffering severe losses in the retreat, and, being re-enforced, drove back the pursuing Turks. Velitchko, which had been surprised and captured by Greek bands on April 16, was retaken by the Turks. At Karya the Greeks were forced back only a short distance, and the Turks maintained a position on the frontier line. On the extreme right the Greeks still held their own at Krania and Nezero, but they were forced to retire after Turnavo fell into the hands of the Turks. They checked the Turkish advance at Kalambaka also, at the extreme left, where fighting took place on April 22, but it did not affect the main issue. At Karya, near Nezero, the Greeks advanced on April 17 in great force against the four Turkish battalions at that point, which were quickly doubled; and with the support of the artillery the Turks held their position. Greek re-enforcements were hurried to the spot, which was an important position, commanding the line of communication between Elassona and the Turkish town of Platamona on the coast, and was in the rear of the forces fighting at Maluna. The Turks continued to bring up fresh troops, and assumed the offensive. The Greeks held their ground, though their losses were five times as great as those of the enemy, until after Maluna was lost, when they retired. After some minor successes in the direction of Damasi, the Greek forces, which threatened to turn the right flank of the Turks, were effectually stopped. On April 20 the Turkish batteries engaged the Greek artillery massed at Zarkos. The Greek successes on both wings were valueless after the center was pierced. After a gallant defense of Kritiri, where the earthworks were entirely demolished by the well-directed Turkish artillery fire, the Greeks abandoned Turnavo. They fell back into the center of the plain of Larissa after their batteries at Zarkos were silenced. It was expected that they would attempt to hold Larissa, where they intrenched themselves on the north and west sides. There were 60,000 Greek troops engaged in the defense of the frontier, and their effective reserves were exhausted. At Karya the issue of the battle was long in doubt, each side in turn advancing and retreating across the frontier, until re-enforcements arrived for Hamdi Pasha's division that forced the Greeks to retire. Greek bands were landed from ships on the Macedonian coast west of Kavala and, with the object of

cutting the railroad from Constantinople near Deagatch, marched as far as Gojrat, where they were overtaken by a Turkish detachment, which with the aid of the peasants compelled them to retreat. Bombardments of undefended places on the western shore of Macedonia were undertaken, and by this means the Greeks inflicted some damage to Turkish supplies. With the Greek fleet hovering on the shores the Turks could no longer transport troops by sea, but with no available troops to land in sufficient force the Greeks were unable to strike at the land communications. The eastern squadron bombarded and destroyed Platamona and Katerina.

In the Gulf of Arta hostilities were begun on the morning of April 18 by the batteries of the new fortress of Prevesa firing on the steamer "Macedonia," which was only saved from sinking by being run ashore, and bombarding Actium, on the opposite shore. The Greek gunboats at Arta were joined by the "Nauarchos Miaulis," the "Basileus Georgios," and the "Spetsai." The ships co-operated with the Greek shore batteries, destroying the Skafadiki battery and damaging others. Arms were distributed among the townsmen of Arta and non-combatants were sent away before an artillery duel began on April 18 between the fort formerly erected by the Turks and the Turkish batteries across the river, two miles away. The Greeks had more guns and made the best practice. The bombardment of Prevesa was begun on April 20, while Greek irregulars crossed the Arachthos at Bani and occupied several villages, threatening communications between Prevesa and Janina. Col. Manos had 25,000 men. About 4,000 advanced into Epirus with the object of capturing Janina, the capital, and bringing about the expected insurrection in the Turkish rear. They penetrated as far as Philippiada, which they found deserted by the Albanian garrison of 7,500 men, these having mutinied and returned to Janina because they did not like their commander. The Greeks crossed the Luros river, and intrenched themselves at Pentepigadia. The troops of Ahmed Hafi Pasha encountered them there and captured their fortifications. Subsequently they recaptured the position and held it until April 24, when the Turks with superior forces took their fortress for the second time, inflicting a loss of 319 killed and wounded, while they lost only 54 themselves.

The Greek forces that carried the Reveni pass advanced as far as Viglia and threatened Damasi, when they were ordered to retire by the Crown Prince. Kritiri was evacuated on April 24, after the neighboring villages had been taken by the Turks. The bombardment of the positions still held by the Greeks was continued, and the advance of the Turks was very slow and cautious. There was much hard fighting before the Greeks were dislodged from the positions that they still held in the mountains and on the foothills. The Greeks retreated from Nezero and Karya, but west of Maluna the positions were still obstinately disputed. After the battle of Mati a remarkable change came over the spirit of the Greek troops, who had advanced upon the impregnable position of Menaxe, guarding the Maluna pass with a dash and intrepidity worthy of high praise, had contested every inch of ground in the defiles and on the ridges without loss of *morale* even under defeat, and had rallied quickly and continued the contest in their new positions, though exposed more than ever to the deadly fire of the Turkish guns. Thus they had fought all day long at Mati while their earthworks were being knocked to pieces by the exploding shells. They had gained ground on the left, while their center remained stationary, and on the right the Turks had advanced two miles to the village of Kutavi. The

Greek position was, however, compromised, for the Turkish forces from Nezero and Raptani had joined hands and outflanked the Greek right, while the Greek left had already been turned as a result of operations at Kourtsiovalli, and nothing but immediate withdrawal could save the army from being surrounded and forced to surrender. The command to retreat was accordingly given in the early evening. All order and discipline vanished as the various arms withdrew and concentrated on the roads leading to Larissa, where soldiers and civilians were huddled together. A few miles from Larissa a cry was raised that the Turkish cavalry was coming, and as it went along the columns the soldiers, irregulars, and peasants were seized with insane fright, turning at intervals to fire their rifles at whoever followed behind and rushing in headlong flight over those who were in front. Col. Mavromiehali and some of the other officers did their best to stop the stampede, but many were as terror-maddened as the men. The horses were taken from the guns and ammunition wagons to enable soldiers and irregulars to flee the faster. Several hundred persons were shot or trampled to death. There was no rear guard nor any screen of cavalry, but in the morning the Greek artillery in the direction of Turnavo endeavored to cover the retreat. The insane terror infected the troops stationed in the vicinity of Larissa, until they began to break up and flee in disorder, the civil population being the first to stampede. Some sort of order was restored by the officers, when it was seen that the Turks were not in immediate pursuit. The Greek troops at Mati and Dereli, at first about 7,000, were reinforced during the day till they were 12,000, about equal to the Turks. The panic spread among the troops at Larissa and grew till there was no holding them as soon as the Turkish columns began to pour through the passes into the Thessalian plain. The Turkish advance was a tactical success, the columns arriving so that their heads were all in line. The natural defenses of Larissa were slight, consisting only of the protection afforded by the Peneios, but the defensive works erected there were very strong. It was impossible, however, to make a stand when the army was so demoralized by fear. A council was held at Athens, the result of which was an order from the Government for a general retreat to Phersala, 25 miles away.

The Crown Prince divided the army into three columns, and departed at the head of one of them. While the troops were still withdrawing from Larissa the Turkish cavalry were at the outskirts of the town. The retreat then degenerated into a disorderly flight. The stores of ammunition and provisions in Larissa were abandoned, and many of the Greek guns were captured. Hakki Pasha entered Larissa with his cavalry on the morning of April 25. The Turkish commanders effectually prevented any looting, though the fleeing Greek soldiers had been guilty of it, by shooting some of their men who disobeyed the order to respect private property. In their march through Thessaly the Turks did not take even forage for their horses or provisions of any kind without paying the full value. The Turkish engineers had made a good military road through Maluna pass, while 40,000 reserves were sent on from Salonica. Ghazi Osman Pasha was appointed to the supreme command of the Turkish army, but he did not supplant Edhem Pasha in the active command of the forces in Thessaly.

The Greek forces concentrated at Phersala numbered about 40,000 men. The Crown Prince's staff, which was blamed for the hasty evacuation of strong positions and the disorderly retreat of the Greek army, was reorganized. Col. Smolenski, who had safely brought back his column from Reveni

after being left far in the rear by the rest of the army, was appointed chief of staff, with power to select the other officers. Athens was on the verge of revolution after the retreat of the army from the frontier. The dismissal of the officers of the general staff helped to allay the excitement, but the people still demanded the recall of the Crown Prince and Prince Nicholas.

The Minister of Marine resigned because the eastern squadron had been inactive during the recent fighting. On April 27 the King called for the resignation of the Cabinet. M. Delyannis refused to resign, and the King dismissed the Cabinet after consulting with the leaders of the other parties. The populace had broken into gunsmiths' shops to arm themselves, and stoned the King's palace, shouting for a republic. An extra session of the Boule was called. On April 29 M. Ralli, the Opposition leader, formed a Cabinet, as follows: Prime Minister, Demetrius Ralli; Minister of Marine, M. Eutaxias; Minister of Foreign Affairs, M. Skouloudi; Minister of War, Col. Tsamado; Minister of Finance, Anargyros Simopoulou; Minister of the Interior, Georgios Theotoki; Minister of Justice, M. Triantaphyllako; Minister of Public Instruction, Konstantinos Carapanos. The powers consulted as to the advisability of either offering mediation. They decided that they would not interpose as mediators until their good offices should be invoked by Greece. M. Ralli, who had incited the popular indignation by declaring that the retreat from Mati and the abandonment of Larissa were entirely needless and due to ignorance and cowardice on the part of the staff and some of the brigade commanders, said that his policy would consist in the reorganization of the army, whose recuperative forces were inexhaustible, and the re-establishment of order, together with a satisfactory solution of the foreign relations of the kingdom.

Osman Pasha started for Epirus with an army of 30,000 men, as it was desired to expel the Greeks quickly, so that no Turkish territory should be found in their possession if an armistice or peace were declared. The campaign was vigorously carried on by the Albanian garrison and the first reinforcements that arrived. On April 28 they attacked the Greek positions, which were obstinately defended at first. As soon as the *euzonoi* were dislodged from their advanced position in the mountain, the whole Greek line abandoned their strongly fortified positions in the pass and in a disorderly mass took to flight, not stopping till they reached Arta, the garrisons on the way joining in the terror-maddened throng. Before dawn not a man of the army of 11,000 men that had successfully invaded Turkey and established itself in strong positions with 40 guns was left on the farther side of the Arachthos.

The Greek army retreating from the frontier left behind them three practicable lines of defense and fell back on the line 35 miles in length, covering the railroad and extending from Karditza through Phersala and Velesino to Volo. Karditza was abandoned as soon as the Turks appeared at Trikhala, reducing the line of defense to 20 miles. Edhem Pasha turned his attention first to Velesino, intending to turn the Greek right. Having occupied northern Thessaly and brought their guns over the mountains, the Turks advanced their lines until they again came in contact with the Greeks, who had reorganized their forces as well as they could on the new line of defense. In Volo, which was thronged with 10,000 fugitives from Larissa, the people were in constant dread of a Turkish attack, and were hardly reassured when the Government promised to protect them with the fleet. On the land side the troops fortified the town of Veles-

tino, where a skirmish took place with a reconnoitering force of Turkish cavalry on April 27. This the volatile Greeks magnified into a victory. On April 29 the Turkish advanced guard having moved up, an attack in force was begun on the Greek positions at Phersala. The Turks occupied Trikhala, the Greek troops falling back on Phersala without offering any resistance. Zarkos was also occupied and large stores of ammunition were found there. The Turks renewed the attack upon Velestino on April 29. Col. Smolenski on the right repelled several vigorous cavalry charges, but on the left Col. Mavromichali was compelled to retire. The railroad between Volo and Trikhala had been restored, and the Turks threatened the Greek position from the east and the west as well as in front. The extreme slowness of Edhem Pasha's advance arose from political rather than military considerations. He displayed remarkable skill in his strategic movements. The four divisions from Trikhala and Larissa were concentrated simultaneously on Phersala, so as to attack the main body of the enemy and break through the center, according to the Napoleonic tactics that had been successful at Maluna. On May 4 the Greek Government recalled Col. Vassos from Crete, announcing at the same time a determination to continue the war.

On May 5 the Turks attacked the position at Velestino held by Col. Smolenski. The Turkish batteries took position on a ridge that jutted out between Velestino and the mountains of Cynoscephalæ, on which a part of the Greek infantry was deployed. Another battery was behind Koninari. The Greeks had only three mountain batteries to answer the Turkish guns raking their positions at a range of 3,000 yards, but with these they kept the Turkish infantry from advancing until the shells from the Turkish battery on the ridge drove one battery from the hilltop. The *andartoi*, or insurgents, on this hill retired, and the Greek riflemen on a neighboring ridge fell back, allowing the Turkish right flank to advance in a turning movement, which soon rendered the Greek position on the right of Cynoscephalæ untenable. After fighting from early morning till afternoon, their batteries having been silenced, the Greek infantry retreated in good order, abandoning their second line of intrenchments after the Turks had carried the first, and falling back on Almyro. The Greek infantry stood their ground well under heavy fire with shells bursting round them, but the Turks found their weak wing, and the defense collapsed. As soon as the Turks began to double up the left flank of the Velestino division at Cynoscephalæ the rest of the army at Phersala received orders to retire to Domoko, 15 miles in the rear. The Turks were advancing to the attack of Phersala at the same time that Velestino was attacked, and had driven back the outposts on the hills north of the river and begun to bring their guns into action, intending to attack in force on the following morning. In the meantime the defenders hastily evacuated the place. During the afternoon and the night the retreat was carried out, and when the Turks, after a short fight with the rear guard, entered Phersala on the morning of May 6 they found that the Greek army of over 30,000 men had fled, abandoning guns and a large quantity of war material and provisions. The Turks advanced their lines to Vryssa and Tehatma, halfway to Domoko, establishing their new base and headquarters at Phersala, while the Greeks erected defensive works at Domoko. Col. Smolenski's division, after more severe fighting with the Turkish advance guard, retreated from Almyro to Sourpi. Foreign war ships proceeded to Volo and landed marines. On May 8, Edhem Pasha having promised to protect

private property, a Turkish detachment occupied the town, the Greek squadron having previously departed. After the precipitate flight from their fortified positions on the farther side of the pass of Pentepigadia the Greek forces in Epirus, recovering their courage and discipline, crossed the Aracothos once more and advanced to the pass, at the entrance of which the Turks were found strongly intrenched. To prevent an attack in the rear by the Turkish garrison in Prevesa, Col. Marko Botzari's corps of volunteers, supported by the gunboats, occupied the isthmus north of Prevesa. Two divisions of Greek regulars occupied the Turkish fortresses of Imaret and Salagora, and on May 12 and the two succeeding days assaulted the Turkish positions with great gallantry, losing 700 killed and wounded. The Turks were strongly re-enforced on May 14, and the advanced positions that the Greeks had won with such heavy cost were seen to be in danger. They therefore fell back in the night to a lower position under cover of the fort at Arta. The Turks reoccupied the ridge abandoned by the Greeks, and could not be dislodged by the guns of the Greek fort, while their own artillery menaced the position on the mount of Imaret. Before this danger became apparent the Greek troops received orders to retire, and on May 15 the entire force recrossed the river into Greek territory. Col. Botzari's irregular troops, which had successfully repelled several sorties of the Turkish garrison of Prevesa, retired on May 16, and the Turks, witnessing the retreat, pursued them vigorously, converting the retreat into a rout in which about 300 Greeks were killed or drowned in attempting the Luros river. The attempt to reinvade Epirus had practically failed, and a speedy retreat was necessary before the order for a withdrawal came from Athens, the representatives of the powers having persuaded the Government to cease hostilities in order to prepare the way for European intervention.

The position at Domoko the Crown Prince stated in general orders to be impregnable, and the army unconquered and invincible. Nevertheless, he headed another retreat when the Turks, on May 17, while the negotiations for an armistice were still going on, appeared with 40,000 men before the fortifications defended by 35,000 Greeks. For the third time the Greek commanders evaded a pitched battle by a strategic movement to the rear, falling back upon the line of the Othrys mountains. On the same day a Turkish division advanced on Almyros, which Gen. Smolenski evacuated, retreating upon Kephalsi. The Greek expedition into Epirus gave the Turks an excuse for resuming the offensive and delivering the attack on Domoko, for which they had made all preparations, although negotiations for an armistice had been begun through the intermediation of the powers. The advance was directed against both wings, especially the right wing, which Edhem Pasha wished to cut off from the line of retreat to the Phourka pass and Lania, at the same time preventing a junction with Col. Smolenski's division from Sourpi. The cannonade began soon after noon, and toward evening the Turkish infantry advanced against both flanks and the center. On the Greek left and in the center the attacking regiments were three times stopped and repelled, but on the right the Greek line was forced back to Boussi and the wing was turned. After the intrenchments at Kitiki were taken by storm the whole Greek army retreated in great haste and disorder. The Greek troops fought with admirable courage, and withstood the boldest and most impetuous attacks that the Turkish infantry had yet made. In the numbers engaged and in the fierceness of the contest this last battle of the

war was the most important. Repeatedly the Turks charged across the level ground in a hail of shrapnel and up the steep inclines against volleying musketry in a desperate endeavor to rush the Greek intrenchments. They attacked the Greek position at almost every point along a line of over 12 miles. Except that the brigade of Col. Mastrapas had fallen back and the Turks had gone partly round the right flank, the Greeks held all their positions and had inflicted far heavier losses than they had sustained—nearly 3,000 killed or wounded, against 220 on their side. The order to retreat given by the Crown Prince, who had declared that he might surrender but would never evacuate, came therefore as a surprise, and threw the army into a state of demoralization and anarchy like that which ensued after Mati. Here again the commander-in-chief and his staff were the first to leave the field, and the cavalry, instead of covering the retreat, went on ahead. The Turks for the first time followed up their victory, and on May 18 attacked the Greek army at Phourka and other positions in the Othrys mountains, compelling it to retreat toward Mount Ceta and Thermopylæ. The Crown Prince established his headquarters at Lamia. All the troops in Athens left the Piræus for Thermopylæ under Col. Vassos, and the King was about to issue a proclamation calling on the entire population of Greece to take up arms for the defense of hearth and altar, when the Turkish Government declared a truce.

Peace Negotiations.—The Greek Government on May 10, at the time when the withdrawal of the troops from Crete was informally announced, let it be known that it would accept the mediation of the powers, not by an official request, but by an informal verbal note addressed by the Cabinet to the diplomatic representatives at Athens. The terms demanded by the Turkish Government, according to the first intimation, were understood to include a war indemnity of £3,000,000 sterling, the cession of Actium, giving with Prevesa on the opposite point complete command of the entrance to the Gulf of Arta, a rectification of the frontier at Nezero that would give the summits of the mountains to Turkey, and the abolition of the capitulations in Turkey as applied to Greek subjects. The German Government insisted as conditions of European intervention upon the recall of the Greek troops from Crete and a declaration on the part of Greece that she would formally consent to the autonomy of Crete. These terms were accepted by the Greek Government. M. Onou, the Russian minister, as dean of the diplomatic corps, presented a note offering the mediation, with a view of obtaining an armistice and of smoothing the difficulties existing between Greece and Turkey, of France, Italy, Great Britain, Germany, Austria-Hungary, and Russia, on condition that the Hellenic Government should declare that it would proceed to the recall of its troops from Crete, adhere formally to Cretan autonomy, and accept without reserve the advice that the powers would give in the interest of peace. The reply of the Hellenic Government declared that it was proceeding to the recall of the troops in Crete, that it formally adhered to autonomy for Crete, and that it placed the interests of Greece in the hands of the powers. On May 12 a collective memorandum of the powers was handed to Tewfik Pasha, the Turkish Minister of Foreign Affairs, by Baron Calice, the Austrian ambassador, informing the Porte that the powers had undertaken the office of mediators on the agreement of Greece to the conditions named above, and begging the Ottoman Government to suspend advance of the imperial troops and agree to a cessation of hostilities with a view to negotiations for peace. The Greek Min-

ister of Foreign Affairs, annoyed at the delay in the arrangement of an armistice after Greece had made the desired concessions, declared that the Government could accept no responsibility should further bloodshed take place, which might be attended by serious complications. The Porte sent an acknowledgment of the communication, and on May 15 a supplementary note, in which were specified certain terms which must be accepted as a basis of the negotiations for peace before an armistice could be granted. These were an indemnity of £10,000,000, the annexation of Thessaly to Turkey, a revision of the treaties by which Greece enjoys extraterritorial rights in the Ottoman Empire, and the signing of a cartel of extradition between the two states. The note went on to declare that if these terms were not accepted the Ottoman army would continue its advance. The demand for the annexation of Thessaly was based on the fact that that province was ceded to Greece on the advice of the powers with the object of putting an end to brigandage and Greek incursions into Ottoman territory, but the appearance of Greek bands in Macedonia for some time past and the incursions immediately preceding the war had proved that the cession had failed to terminate that state of things. After the battle of Domoko the Greek Government protested in a circular note that, while it had adhered to all the conditions imposed by the powers and refrained from offensive operations, the Turks had taken advantage of the period of inaction to prepare for a fresh attack, which had found the Greek army in a position for which the Government would not accept the responsibility, since it was due to the obligations that it had undertaken not to sanction further offensive movements. On the evening when the Turkish army occupied the abandoned Greek encampment at Domoko the Sultan sent orders to Edem Pasha to cease operations. The Porte agreed to a suspension of hostilities for seventeen days after receiving a telegram from the Czar, which said: "Encouraged by the evidence of sincere friendship and neighborly feeling which exist between us, I take upon myself the task of addressing to your august sensibility the wish that you will crown the heroic successes of your soldiers by a suspension of hostilities." In his answer the Sultan asked the Czar to take into consideration that he wished for "the friendly intervention of the powers to assure the re-establishment of peace, resulting in the safeguarding of the rights and prestige of my Government and the maintenance of general peace by the subsequent continual security of my frontier."

The enormous mobilization of the Turkish army, far out of proportion to the necessities of the campaign, was still going on when the truce was concluded, so that the army of occupation in Thessaly was eventually increased to over 200,000 men. This demonstration to Europe of the military power of Turkey encouraged the war party in Constantinople in the determination that no territory purchased with Moslem blood should again be surrendered to the unbeliever. Premier Ralli said that the Greek Government, since the richest provinces of Greece had been devastated and the harvest spoiled by war and there were 180,000 refugees to provide for, could pay no indemnity. Germany objected to the fixing of the terms of peace by the European concert without their previous acceptance by Greece, being anxious to safeguard the interest of German bondholders and to introduce the principle of an international control of Greek finances. England resisted the proposal that the Turks be allowed to remain in Thessaly until Greece paid the indemnity. An identical note was presented to the Porte on May 25, in which the

representatives of the powers recognized only the right of Turkey to a strategic rectification of the frontier and to a war indemnity proportionate to the financial resources of Greece. The Porte had proposed a peace conference at Phersala, but the ambassadors said that they were prepared to discuss the terms of peace with the Turkish foreign minister or any other representative of the Ottoman Government in Constantinople. The Porte was willing to treat with the ambassadors after a definite armistice had been concluded with the Greek commander, but desired that the peace to be agreed on should be signed at Phersala. A new armistice of two weeks and afterward renewable was declared preferable to one of indefinite duration, but after some discussion the Porte agreed to a continuance until the conclusion of peace negotiations. The six ambassadors and Tewfik Pasha held their first conference on June 3. Greece objected to raising the blockade of the coasts of Macedonia and Epirus without receiving an engagement that no Turkish troops or munitions should be landed nor the garrisons in the archipelago re-enforced. The British, French, and Italian ambassadors joined in a formal declaration against the retrocession of Thessaly. The ambassadors decided to get the opinion of a military commission on the strategical delimitation of the frontier, of jurists on the question of the capitulations, and of financial experts as to the amount of indemnity that Greece could pay. Enver Pasha, the Turkish Governor of Thessaly, proceeded to collect the sheep tax and tithes and in a proclamation threatened to confiscate the lands and effects of refugees who did not return to their homes. The international financial commission was informed by the Greek Government authorities that the crop of Thessaly, estimated for the year at 73,000,000 drachmai, was entirely lost, and consequently the Government revenue of 10,000,000 drachmai from that province, while the expenditure of 4,000,000 drachmai for administration went on; that the expenses of the Greek Government for the war amounted to 36,000,000 drachmai, and that the cost of maintaining 135,000 refugees from Thessaly, 15,000 from Epirus, and 30,000 from Crete was 3,000,000 drachmai; that, moreover, the mobilization of the army had produced a great disturbance in the country's finances, so that the revenue for 1897 would not amount to over 65,000,000 drachmai, showing a falling off of 40 per cent., while the expenses of the Government would foot up 135,000,000 drachmai. An internal loan would reduce the deficit to 40,000,000 drachmai, not counting 10,000,000 drachmai required for reinstalling the Thessalians in their homes.

The financial experts reported that Greece could not afford more than an annuity sufficient to cover an indemnity of £ T. 4,000,000, or 152,000,000 drachmai. The military commission reported in favor of giving Turkey all the crests of the mountains which would not involve the transfer of any inhabited district. Tewfik Pasha proposed the Peneios, or Salambria, as the boundary, which met with as strong opposition from the ambassadors as the claim to the whole of Thessaly, which the Turkish Council of Ministers reaffirmed as the indefeasible right of the conqueror on July 1 by a unanimous declaration, followed and amended on July 5 by a resolution that the Porte would not consider the frontier proposed by the powers nor any other line north of the Peneios, the natural boundary. On this point Tewfik Pasha interrupted the negotiations on July 4, drawing from Russia, of all the powers except Germany the most favorable to Turkey, a circular suggesting that steps be taken to expedite the conclusion of peace. The German ambassador insisted

on the strategic frontier finally proposed by the ambassadors, which included some small Greek villages, whose inhabitants would be repatriated in other parts of Thessaly. The Porte in a circular and the Sultan in telegrams to the five sovereigns and President Faure made a fresh appeal in favor of the Peneios line, to which the powers answered in a collective note, insisting on the strategic boundary and warning the Ottoman Government that they were resolved to put an end to obstruction preventing the conclusion of peace, which was eminently a European necessity. The Porte then accepted in principle the proposals of the powers, and negotiations were to be resumed on July 18, but Tewfik Pasha still objected to the strategic frontier. He finally accepted it on July 22, subject to a modification, which would transfer to Turkey certain Wallachian villages, the inhabitants of which had petitioned for the restoration of Turkish rule and whose request was supported by the Roumanian Government. England had in the beginning urged the immediate evacuation of Thessaly, even threatening to withdraw from the European concert if this were not insisted upon. Germany and some of the other powers, on the other hand, contended that evacuation could not be required before the indemnity was settled and the payment guaranteed. Germany insisted that guarantees for the payment of the older creditors of Greece be considered in connection with the indemnity. The German ambassador proposed to insert in the treaty a provision for the establishment of a financial control in Greece. Russia was opposed to such control, but acquiesced when the other powers agreed. With the support of Germany and at her suggestion the Porte proposed that the evacuation of Thessaly should be effected gradually as the successive installments of the indemnity should be paid. Tewfik Pasha proposed, when the ambassadors objected to the continued occupation of the plain of Thessaly as rendering the payment of the indemnity more difficult and remote, that the occupation should be confined to a zone including Volo, Larissa, and Trikala. He demanded the immediate payment of a first installment of £ T. 1,000,000, which was needed for the expenses of evacuation, the Turkish treasury being empty. The Greek Government was unable to provide such a sum. Efforts were made to raise the whole indemnity among the privileged banks and Greek financial houses at home and abroad, in order to escape international financial control, but with no success.

There was a movement in favor of resuming the war by means of a forced loan imposed on the rich, rather than admitting foreign control. The German, Russian, Austrian, French, and Italian governments accepted Tewfik Pasha's compromise proposal for the retention of Volo, Larissa, and Trikala as pledges, and their progressive evacuation when the installments of the indemnity were paid. Lord Salisbury refused positively to sanction such a plan, fearing that, with or without a control, Greece would be unable to pay the indemnity, and a practically permanent occupation would result. England had already recognized the justice of Turkey's occupying some territory as a guarantee, but the English ambassador now held that the occupation should be confined to certain strategic points north of the Peneios, involving no civil or military administration over the population. The Greek Government took advantage of the deadlock to urge its inability to pay more than £ T. 1,500,000, and this the English, French, and Russian governments were inclined to believe. Lord Salisbury suggested that these three governments, the original sponsors for the Hellenic Kingdom, should guarantee a loan of £ T. 4,000,000, the other powers

being invited to join in the guarantee if they wished. The three protecting powers requested the Greek Government to specify the revenues that it could set apart for the service of the new loan and what kind of supervision it was prepared to accept over the hypothecated revenues.

Germany steadfastly refused her assent to the proposal of a guarantee of the indemnity loan by the three protecting or the six signatory powers on the ground that the rights of the prior creditors would be prejudiced, and Austria and Russia supported the objection. The Greek Government was willing to concede the stamp tax, yielding 11,000,000 drachmai annually, the collection to be supervised by representatives of the creditors, whose appointment should be confirmed by the three powers. To compensate the older creditors for the withdrawal of the stamp tax from their guarantees, the Government proposed to the German ministers to add the tax on cut tobacco to the monopolies already assigned to them, and, should further security be required, the surplus of the stamp tax or the duty on exported currants. An association composed of three representatives of the bondholders and two Greek representatives should be created to supervise the collection of the assigned revenues. Germany, however, insisted on a thorough investigation of the Greek finances and the establishment of a general control. An English guarantee and financial control was proposed in Greece, the export duty on currants, which was fixed by the Chamber at 15 per cent. in kind, and the export dues of the Ionian Islands being sufficient security. Count Muravieff, the Russian Minister of Foreign Affairs, having in a note implied that the responsibility for the incalculable evils suffered by Greece and Turkey through the delay in the conclusion of peace rested upon England, Lord Salisbury, on Sept. 5, sent a new proposition, namely, the constitution of an international commission of six members, one for each of the powers, under whose control Greece should place revenues sufficient for the service of the indemnity and the old loans, to be accompanied by the prompt evacuation of Thessaly. The Greek Government acceded to this measure of international control. This solution of the difficulty was accepted in principle by all the powers. The following revenues were offered by Greece as guarantee for payment of the indemnity: Currant duties, 4,526,000 drachmai; special duties levied in the Ionian Islands, 1,729,000 drachmai; the duty on figs, 50,000 drachmai; stamp and post-card duties, 1,570,000 drachmai; customs duties from the Laurium mines, 1,392,000 drachmai; total, 10,240,000 drachmai. Germany, holding that the Turkish occupation of Thessaly was the only security that Greece would fulfill her financial obligations, was not willing to relinquish this security without arriving at a settlement of the partly repudiated debts. The German ambassador suggested that the interest to be paid to the original bondholders should be determined. The other powers were not ready to assent to Lord Salisbury's proposal that the evacuation should take place within a month of the signature of the preliminaries of peace, and thought that the dates for the payment of the installments should be fixed in the preliminaries. The British ambassador proposed that the evacuation should follow within a month after the Boule should vote the assignment of the revenues necessary for the service of the old debt as well as the indemnity loan. This did not remove the objections of Germany. It was finally decided that the evacuation of Thessaly should begin a month after the indemnity loan had been negotiated. The difference between England and Germany having been arranged, the chief obstacle disappeared, and on Sept. 18 the

preliminary articles of peace were signed by the ambassadors and the Turkish plenipotentiary.

The first article provided for the rectification of the frontier according to a line drawn on a map, which should be fixed on the spot by a delimitation commission meeting within fifteen days, consisting of delegates of Greece and Turkey and military delegates of the mediating powers, and was subject to slight modifications from a strategic point of view in favor of Turkey. Whereas the former line followed the water parting, the new line follows, as a rule, the southern base of the mountains, and transfers to Turkey the Maluna and all the other important passes. A little west of Larissa the line leaves the mountains and crosses the Peneios, giving both banks to Turkey from Gounitza to Koutzocheron. The strategic frontier includes the village of Kontzofliani, whence the insurgents employed by the Ethniké Hetairia made the raid into Macedonia that precipitated the war. Turkey laid claim to the village and lake of Nezero, and this point was left to the delimitation commission to decide. All the heights round Zarkos, Gounitza, Koutzocheron, Kritiri, Maluna, and Nodoman and those near Rapsani pass over to Turkey.

The second article of the treaty provided that an International Commission of Control, composed of six members representing the mediating powers, shall be empowered to make the necessary arrangements to secure the rapid payment of the indemnity and to prevent any injury being done to the rights of former creditors. The Greek Government promised to submit to the Boule a law, to be previously approved by the powers, defining the rights of the commission, according to which the collection and employment of revenues sufficient for the service of the new and old loans will be subjected to the absolute control of the commission.

The third article provided that, without tampering with the privileges and immunities enjoyed by Hellenic subjects before the war on the same footing as subjects of other states, special arrangements be concluded between Turkey and Greece with a view to guarding against the abuse of consular immunities to prevent the hindering of the regular course of justice, assure the execution of sentences pronounced, and safeguard the interests of Ottoman and foreign subjects in differences with Hellenic subjects, including cases of bankruptcy.

Article IV provided for the meeting of Greek and Ottoman plenipotentiaries at Constantinople within fifteen days to draw up and sign a definitive treaty of peace, to be concluded on the basis of the stipulations of the preliminary treaty, and to contain besides clauses for exchange of prisoners of war, free emigration of the inhabitants of the retroceded territories, and compensation to private persons for losses caused by the Greek forces, also re-establishment of postal and telegraphic relations.

The fifth article provided for the negotiation of the following arrangements: A convention settling the questions of contested nationalities on the basis of the plan negotiated in 1876 between Turkey and Greece, a consular convention in accordance with the third article, an extradition convention for the reciprocal surrender of common-law offenders, and a convention for the repression of brigandage on the common frontier.

Article VI provided that the state of war should cease from the date of the signature of the preliminary treaty, and that the evacuation of Thessaly should take place within a month from the date when the powers should have recognized that the provisions of the second article had been fulfilled, and when the time for the issue of the indemnity loan had been fixed by the International Commission. Article X reaffirmed the stipulations of

the convention of May 24, 1881, for the cession of Thessaly to Greece, except so far as they are modified by the present act, the Sublime Porte reserving the right to submit questions as to the interpretation of the convention to the arbitration of the powers, whose decisions shall be accepted by Greece.

Change of Government.—The preliminary treaty was approved by the Sultan, and was officially communicated to the Hellenic Government on Sept. 27, with a collective note stating that it was definite. There was intense popular opposition to the treaty, especially the arrangement for an international control, which was considered an invasion of the sovereignty of the nation and a matter not confided to the decision of the powers. The Russian minister at Athens intimated that if Greece did not accept the treaty, she would be left to her fate. Premier Ralli declined to present the treaty for the approval of the Boule, declaring that this was unnecessary, as it was executory, and that such a vote by the Chamber would be contrary to the sovereign rights of the state. M. Delyannis, who led the Opposition and controlled a majority of the Chamber, had urged the rejection of the treaty. The vote of confidence asked by M. Ralli on Sept. 30 was rejected by 93 votes to 71, with 41 abstentions. On the following morning the Cabinet resigned, and M. Zaimis, President of the Chamber, was called upon by the King to form a new Cabinet, which was constituted on Oct. 3, as follows: President of the Council and Minister of Foreign Affairs, M. Zaimis; Minister of the Interior, M. Colkorporis; Minister of Public Instruction, M. Panagiotopoulou; Minister of War, Gen. Smolenski; Minister of Marine, Capt. Hadji Kyriako; Minister of Justice, M. Toman; Minister of Finance, M. Streit. The new Cabinet announced that it would take steps to deliver Greek territory from the invader as early as possible, and afterward proceed to the reorganization of the army and navy. Prince Mavrocordato was sent to Constantinople as Greek plenipotentiary to negotiate a definitive treaty of peace, which was concluded in December on the basis laid down by the powers.

GUATEMALA, a republic in Central America. The legislative power is vested in a Congress composed of a National Assembly of 69 members, 1 to 20,000 of population, elected for four years by direct universal suffrage, and Council of State of 13 members, part elected by the National Assembly and part nominated by the President. The President is elected for six years, and is not re-eligible for the next ensuing term. José M. Reyna Barrios was elected for the term beginning March 15, 1892, and by the vote of the National Assembly on Aug. 30, 1897, his term was extended to March 15, 1902. The Cabinet in the beginning of 1897 was composed as follows: Secretary of Government and Justice, M. E. Cabrera; Secretary of War, P. Morales; Secretary of Public Welfare, M. Morales-Tovar; Secretary of Foreign Affairs, M. Cabral; Secretary of Finance, J. M. Gonzalez.

Area and Population.—The estimated area is 63,400 square miles. The population according to the census of 1893 was 1,364,678, divided into 677,472 males and 687,206 females, and containing 481,945 whites, besides 11,331 foreigners. The rest are Indians and mestizos. Guatemala, the capital, had 71,527 inhabitants. The number of marriages in 1896 was 5,504; of births, 63,248; of deaths, 31,308; excess of births, 31,940.

Finances.—The receipts of the Government, according to the budget of 1898, amount to 15,250,000 pesos, of which 9,050,000 pesos are derived from customs, 2,100,000 pesos from taxation, 3,800,000 pesos from monopolies, and 300,000 pesos from other sources. The expenditures are estimated at 12,415,

107 pesos, of which 1,412,769 pesos are for the interior and justice, 179,060 pesos for foreign affairs, 5,934,001 pesos for finance, 1,005,500 pesos for agriculture, public works, posts, telegraphs, bridges, and highways, 2,096,172 pesos for war, 1,499,739 pesos for public instruction, and 287,866 pesos for miscellaneous expenses. The foreign debt on Jan. 1, 1897, amounted to £2,009,815 sterling, and the internal debt to 7,319,955 pesos.

Commerce and Production.—The soil is very fertile, and adapted to most of the products of the temperate zone as well as to tropical plants. There are 125,000 acres planted to coffee, yielding over 75,000,000 pounds a year. Gold, silver, lead, tin, copper, and other minerals exist, but are not mined to any extent. The value of the imports in 1895 was 7,782,326 pesos, including specie and bullion; exports, 26,534,394 pesos. In 1896 the imports were valued at 11,429,000 pesos, and the exports at 23,086,000 pesos, the value of the coffee exported being 22,349,624 pesos. The number of steamers entered in 1896 was 573, of 1,027,500 tons.

Communications.—The length of railroad in operation in 1896 was 272 miles, and 98 miles were not yet finished. The post office dispatched 4,949,570 letters, etc., and received 4,463,692. The telegraphs have a total length of 2,985 miles. There were 755,687 messages sent in 1896, of which 161,970 were official, 15,789 were service dispatches, and 577,928 were private paid dispatches.

The Army.—By virtue of the law of May 23, 1888, every able-bodied man of white or mixed blood paying less than 50 pesos of yearly taxes, unless he is a single son or a public functionary, is obliged to serve in the active army from the age of eighteen till he is twenty-five, and in the militia till he is fifty years of age. Under the law of Oct. 23, 1893, the army is composed of an effective force, numbering 56,915 men, and a reserve force, numbering 29,439. The effective force includes 242 superior and 1,903 other commissioned officers.

Insurrection.—There were several candidates for the succession to the presidency in March, 1898, when the constitutional term of Barrios would expire. The most active in his antagonism to Barrios was Prospero Morales, who advocated keeping Guatemala for the Guatemalans. He had been Minister of War, and had great influence in the army. José Leon Castillo was another candidate who had strong military support. Juentes, Amado, and Ubico were other aspirants of less importance. The movement in favor of Morales attained dangerous magnitude, and the Opposition in the National Assembly was gaining such strength that the President saw his power threatened. At his behest the majority of the Deputies retired from the Assembly, leaving only the hostile minority, who refused to take their seats at the appointed time. Early in June he caused his troops to march through the streets of the capital, dissolved the National Assembly, ordered the arrest of the most prominent of his opponents, obtained a loan from the bank by intimidation, and proclaimed himself dictator, issuing a decree justifying this act. The troubles that had come upon the country he attributed to the factious and unpatriotic conduct of the National Assembly, which had acted in a way unprecedented in the history of Guatemala and detrimental to the interests of the Government. The Deputies, he said, were inspired by personal ambition; they had committed irregularities, enacted laws that were inexpedient and contradictory, and in an impolitic manner had sought to break the ties of harmony, threatening the public security. At the time when the President assumed the dictatorship the country was perfectly tranquil, and, although some of the more obnoxious of Bar-

rios's enemies were reported to have been shot, no disturbance occurred till the beginning of September. He had given notice that, while striving to promote the happiness of Guatemala, he would maintain order at whatever cost. On June 15 a treaty was signed at Guatemala by the plenipotentiaries of Honduras, Nicaragua, and Salvador on the one part, and those of Costa Rica and Guatemala on the other, in accordance with which the five States would constitute a single republic of Central America in respect to their relations with foreign countries if the treaty were ratified by the legislatures of the individual republics before Sept. 15.

The power of Barrios as dictator went without challenge or protest, save by a few sporadic malcontents who were soon quieted, until after the newly elected National Assembly had unanimously voted to prolong his term as President for four years. In the second week in September a revolution was started by the adherents of Gen. Prospero Morales near the Pacific coast. At San José the revolutionists killed the President's brother. Gen. Morales had the backing of all the other candidates for the presidency. At San Marcos, close to the border of Honduras, a band of insurgents gained possession of the plaza. Revolutionary agitation pervaded the republic, though in the capital, where Barrios had a large body of troops, there was no manifestation. The whole of Guatemala was placed by proclamation under martial law. The insurrectionary movement first became formidable in the west. The rebels took possession of the seaport of Ocos, which was thereupon declared closed by the dictator. A revolutionary force of about 2,000 men marched upon the strongly fortified and wealthy old city of Quezaltenango. The rebel leaders attempted first to buy over the garrison to their side with money. Failing in this, they attacked the place. They fought through one whole day and until noon of the next, when the soldiers struck their colors, surrendered in a body, cheered the name of Gen. Prospero Morales, and joined the revolt. The enlarged force of insurgents moved then upon the garrisoned port of Champerico, capturing San Felipe on the way. After taking Champerico they were in possession of two ports for the entry of arms and ammunition, and were prepared to advance upon Guatemala city.

President Barrios, alarmed at the growing strength of the insurrection, proceeded to drastic measures of precaution and repression. All prominent men suspected of sympathy with the revolution were imprisoned, and some of them were shot. The wives of revolutionists were arrested. The police usurped civil and judicial functions. There were more than 600 political suspects in the prisons. Loans were raised by force, death being the penalty for refusing financial assistance to the dictator.

One of his victims was Juan Aparicio, a public-spirited planter and merchant who never had mingled in politics. Barrios was constantly attended by a bodyguard because he was in fear of assassination. He dismissed his entire Cabinet, and formed a new one, as follows: Minister of War, Gen. Gregorio Solares; Minister of Fomento, or Public Works, Feliciano Gareia; Minister of Foreign Affairs, J. Muñoz; Minister of Public Instruction, Mariano Cruz.

President Gutierrez of Salvador sent a force to guard the borders of the departments of Jutiapa and Chiquimula and to prevent an invasion, for a revolutionary movement was on foot in the east of Guatemala. Gen. Domingo Vasquez, with a force of 1,000 insurgents, occupied the town of Chiquimula. Gen. Morales established his headquarters at Quezaltenango. An attack on Totonicapán was at first repelled, and the attacking force retired to Quezaltenango. Ocos was recaptured by the Government troops. The Government concentrated its forces at Totonicapán, where Gen. Mendizábal was in command. On Sept. 29 the insurgents fired on this town of 26,000 inhabitants from their position in the hills, but their shells went wide. The Government succeeded in mobilizing 24,000 men, with 38 pieces of artillery. Ex-President Barillas raised a force of 3,000 men, and also aided the President with money. The rebels had 8,342 men under arms, with 80 generals, 105 colonels, and 240 lieutenant colonels. They were equipped with 10,000 modern rifles, 15 pieces of heavy artillery, and 18 Hotchkiss guns. On Oct. 2 the Government forces, 16,000 strong, attacked the rebels in the vicinity of Totonicapán. After bombarding their position on the summit of Tierra Blanca, from which they returned the fire with 3 guns, Gen. Ovalle carried the height by assault, driving the insurgents back to Coxon. Their other positions in the mountains having been carried by detachments of the Government army, they retreated to Quezaltenango, where they were shut in by the superior forces of Gen. Mendizábal and Gen. Francisco Vilela. Meantime Gen. José L. Castillo had evaded the Salvadorean frontier guard, marched into Guatemala with a large force, and captured Jerez, Yupiltepeque, Jutiapa, and Cuajiniquilapa, meeting but little resistance from the garrisons. The rising in the eastern departments quickly subsided after it was known that Gen. Morales and his army were closely invested by an overwhelming force. Quezaltenango was recaptured by the Government troops after a brief struggle. The rebels were allowed to depart, except the officers, who were made prisoners. All the arms and ammunition were captured. In the middle of October it was announced that the revolution had been completely subdued, order restored all over the country, and peace definitely re-established throughout the republic.

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HAWAII, a republic occupying the Hawaiian Islands in the Pacific Ocean, proclaimed on July 4, 1894, in succession to the Provisional Government that was constituted on Jan. 3, 1893, when Queen Liliuokalani conditionally abdicated the throne. The legislative power is vested in a Senate and a House of Representatives, the former consisting of 15 members elected by indirect suffrage for the term of six years, one third being renewed every two years, the latter of 15 members elected by indirect suffrage every two years. The President is elected for six years by the two houses in joint

session. Sanford B. Dole was elected President for the term ending Dec. 31, 1900. The Cabinet at the beginning of 1897 was composed of the following members: Minister of Foreign Affairs and Minister of Public Instruction, H. E. Cooper; Minister of the Interior, J. A. King; Minister of Finance, S. M. Damon; Attorney-General, W. O. Smith.

Area and Population.—The area of the inhabited islands is as follows: Hawaii, 4,210; Maui, 760; Oahu, 600; Kauai, 590; Molokai, 270; Lanai, 150; Niihau, 97; Kahoolawe, 63; total, 6,740 square

miles. The native population was estimated at 150,000 in 1820, when the first American missionaries appeared in the islands. In 1890 there were only 34,436 pure Hawaiians left, and in the next six years there was a further diminution of over 10 per cent. A census taken on Sept. 27, 1896, revealed a population of 72,517 males and 36,503 females, a total of 109,020, of whom 31,019 were Hawaiians, 8,485 part Hawaiians, 24,407 Japanese, 21,616 Chinese, 15,191 Portuguese, 5,260 Americans, 2,257 British, 1,432 Germans, 101 French, 378 Norwegians, 455 South Sea Islanders, and 600 of other nationalities. The foreign-born population was 55,783, to which may be added 13,733 born of foreign parents in Hawaii. In the American and British population, as given above, are included those born of American and British parents in Hawaii. The Americans born in the United States number 3,086. There were 16,399 males and 14,620 females in the pure Hawaiian population, 4,249 males and 4,236 females among the half-breeds, 19,212 males and 5,195 females among the Japanese, 19,167 males and 5,195 females among the Chinese, 8,202 males and 6,898 females among the Portuguese, 1,975 males and 1,111 females among the Americans, and 1,406 males and 844 females among the British. The Americans formed 2.73 per cent. of the total population. Honolulu, the capital, situated on the island of Oahu, had 29,920 inhabitants. Chinese immigration is now restricted, and the Government has sought to place limitations on the immigration of Japanese under contract, who form the bulk of recent immigration. The bulk of the Japanese immigrants consists of laborers engaged for a term of years, but the immigration of a superior class of Japanese increased from 5 per cent. of the whole in 1890 to 20 per cent. in 1896. The number of arrivals in 1893 was 5,672, and of departures 3,926; of arrivals in 1894, 8,114, and of departures, 5,477; of arrivals in 1895, 8,090, and of departures, 4,636; of arrivals in 1896, 13,984, and departures, 6,857. The population in 1896 was divided in respect to occupation as follows: Agriculture, 7,570; fishing and navigation, 2,100; industry, 2,265; commerce and transportation, 2,031; liberal professions, 2,580; laborers, 34,438; miscellaneous pursuits, 4,310; without profession, 53,726. The division as to creed was as follows: Roman Catholics, 26,363; Protestants, 23,773; Mormons, 4,886; Buddhists and other cults, 44,306; without indication, 10,192. (For map, see "Annual Cyclopædia for 1892," page 334.)

Finances.—The receipts of the Government in 1896 were \$1,997,818, of which \$656,896 came from customs, \$706,542 from taxes, \$168,384 from the Interior Department, \$59,900 from the courts, \$77,489 from the post office, \$29,363 from stamps, \$62,820 from water supply, \$96,549 from state domains, \$61,048 from sales of Government property, \$56,331 from various sources, and \$22,496 from the surplus of the preceding year. The total expenditures amounted to \$1,904,191, of which \$43,045 were for the civil list and legislation, \$91,607 for justice, \$56,784 for foreign affairs, \$175,472 for public works, \$203,397 for sanitary measures, \$194,401 for the Finance Department, \$252,560 for the public debt, \$251,633 for the Attorney-General's office, \$227,695 for public instruction, \$92,957 for the army, and \$314,640 for various purposes. The amount of the public debt on Dec. 31, 1896, was \$4,136,174. The army consists of a regiment of 8 companies, numbering 476 officers and men.

Commerce.—The total value of the imports in 1896 was \$7,165,000, of which \$5,464,000 came from the United States, \$756,000 from Great Britain, \$299,000 from China, \$276,000 from Japan, \$114,000 from Australia, \$148,000 from Germany, and

\$108,000 from other countries. The exports of domestic produce were \$15,436,000 in value, of which \$15,408,000 went to the United States. The principal exports were sugar for \$14,932,000, rice for \$195,000, and bananas for \$125,000.

Navigation.—There were 386 vessels, of 447,997 tons, entered, and 373, of 465,198 tons, cleared in 1896. The merchant marine consisted of 59 vessels, of 29,024 tons, 26 of the vessels being steamers.

Communications.—The lines of railroad in operation are 25 miles in the island of Hawaii, 7 miles in Maui, and in Oahu 25 miles in the vicinity of Pearl Harbor and 15 miles at Waianae; total length, 72 miles.

The post office in 1895 forwarded 3,057,600 internal and 921,280 external letters, etc. Telegraphs and telephones connect all points in the islands. The telegraphs have a length of 250 miles.

Treaty of Annexation.—William O. Smith, the Attorney-General, went to Washington in February, 1897, to open negotiations, in conjunction with the Hawaiian minister, for a new treaty of annexation. Subsequently Lorin A. Thurston and William A. Kinney were associated with the Hawaiian minister, Francis M. Hatch, and on June 16 Secretary Sherman signed for the United States a treaty with these plenipotentiaries. In his message submitting the treaty to the Senate President McKinley said: "This is not really annexation, but a continuance of the existing relations with closer bonds between people closely related by blood and kindred ties. At the time a tripartite agreement was made for Samoa Great Britain and Germany wanted to include the Hawaiian group, but the United States rejected the suggestion because it held that there already existed relations between Hawaii and the United States, placing the former under the especial care of the United States, which will not allow any other country to interfere in the annexation of Hawaii and the making of the islands part of the United States in accordance with its established policy." The preamble of the treaty states that the United States and the Republic of Hawaii, in view of the natural dependence of the Hawaiian Islands upon the United States, of their geographical proximity thereto, of the preponderant share acquired by the United States and its citizens in the industries and trade of said islands, and of the expressed desire of the Government of Hawaii that those islands should be incorporated into the United States as an integral part thereof and under its sovereignty, have determined to accomplish by treaty an object so important to their mutual and permanent welfare. By the first article the Republic of Hawaii cedes, absolutely and without reserve, to the United States all rights of sovereignty of whatsoever kind in and over the Hawaiian Islands and their dependencies; and it is agreed that all the territory of and appertaining to the Republic of Hawaii is hereby annexed to the United States of America under the name of the Territory of Hawaii. In the second article the Republic of Hawaii cedes and transfers to the United States the absolute fee and ownership of all public, Government, and crown lands, public buildings or edifices, ports, harbors, military equipments, and all other public property, with the proviso that the existing laws of the United States relative to public lands shall not apply to such lands in the Hawaiian Islands, but the Congress of the United States shall enact special laws for their management and disposition, all revenue from or proceeds of the same (except such part thereof as may be used for the civil, military, or naval purposes of the United States) to be used solely for the benefit of the inhabitants of the Hawaiian Islands for educational and other public purposes. In the third

article it is stipulated that until Congress shall provide for the government of the islands all the civil, judicial, and military powers exercised by the officers of the existing Government shall be vested in such persons and exercised in such manner as the President of the United States shall direct, and the President shall have power to remove said officers and fill the vacancies so occasioned; also that the existing treaties of the Hawaiian Islands with foreign nations shall cease and determine, being replaced by such treaties as may exist or may hereafter be concluded between the United States and such foreign nations, but that the municipal legislation of the Hawaiian Islands, not enacted for the fulfillment of the treaties so extinguished and not inconsistent with this treaty nor contrary to the Constitution of the United States nor any existing treaty of the United States, shall remain in force until the Congress of the United States shall otherwise determine, and until legislation shall be enacted extending the United States custom laws and regulations to the Hawaiian Islands, the existing customs relations of the Hawaiian Islands with the United States and other countries shall remain unchanged. By Article IV the public debt of the Republic of Hawaii lawfully existing at the date of the exchange of ratifications, including the amounts due to depositors in the postal savings bank, is assumed by the Government of the United States, but the liability of the United States in this regard shall in no case exceed \$4,000,000, and the existing Government, so long as it is maintained and the present commercial relations of the Hawaiian Islands remain unchanged, shall continue to pay interest on the debt. In Article V it is provided that there shall be no further immigration of Chinese into the Hawaiian Islands, except upon such conditions as are now or may hereafter be allowed by the laws of the United States, and no Chinese by reason of anything contained in the treaty shall be allowed to enter the United States from the Hawaiian Islands. The sixth article provides that the President shall appoint five commissioners, at least two of whom shall be residents of the Hawaiian Islands, who shall as soon as is reasonable and practicable recommend to Congress such legislation concerning the Territory of Hawaii as they shall deem necessary or proper. The seventh article provides for the ratification of the treaty by the President, by and with the advice and consent of the Senate, and by President Dole, with the consent of the Hawaiian Senate, in accordance with the Constitution, and for the exchange of ratifications at Washington as soon as possible.

The Hawaiian annexationists believed that the country would have a stable government if incorporated in the American Union, under which it would become more prosperous than in any past period and the people would be more contented; that the United States would share in this prosperity, and would secure a naval station of inestimable strategic value; that, in short, it is the manifest destiny of the Hawaiian Islands to become a part of the United States. The opponents of annexation in Hawaii believed that the Hawaiian natives never would submit to the extinction of their national existence, and that they still look forward to the restoration of the monarchy or a native government; that after annexation they would have no voice whatever in the government; that the prosperity of the islands would be doomed, because contract labor will not be available under the laws of the United States, and the sugar plantations can not be profitably worked by free labor; and that, as the Territorial governments of the United States, which would be the form imposed on Hawaii, have invariably been incompe-

tent, corrupt, and unjust, the people would be plundered and harassed by political adventurers and carpetbaggers in the event of annexation.

The Hawaiian Legislature, which met on Sept. 8 in extra session for the purpose, ratified the treaty by a unanimous vote on Sept. 10, but not without a protest from the anti-annexationists, who called a mass meeting on Sept. 6 and adopted resolutions asserting that the native Hawaiians and a large majority of the people of the islands were in direct opposition to annexation, and fully believed in the independence and full autonomy of the islands and in the continuation of the Government of Hawaii as of a free and independent country governed by and under its own laws.

British Annexation of Pacific Islands.—Great Britain in recent years has established a protectorate over a number of outlying islands over which Hawaii has claims. The occupation of Johnson island was countermanded, and the island was acknowledged to belong to Hawaii on condition that the right to land a cable is conceded, if desired. The British flag has been raised over the Phoenix group, composing the islands of Phoenix, Birnie, Gardner, and Sydney. Jarvis island has also been declared a British protectorate. The uninhabited guano island of Palmyra, situated 1,000 miles southwest of Hawaii, has been claimed as a British possession since 1888, and in May, 1897, a British gunboat visited it and hoisted the British flag. The Hawaiian Government has claimed the same island as a dependency by virtue of its discovery and colonization by its citizens in 1862.

Diplomatic Disputes with Japan.—The treaty made between Japan and Hawaii in 1871 contains the favored-nation clause, and under its provisions Hawaii can not prevent Japanese from coming to the islands as free immigrants. A law was passed to exclude lunatics, paupers, and persons liable to become a burden on the community, and the manner in which it was enforced led to a controversy with the Japanese Government. Another law restricted the importation of contract laborers in a manner which the Japanese held to be contrary to existing engagements. Although but few of the Japanese now in the islands are able to read and write either English or Hawaiian, which constitutes the qualification for the franchise, the Americans feared that the continued settlement of Japanese in the Hawaiian Islands and the influx of educated Japanese would result in the transfer of the political power to them and the adoption of such laws as would make Hawaii a Japanese colony. The first measure to restrict the influx of Japanese was a regulation of the immigration commissioner issued in 1895 requiring planters to import two thirds of their contract laborers from China or from other countries than Japan. The Japanese Government asked an explanation. The free immigration of Japanese not under contract and not of the laboring class, but many of them of the student class, reached enormous proportions early in 1897, when in one week as many as 1,500 arrived, and the regular increase was at the rate of from 1,800 to 2,000 a month. Finally the Hawaiian authorities refused to allow 587 immigrants to land from the steamer "Shinshiu Maru," which arrived on Feb. 22. At first they were held in quarantine on the complaint that there was smallpox on board. In the end the steamer was compelled to take more than 400 of them back to Japan. The same course of action was taken in regard to the immigrant passengers on the "Sakura Maru" and the "Kinai Maru," the latter of which arrived in port on April 17. About 1,200 immigrants on the three vessels were ordered to be taken back by the ships that brought them after a period of detention in the quarantine station,

an island in the harbor. The Supreme Court refused to issue a writ of *habeas corpus* on the ground that the immigrants, not having been landed on Hawaiian soil, were not within the jurisdiction of the court. Hawaii based her right to exclude these people on the laws regulating immigration framed with special reference to contract laborers. These 1,199 immigrants from Japan were prevented from landing on the ground that they were without the prescribed qualifications or had broken the immigration laws. These laws require that the contract laborers shall have a contract to work in the service of some Hawaiian citizen for at least two years. These contract laborers must have their agreements previously indorsed by the Hawaiian Board of Immigration. Japanese contract laborers first went to Hawaii in response to the demand for labor in the islands under a convention concluded in 1886 at the request of the Hawaiian Government, in which the Japanese inserted clauses for the protection of the laborers more stringent than are usually included in arrangements for the importation of coolie labor, for the Japanese Government was not eager to obtain this outlet for labor, and was, above all, anxious that its citizens should not be reduced to the position of coolies. To these conditions, which were not applied to Chinese and other contract laborers, the Hawaiian planters eventually raised objections, thinking that they could obtain labor more cheaply if the restrictions were removed. Free laborers are entitled to enter Hawaii without any preliminary consent of the authorities, but not unless they have \$50 in their possession. Of the total number excluded, nearly 1,000 had a written agreement with the Japanese Immigration Company, whereby, in consideration of the prepayment of 12 yen, the company agreed to return the immigrants to their homes in Japan in case it was unable to procure work for them after landing. They had come as free laborers, but the Hawaiian authorities held that this agreement made them contract laborers in the view of the law, and that it was a contract that had not received the approval of the Hawaiian immigration commissioners, such as the law requires. These immigrants and others showed \$50 in cash, but the authorities demanded proof that it was their own, not lent by the immigration societies to the immigrants to be returned to their agents after landing for the purpose of evading the law. The Japanese consular authorities brought *habeas corpus* proceedings in the case of the immigrants who were detained on board ship pending their deportation, but the Hawaiian courts refused to issue writs of *habeas corpus*. The Japanese Government decided to stop free emigration for a time and to send a war ship to Hawaii. The United States Government at the same time dispatched the cruiser "Philadelphia," which was in Honolulu harbor when the "Naniwa" arrived, on May 5. The Japanese cruiser brought a commissioner to investigate the immigration question. The Japanese Government alleged violations of the treaty on the part of the Hawaiian authorities in refusing to permit the immigrants to land, thus placing it out of the power of the Japanese consul to protect them; in preventing them from placing the matter in the hands of legal advisers; and in the refusal of the judiciary to entertain a suit at law instituted by the Japanese whose landing had been prevented. Money damages in their behalf to the amount of nearly \$100,000 were demanded. The sudden prohibition from landing applied to Japanese free immigrants was denounced as arbitrary and an infraction of the treaty of 1871, which secures to Japanese subjects the right to enter Hawaiian ports with ships and cargoes of all sorts, to trade, travel, reside, and exercise every profession in Hawaiian

ports, to have complete protection to persons, property, and civil rights, and to have free access to courts of justice and liberty to choose and employ lawyers. The Hawaiian Government took the position that the immigration laws are a reasonable exercise of the police power of the state, and in answer to the Japanese complaint at the sudden stringency with which they were applied, said that they had been laxly enforced as long as the immigration and transportation companies did not attempt fraud; but when these companies made an attempt by evasions of the law to flood the country with pauper immigrants it was necessary to enforce the immigration acts to the letter. The Japanese Government complained also of a discriminating duty imposed on *sake*, the national beverage of the Japanese. The duty had been fixed at 15 cents a gallon, but the Legislature passed, over the veto of President Dole, a bill imposing a duty of \$1 a gallon, which was held by Japan to be a breach of the treaty between the two countries. In February, 1897, the Hawaiian Government requested that the Japanese emigration laws be changed so as to restrict free immigration into Hawaii.

At the time of the signature of the annexation treaty the Japanese minister at Washington demanded the recognition by the United States of all the rights of Japan and her subjects under subsisting treaties with Hawaii. He protested against depriving the Japanese residents in Hawaii, who possess large property rights, of the right which they enjoy under present conditions to become citizens and to vote, and against subjecting them to any measures which the United States may adopt in derogation of their existing treaty rights. The Japanese note, while disclaiming all designs against the integrity and sovereignty of Hawaii on the part of Japan, urged that maintenance of the *status quo* of Hawaii was essential to the good understanding of the powers which have interests in the Pacific. It was further suggested that annexation might lead to the postponement by Hawaii of claims and liabilities already existing in favor of Japan under treaty stipulations. Mr. Sherman, in his reply of June 25, met the general protest with the statement that the influence of the United States in Hawaii has always been paramount, that annexation has long been recognized as a necessary contingency, always probable and steadily drawing nearer, and was proposed four years before without eliciting any objection from Japan, and that the United States Government would not admit that the projected more perfect union of Hawaii to the United States can injure any legitimate interests of other powers in the Pacific. With reference to the rights and claims of Japanese subjects, he pointed out that, although treaties would be extinguished by annexation, rights that have already accrued to Japan or to Japanese subjects under the treaty between Japan and Hawaii would remain. Toru Hoshi, the Japanese minister, replying on July 10 to Mr. Sherman's note, acknowledged the predominant and paramount influence of the United States on Hawaii, which he considered a guarantee against anything inimical to either the United States or Hawaii, and therefore an argument against any change injuriously affecting the interests of others in the *status quo*. The Japanese Government could not view with unconcern and in a spirit of acquiescence the consequences which would probably follow the extinction of Hawaiian sovereignty, nor anticipate without apprehension the consequences, direct and indirect, that would follow the practical consummation of the theory that annexation means the immediate termination of the treaties and conventions with Hawaii and the consequent cessation for the future of the privileges granted thereunder; and it would not admit

that the treaty of 1858 with the United States, which is wholly nonreciprocal, could be extended to Hawaii without its consent.

Hawaii proposed to arbitrate the immigration question and other differences, and Japan, after first declining, before the end of July accepted arbitration in principle and expressed a willingness to discuss the basis, the subject-matter, and the procedure of the arbitration. The Chinese consul raised objections in behalf of his countrymen, against whom the Hawaiian Government was beginning to apply the exclusion act in force in the United States. The Hawaiian minister assured him that Chinese residing in Hawaii would be free to visit their native country and return. In the autumn the immigration of free laborers from Japan was resumed. The Japanese authorities took pains to see that every one of the immigrants complied with the immigration regulations, and the Hawaiian Government, which had given the assurance when the dispute first arose that there would be no interference with *bona fide* immigrants, was helpless to stop this further immigration.

Hawaii accepted Japan's proposal that each party to the controversy should prepare a statement of the facts on which it rests its case. Japan admitted the right of both parties to present testimony regarding facts on which they were not agreed.

HAYTI, a republic in the West Indies occupying the western part of the island of Hayti. The legislative body is the National Assembly, consisting of a Senate of 39 members and a House of Commons of 95 members, the latter elected for three years by universal male suffrage, while the Senators are elected by them from a list supplied in part by the President and in part by the electors. The two houses in joint session elect the President, whose term of office is seven years. Gen. L. M. F. Hippolyte, like most of his predecessors, became President as the result of a revolution. His term would have expired in May, 1897, but he died in 1896, and in his place Gen. Tiresias Augustin Simon Sam was elected for the term ending in May, 1902. The Cabinet was composed in the beginning of 1897 of the following members: Secretary of State for Foreign Affairs and Justice, P. Faïné; Secretary of War and Marine, M. Montpain; Secretary of the Interior, M. Buteau; Secretary of Public Instruction, M. Chanzy; Secretary of Public Works, M. Arteau; Secretary of Finance, C. Fouchard.

Area and Population.—The republic has an area of about 11,070 square miles, comprising the most fertile part of the island. The population in 1894 was 1,210,625, nine tenths of whom are of pure negro blood.

Finances.—The budget for 1897 makes the total disbursements of the treasury 8,984,539 pesos of the nominal value of 5 francs, of which 158,210 pesos are for foreign affairs, 823,818 pesos for finance and commerce, 1,870,745 pesos for war and marine, 1,593,394 pesos for the interior, 731,322 pesos for public works, 297,222 pesos for agriculture, 1,204,190 pesos for public instruction, 519,008 pesos for justice, 96,945 pesos for worship, 266,000 pesos for the national bank, and 1,423,685 pesos for the public debt.

The foreign debt amounted on April 30, 1897, to 13,476,113 pesos in gold, consisting of a 5-per-cent. loan of 4,176,113 pesos issued in 1875 and one of 9,300,000 pesos raised in 1896 and paying 6 per cent. interest. The total debts amounted to 17,913,218 pesos in gold and 10,812,574 pesos in currency.

The Army and Navy.—The army, recruited partly by conscription for seven years and partly by voluntary enlistment for four years, is composed of

the Government guard of 100 artillerymen, 300 infantry, 150 sharpshooters, and 100 cavalry, 4 batteries of artillery numbering 1,000 men, 6 regiments of infantry of the line numbering 3,200 men, and 1,978 gendarmes; total, 6,828 men.

The navy consists of 5 screw steamers carrying 32 guns, and a steel gunboat armed with 5 guns.

Commerce.—The total value of the imports in 1896 was 6,053,835 pesos, and of the exports 9,463,903 pesos. Of the imports 4,134,000 pesos came from the United States, 1,340,000 pesos from France, 304,000 pesos from Germany, 206,000 pesos from England, and 70,000 pesos from other countries.

The number of vessels entered at Port au Prince during 1896 was 260, of 352,142 tons, of which 191, of 332,526 tons, were steamers and 69, of 19,616 tons, were sailing vessels.

Internal Affairs.—President Sam, lacking the prestige and vigorous authority of his predecessor, had to contend with difficult economic conditions as well as the usual political instability of the country. The low price of coffee and the high rates of exchange produced a state of depression and distress that roused the anger of the populace against the Government and also against the foreign merchants, who were supposed to benefit by the sufferings of the people. Constant disagreements arose between the President and his ministers. Revolutionary plots were hatched at Jacmel and other places. Merchants refused to lend money to the Government, and as the treasury was empty, the soldiers were unpaid and insufficiently fed. The premium on gold rose to 90 per cent. On Oct. 1 President Sam proposed a bill partially to retire the paper and silver currencies and establish the gold standard. To insure the regularity and stability of transactions and cause, as far as possible, the perturbations of the exchanges to cease, so as to give the best encouragement to the national commerce, he believed that the paper money should eventually be wholly retired and the silver and copper money partially withdrawn from circulation. The bank notes in circulation are issued by the Government under the control of the National Bank. As the gourde, or peso, has hitherto exchanged with United States dollars at an average premium on the latter of 17 per cent., the high rates prevailing in 1897 created a critical commercial situation. There were 2,900,000 gourdes in silver and 75,000 gourdes in copper issued during the ten years ending in 1890. In 1895 silver and copper coin was issued to the amount of 1,600,000 gourdes. More than 4,000,000 paper gourdes were in circulation in 1896. The President's project of law was adopted by the National Assembly. The leading provision is for a loan of \$2,800,000 of United States gold at par, the interest not to exceed 12 per cent. per annum, the proceeds of which are to be applied to the withdrawal of the paper money from circulation at the rate of 50 per cent. a year. The bill establishes a surtax of 25 per cent. *ad valorem* on all importations, 15 per cent. payable in United States gold, the remaining 10 per cent. in silver, which shall be withdrawn from circulation and demonetized as soon as it is taken in. From the beginning of the withdrawal of the paper notes American gold coins shall be the legal tender in the republic, and the customs dues, except the proportion payable in silver, and all other state revenues shall be collected in that money or in bills at two thirds of their face value.

A new Cabinet was appointed by President Sam, with which he worked more harmoniously than with his previous ministers. It was composed of the following members: Secretary of Foreign Affairs, Finance, and Commerce, Solon Ménos; Secretary of War and Marine, S. Marius; Secretary of

the Interior and Police, Luxembourg Cauvin; Secretary of Justice and Worship, A. Dyer; Secretary of Public Instruction, M. Chanzy; Secretary of Public Works, M. Arteaud.

Dispute with Germany.—The habitual jealousy of the Haytians toward foreigners and the assumption of superiority of race and civilization and contempt for the laws and customs of the country which the foreign residents are apt to betray was quickened by the commercial crisis, which the natives attributed to the speculations of bankers and traders. Various acts of the local authorities toward American citizens and others indicated a revival of the intense suspicion of the Haytians in regard to foreign political intrigue or dictation. There was in Port au Prince a merchant who had rendered himself obnoxious to the police because he assumed liberties and immunities usually accorded to foreigners, being under German law a German subject and inscribed as one at the German legation, for his father was a German, and he had elected that nationality and served in the German army. Under Haytian law, however, this Lueders was a citizen of Hayti, having been born in Hayti of a Haytian mother. Lueders got into a more serious difficulty with the police than he ever had before by resisting their entry into his stable to arrest his negro coachman for some crime or misdemeanor. When a dozen of them finally forced a passage and took the coachman into custody Lueders went to the police headquarters to complain of a violation of his domicile. There he was himself placed under arrest on a charge of assailing and attempting to murder police officers in the discharge of their duty. He was promptly condemned to pay a fine of \$48 and to undergo one month's imprisonment, and was immediately taken to jail. He demanded and obtained a retrial of the case, claiming that it was not sufficiently proved that he had assailed any of the policemen and that, if he had done so, he had a right to defend his domicile against illegal invasion. The result of the second trial was that he was sentenced to pay a fine of \$500 and to one year's imprisonment. Count Schwerin, the German *chargé d'affaires*, wrote to the Ministry of Foreign Affairs in reference to the case. Not receiving an immediate answer, he sought an audience with President Sam, to whom he addressed verbal representations that assumed the tone of an *ultimatum*, challenging the verdict as unjust and influenced by a hatred of foreigners, declaring it invalid, and demanding the liberation of Lueders. In this interview Count Schwerin, who had received telegraph instructions from his Government to demand the release of Lueders, a money indemnity, and the punishment of the police officers and judges concerned in the arrest and condemnation, demanded an indemnity of \$1,000 in gold for every one of the twenty-three days that Lueders had been confined, and added that for every additional day that he was kept a prisoner the German Government would exact an indemnity of \$5,000. President Sam told him that he had not granted an interview for the purpose of discussing such a question, and that the German representative must address his communications to the Secretary of Foreign Affairs. In a circular addressed to the members of the diplomatic corps the President of the republic gave an account of the interview, of the irregular manner in which it had been obtained, and of the demands which the German representative had made, but of which he had not even furnished a written copy, adding that he had replied to Count Schwerin "in terms within the rights of the head of an independent state that is not minded to accept the suzerainty of any foreign power whatever." Gen. Sam had intimated that he had not ex-

pected a business interview, else he would not have granted the audience, and said that he could give no answer to Count Schwerin, who must apply to the proper quarter. The Secretary of Foreign Affairs wrote to Count Schwerin, offering to discuss any communications that he might make in regular form with reference to Emil Lueders and to procure for him a private audience with the President if he desired. To this communication Count Schwerin replied by a formal acknowledgment of its receipt, which was interpreted by the Foreign Secretary as a definitive refusal to enter into relations with his department. This attitude he considered to be one offering no prospect of a compromise and entirely devoid of justification. He therefore informed the representatives of other powers that he considered it desirable that they should advise their governments of what had occurred. The country had been wrought into a fever of excitement by this incident. Threats of mobbing foreigners and lynching Germans were uttered in various towns. The Secretary of State alluded to the national excitement and reminded the foreign diplomatic representatives that the Republic of Hayti had been established at the cost of great sacrifices, "which his countrymen were prepared to repeat in order to maintain their independence and the majesty of their legal administration." The Haytians are an exceedingly proud people and boastful of their national spirit and military prowess and of having possessed the only army that was not beaten by Napoleon I.

On Oct. 21, four days after his interview with the President, the German *chargé d'affaires* hauled down the flag of the legation and sent the archives to the legation of the United States, thus breaking off all relations with the Haytian Government. The German colony, consisting of 70 persons, was placed under American protection. Three German training ships that were in West Indian waters were ordered by telegraph from Berlin to repair to Port au Prince. The colonial circles in Germany and the advocates of the Kaiser's plan for an increase in the navy made much of the Lueders incident, ridiculing the negro and mulatto republics as a piece of exported Africa, a satire on the idea of the modern state, which should be abolished by international agreement as hostile to civilization, and saying that if Germany had the fleet that she ought to have here would be an admirable opportunity to obtain a foothold in these waters such as she has obtained for others. They clamored for the dispatch of a cruiser or a battle ship to Hayti.

The incident entered upon a new phase when W. F. Powell, the American minister, interposed with a letter addressed to the Haytian Foreign Secretary asking for the release of Lueders. Mr. Powell stated that in taking this initiative he had no intention of interfering with the native laws nor of intervening in the difficult complications in which the Government of Hayti and that of the German Empire were involved, nor was it his intention to implicate his Government in the affair. His only object was to mitigate the present difficulties and to avoid all bloodshed and every kind of disturbance such as would damage the interests of American citizens living on the island and engaged in trade. In a subsequent letter he gave it as his opinion that the Haytian Government could set Herr Lueders at liberty without prejudicial consequences. The Government of the United States would regard this proceeding as an act of courtesy. He further reassured the Foreign Secretary that if Lueders were liberated he would leave the island on a Dutch steamer that sailed the next day for New York, and he expressed the hope that the immediate liberation of Lueders would mitigate the

existing strained relations without any humiliation of the Government of Hayti. The Haytian Secretary of State replied in cordial and grateful terms, saying: "In view of the relations of sincere friendship between the Republic of Hayti and the noble and great American republic, my Government has resolved to fulfill your loyal request, and I give you the assurance that the President will to-day decree the pardon of Herr Lueders. While taking note of the prisoner's promise to leave the island at once, I must not leave you unaware that my Government reserves the right, under all the circumstances, to proceed to the measure of expulsion and to forbid Herr Lueders for the future to set foot on the soil of this country which he has renounced."

Lueders was liberated on Oct. 22, and departed for New York and thence for Berlin. He had been kept in confinement six days after the time when Count Schwerin demanded his instant release. Negotiations for indemnification and reparation were conducted in Berlin. The Haytian Government was reluctant to pay the sum demanded, which was \$50,000. The population became more excited when the German war vessels arrived, and the Government prepared to take drastic measures to prevent an outbreak. In Jacmel an attempt was made to seize the Government offices by rioters, of whom 7 were killed and 15 wounded by the troops. A rumor had reached that port that the German fleet was bombarding the capital. To escape the rage of the populace all the foreign residents of Jacmel took refuge on vessels anchored in the harbor. In the interior, where there was much discontent, the situation was particularly critical.

Finally an *ultimatum* was sent to President Sam by the German naval commander. After consulting his Cabinet the President decided to comply, and before the time expired the Minister of War paid over on board the German flagship the sum demanded.

IDAHO, a Northwestern State, admitted to the Union July 3, 1890; area, 84,800 square miles: population, according to the census of 1890, 84,385. Capital, Boise City.

Government.—The following were the State officers during the year: Governor, Frank Steunenberg; Lieutenant Governor, George F. Moore; Secretary of State, George J. Lewis; Treasurer, George H. Stover; Auditor, James H. Anderson; Attorney-General, R. E. McFarland; Superintendent of Public Instruction, L. N. B. Anderson; Inspector of Mines, B. F. Hastings—all Democratic-Populist fusion. Supreme Court—Chief Justice, I. N. Sullivan, Republican; Associate Justices, J. W. Huston, Republican and Ralph P. Quarles, Democratic Populist; Clerk of the Court, Solomon Hasbrouck, Republican.

Finances.—In his message to the Legislature, which convened in January, 1897, the Governor called attention to the fact that the bonded interest-bearing debt of Idaho had almost doubled since the attainment of Statehood (1890), while the assessed valuation of property was decreasing. "We are thus," he remarked, "confronted by the difficulty of doing an increasing business on a decreasing Capital." The report of the State Auditor for 1893 and 1894 shows that the bonded debt of the State on Jan. 1, 1895, aggregated \$378,000, since which time there has been paid: Asylum bonds, \$5,000; Capitol-building bonds, \$80,000; total, \$85,000; leaving balance of debt, \$293,000. The preceding session

HOLLAND. (See NETHERLANDS.)

HONDURAS, a republic in Central America. The Congress is a single chamber, containing 46 members, who are elected by direct universal male suffrage for four years. The President is elected for the same term by the vote of the nation. Dr. Policarpo Bonilla, who became chief of the executive as the result of a revolution in 1893, and was elected President by the Constituent Assembly, was afterward elected in the regular way for the term ending Dec. 31, 1898. The Vice-President is Gen. Manuel Bonilla. The ministers at the beginning of 1897 were as follow: Minister of Foreign Affairs and Acting Minister of Justice and Public Instruction, Dr. C. Bonilla; Minister of Public Works, Dr. E. C. Fiallos; Minister of the Interior, Dr. J. A. Arias; Minister of Finance, Dr. M. R. Davila; Minister of War, Gen. M. Bonilla.

Area and Population.—The area of Honduras is estimated at 45,250 square miles. The population is about 400,000, consisting almost entirely of Indians, with a few white settlers scattered among them. Tegucigalpa, the capital, has about 18,000 inhabitants.

Finances.—The receipts in 1895 were 2,172,760 pesos. The foreign debt on July 30, 1896, was £16,444,799 sterling, including the capital sum of £5,398,570, and £11,046,229 of unpaid interest accruing since 1872.

Commerce.—The imports in 1896 amounted to 1,322,418. The exports were as follow: Precious metals, 1,150,000 pesos; coffee, 750,000 pesos; cattle, 400,000 pesos; bananas, 400,000 pesos; tobacco, 2,000,000 pesos; coconuts, 125,000 pesos; other products, 100,000 pesos; total, 3,125,000 pesos.

Communications.—There is a line of railroad from Puerto Cortez to La Pimienta, 57 miles. The post office in 1896 forwarded 370,456 letters, etc., besides 12,451 registered letters. The telegraphs had 2,680 miles of wire in July, 1896.

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of the Legislature provided for the issuance of: Asylum-improvement bonds, \$25,000; normal-school bonds, \$75,000; total, \$100,000; making a total bonded indebtedness of \$303,000, classified as follows: Refunding bonds, drawing 6 per cent., \$108,000; wagon-road bonds, 1889, 6 per cent., \$50,000; wagon-road bonds, 1893, 5 per cent., \$135,000; asylum-improvement bonds, 5 per cent., \$25,000; normal-school bonds, 5 per cent., \$75,000; total, \$393,000; outstanding warrants Jan. 4, 1897, \$243,638.82; leaving total indebtedness, bonded and warrant, \$636,638.82.

Accounts against the State for which no appropriation has been made or claims where the regular appropriation has been exhausted are examined and certified as correct by the board of examiners, and are so certified to the next session of the Legislature, and such certified account constitutes a deficiency warrant. These warrants collectively amounted in January to \$44,298.59.

The semiannual report of the Auditor, covering the period from Jan. 1 to July 31, 1897, showed: General-fund warrants, series 1895 and 1896, outstanding Jan. 1, 1897, \$224,270; redeemed Jan. 1 to July 31, 1897, \$131,253; balance outstanding series 1895 and 1896, \$93,253. Collections reported by the Treasurer for the period amounted to \$276,500, the principal items being: Revenue, \$190,631; poll taxes, \$8,048; insurance licenses and filing fees, \$3,603; State proportion of State and county license, \$8,193; wagon-road tax, \$10,061; principal account

school-land sales, \$2,273; 5-per-cent. Federal land sales, \$2,501; principal account school-fund loans, \$4,605; interest and rental account school-land sales, \$9,115; Soldiers' Home endowment fund, \$3,128; national endowment, Morrill act, \$23,000. The Auditor's report shows that the total amount of general-fund warrants issued during the seven months was \$180,968.

There was a saving at the Soldiers' Home of \$18,000 through changed methods adopted there.

The preceding Legislature provided for the building of normal schools, the outlay for building and maintenance being \$81,521. This year's appropriation for the schools was only \$28,000, a difference of \$53,521. The deficiency claims paid by the 1895 session aggregated \$60,443; those paid by the 1897 session \$27,700, a difference of \$32,743. These three items of difference foot as follow: Soldiers' Home, \$18,000; normal schools, \$53,521; deficiencies, \$32,743; total, \$104,264.

Banks.—The report of the United States Comptroller of the Currency, in October, on the condition of the 10 national banks in the State showed: The average reserve held was 40.48 per cent. The total resources of the 10 banks had increased from \$3,360,739 in July to \$3,505,448. Increase in the amount of loans and discounts was from \$1,036,214 to \$1,066,699. Individual deposits had increased from \$2,168,100 to \$2,393,344. The lawful money reserve in the banks was \$276,092, of which \$214,634 was specie. There was a falling off in the amount of gold coin held in reserve in the banks, and a corresponding increase in the amount of silver coin. In July the 10 banks had on hand in gold coin \$230,497; in October they had but \$85,409. The Idaho banks had due them from other national banks, not reserve agents, \$259,160; from State banks and bankers, \$176,953; and from approved reserve agents, \$644,733. They owed to other national banks \$12,744, and to State banks and bankers \$22,994.

The banking house of C. Bunting & Co., in business at Blackfoot and Dubois, was closed, Feb. 15, under an attachment of the First National Bank of Pocatello, of which Bunting is president. The liabilities were placed at about \$200,000. In the attached bank was \$53,000 of the county funds and \$9,000 of State money. The withdrawal of \$22,000 of State funds was the immediate cause of the collapse. The assets were said to be large.

Assessment.—The total valuation of property by counties aggregated \$29,951,920, as follows: Ada, \$3,373,493; Bannock, \$1,769,348; Bear Lake, \$1,006,409; Bingham, \$1,345,230; Boise, \$471,383; Canyon, \$2,037,331; Cassia, \$751,960; Custer, \$482,306; Elmore, \$1,183,517; Fremont, \$1,470,479; Idaho, \$921,283; Kootenai, \$2,235,774; Latah, \$2,756,238; Lemhi, \$871,777; Nez Percés, \$1,578,277; Oneida, \$1,353,116; Owyhee, \$1,000,725; Shoshone, \$1,866,164; Washington, \$1,200,643; Lincoln, \$1,030,376; Blaine, \$1,246,072. The aggregate amount the counties were taxed to pay the State was \$253,000.

Of the special land grants to the State by the National Government, aggregating over 600,000 acres, only one sixth yet remain to be settled.

Education.—The biennial report of the Superintendent of Public Instruction showed that in 1869 there were but 24 school districts in the State and 15 schoolhouses; in 1894 there were 626 districts and 559 schoolhouses; in 1897, 671 districts and 658 schoolhouses. The growth of population is reflected in the number of school children. In 1894 there were 35,606 children between the ages of five and twenty-one; in 1896 the number had grown to 43,745, showing a growth of school population of more than 8,000 in two years, or nearly 25 per cent.

The report of the United States Indian Commissioner, made in November, showed that 440 young Indians were attending school at the three Government Indian boarding schools in the State. Of these, 150 were going to the Fort Hall school, 250 to that at Fort Lapwai, and 40 to that at the Lemhi reservation. There is also a contract school maintained on the Cœur d'Alene reservation where 55 pupils are taught, for whom tuition is paid at the rate of \$108 a year.

Insane Asylum.—The records of this institution show a marked increase of patients from year to year. In 1890 the number of patients was 64, while in 1896 it was 158. The *per capita* cost of maintenance per day was 85 $\frac{3}{4}$ cents in 1891, 91 cents in 1892, 70 cents in 1893, 64 cents in 1894, 59 cents in 1895, and 54.52 cents in 1896. This institution is by law for the indigent insane, but patients of all conditions are admitted, and while due effort is made to collect from nonindigents, there is no provision of law whereby such efforts can be made effective.

Mining.—According to the report of the Superintendent of the Boise Assay Office, Idaho's production of gold, silver, and lead in 1896 had a total value of \$11,751,845, an increase of \$1,641,360 over 1895. The values were: Gold, \$2,323,700; silver, \$6,474,765; lead, \$2,953,380. There was an increase of \$652,059 in the value of lead mined. The production of gold by counties was: Owyhee, \$681,095; Shoshone, \$359,049; Boise, \$325,995; Custer, \$106,791; Idaho, \$155,349; Blaine, \$66,894; Elmore, \$63,731; Cassia, \$18,522; Ada, \$27,349; Bingham, \$15,628; Canyon, \$10,791; Lincoln, \$17,426; Lemhi, \$451,411; Oneida, \$13,844; Nez Percés, \$3,824; and Washington, \$6,801. The principal production of silver by counties was: Shoshone, \$4,090,292; Owyhee, \$1,846,568; Blaine, \$337,350; Custer, \$186,648; Boise, \$6,006; Elmore, \$2,106; and Lemhi, \$2,463.

Decisions.—Through the adoption of a constitutional amendment by the people, Idaho women have been admitted to the right of franchise. At the election 12,126 votes were cast in favor of the amendment and 6,282 against it. While this was a majority of those voting on the subject, the State Board of Canvassers held that a majority of all those participating in the general election was necessary for the success of the amendment. The matter was taken into the Supreme Court of the State, which decided against the Board of Canvassers.

The decision on the suffrage amendment carries the others that were voted on at the same time. These are the amendments to abolish the office of district attorney, substituting county attorneys and segregating the office of probate judge and county school superintendent.

In the case of F. M. Conger *vs.* the Board of Commissioners of Latah County, the Supreme Court decided that a board of county commissioners can not employ counsel to assist the district attorney in criminal cases.

Horticulture.—The Horticultural Inspector reported that the fruit acreage had increased from 10,000 acres in 1890 to 20,000 in 1896. Besides the various wagon loads of fruit distributed 116 car loads were shipped from the State. One shipper received \$1,076 for a car of Hungarian prunes sold in the New York market. This car netted the shipper \$300 after freight and commission charges were paid. The lowest freight rate obtained was \$300 per car by a shipper who iced his cars at Pocatello. The rate for other shippers, who iced at Boise and Nampa, was from \$350 to \$385 to points as far east as Chicago. To New York the rate was from \$525 to \$675. The common pests found in the State are, in the order of their destructiveness, as follow: San

José scale, codlin moth, woolly aphis, green aphis, pear-leaf-blister mite, oyster-shell bark louse, apple scab, peach blight, and dieback.

Irrigation.—The State engineer reported 315,000 acres of land under cultivation by irrigation and 1,250,000 acres that can be irrigated. Thirty-two thousand acres are irrigated with water from the Boisé river, 1,062 feet a second being used. Four acts providing for irrigation were passed by the Legislature.

Legislative Session.—Henry Heitfeld, Populist, was elected United States Senator over Fred T. Dubois, Silver Republican, by a vote of 39 to 30.

Among the bills passed were the following:

Abolishing the office of assistant State engineer.

Fixing the legal rate of interest at 7 per cent.

Establishing a sheep-quarantine system.

Defining the manner of locating placer claims.

Allowing any school district with taxable property amounting to \$150,000 to organize an independent district.

To prohibit gambling.

Providing for a State board of arbitration for settling labor troubles. This act provides that whenever the State board shall be advised that a strike or lockout is threatened in a business employing not fewer than 25 persons "it shall be the duty of the State board to put itself into communication as soon as may be with such employer and employees, and endeavor by mediation to effect an amicable settlement between them or endeavor to persuade them." If a strike has actually occurred, it may investigate it and publish a report giving the causes and assigning the responsibility or blame.

ILLINOIS, a Western State, admitted to the Union Dec. 3, 1818; area, 56,650 square miles. The population, according to each decennial census, was 55,162 in 1820; 157,445 in 1830; 476,183 in 1840; 851,470 in 1850; 1,711,951 in 1860; 2,539,891 in 1870; 3,077,871 in 1880; and 3,826,351 in 1890. Capital, Springfield.

Government.—The State officers during the year were: Governor, John R. Tanner; Lieutenant Governor, W. A. Northcott; Secretary of State, James A. Rose; Treasurer, Henry L. Hertz; Auditor, J. S. McCullough; Attorney-General, E. C. Aiken; Adjutant General, J. N. Reece; Superintendent of Insurance, J. R. B. Van Cleave; Superintendent of Education, S. M. Inglis—all Republicans.

Finances.—The total amount of funds in the treasury Oct. 1, 1894, was \$1,923,462.07. The receipts from all sources from Oct. 1, 1894, to Oct. 1, 1896, were \$13,442,055.16. The disbursements from Oct. 1, 1894, to Oct. 1, 1896, were \$12,555,709.03. The balance of all funds in the treasury Oct. 1, 1896, was \$886,346.13. The principal of the bonded debt of the State outstanding Oct. 1, 1896, was \$18,500. These bonds, called in, have ceased to draw interest, but have not been surrendered.

Valuation.—A statement of the equalized assessment of all taxable property in the State for the year 1896 gives the total valuation as \$816,679,620. A later statement of the Board of Equalization, made in October, 1897, shows a decrease in the general assessment and an increase of \$12,000,000 in that on corporations. One hundred and ten railroads are assessed at \$78,621,936, a reduction of about $\frac{1}{2}$ of 1 per cent. from 1896. A reduction of \$12,059,295 in the taxes on Cook County's unclassified property is shown. In Sangamon, Morgan, Menard, Christian, Cass, Macoupin, Logan, Macon, Shelby, Champaign, De Witt, Greene, Jersey, Piatt, and Pike Counties a decrease of valuation ranging from 40 per cent. on lots in Morgan County to 5 per cent. on lands in Christian County is shown. The total assessment on the capital stock of 315

corporations other than railroads, added to the equalized value of the tangible property, is \$15,908,424. This is an increase of 35 companies, and a total increase in the assessment of \$1,113,764. Of this, Cook County furnishes 22 companies and \$725,000.

Banks.—The report of the State Auditor gives the number of State banks in operation on Sept. 1 as 138. The capital stock of these banks was \$18,919,500; the total resources amounted to \$127,291,996.62; amount of United States bonds, including premiums, \$572,796.50; other bonds and stocks, \$10,248,139.09; cash on hand, \$14,782,628.79; loans and discounts, \$83,256,291.79; surplus fund, \$7,547,135.04; undivided profits, \$3,467,637.41; savings profits subject to notice, \$37,665,012.19; individual deposits subject to check, \$39,720,414.17.

The Auditor issued a statement in August showing the comparative increase and decrease from May 11 to Aug. 2, 1897. The number of State banks had increased to 141. The amount of loans and discounts increased \$1,840,502.78; cash on hand shows a decrease of \$706,819.20; due from other banks, an increase of \$1,873,816.26; current expenses, a decrease of \$743,893; checks and other cash items, a decrease of \$131,873.45; collections, a decrease of \$1,138,065.01; capital stock, a decrease of \$35,000; surplus fund, an increase of \$23,713.05; dividends unpaid, an increase of \$18,056.66; saving deposits subject to notice, an increase of \$12,908,881.50; individual deposits subject to check, an increase of \$2,863,566.78; time certificates of deposits, a decrease of \$1,110,058.94.

Railroads.—The State Auditor's report for 1896 shows that there are 105 railway systems operating in the State, with 10,611 miles of main track, 1,113 miles of which are second main track. There are 3,528 miles of side track.

The report issued in August, 1897, gives 110 railroads, with 10,989 miles of main track. The annual report of the Illinois Central Railroad for the year ending June 30 showed the gross receipts from traffic to be \$22,110,937; the expenses of operation and taxes, \$15,735,884; leaving the net receipts from traffic, \$6,375,053. The income from all other sources swelled the total net receipts to \$8,539,248. The total fixed charges and rentals of the road were \$5,760,698. During the year \$2,625,000 were paid out in dividends, and \$924,461 has been carried forward and set apart as applicable to future dividends. The net receipts from traffic for the year showed a decrease of \$665,514, and the total net receipts from all sources showed a decrease of \$419,781 from the year ending June 30, 1896.

For July, 1897, the freight earnings of the Burlington road were \$2,004,478, an increase of \$332,000 over the same month last year. The net earnings of the road for the month were \$196,435, an increase of \$99,314 over the same month last year.

Agriculture.—On Aug. 1, 1897, the State Board of Agriculture reported that 1,938,442 acres, or 53 per cent. of the total area seeded in wheat, was winter killed or destroyed by floods, leaving but 898,755 acres for harvest. The greatest loss was in the central part of the State, where but 23 per cent. of the fall planting was harvested. The quality of the yield was good and averaged 14 bushels to the acre all over the State. The total yield was 10,225,525 bushels. The average price paid to farmers, Aug. 1, was 67 cents, and the total value of the crop was \$6,924,013.

Oats produced an average yield of 35 bushels to the acre—greater than for the two previous years; 3,540,231 acres were planted, and the average price realized by the farmer was only 15 cents a bushel. The total yield was 126,959,997 bushels; estimated value, \$19,547,410.

An estimate issued Sept. 10 gives the area planted in corn during 1897 as 7,059,527 acres. The average yield is 32 bushels an acre; total yield, 225,648,864 bushels; value, 25 cents a bushel. The Government estimate of the Illinois corn crop for 1887 was given on Oct. 1 as 203,024,000 bushels. On Sept. 3 the State Board of Agriculture estimated the yield from 126,411 bushels of rye at 1,964,189 bushels, valued at \$667,139, an average yield of 15 bushels to the acre, at 34 cents a bushel. There were 18,170 acres of barley, 3,000 more than last year. The average yield was 27 bushels an acre, the total yield 491,083 bushels, and the total value \$149,939; price per bushel, 30 cents.

One particular in which a great advance has been made the past year is in the laying of drain tile, nearly 7,000,000 feet having been laid. The average number of feet laid to the acre of cultivated land is 28.

Education.—The report of the Superintendent of Public Instruction for the period between July 1, 1894, and June 30, 1896, shows a total enrollment in the graded schools of 541,231 pupils for the year of 1895-'96, an increase of 48,153 above the year 1894-'95. The ungraded schools show a total enrollment of 357,388 pupils, a decrease of 5,472 in two years. The total enrollment in graded and ungraded schools in 1896 was 898,619, an increase of 42,681 over 1894. The total number of schools in 1896 was 12,623, and the cost to the people of maintaining them was \$15,906,854.57. In this expenditure are included the support of the Illinois Institution for the Deaf and Dumb, the Illinois Institution for the Blind, the Illinois Asylum for Feeble-Minded Children, and the Soldiers' Orphans' Home. The income derived from the bonds and funds held by the various institutions, together with that from fines and forfeitures, is applied to the general fund, making the grand total of public moneys expended for public schools for 1896 \$18,196,669.11. The average cost of tuition per pupil, calculated on the enrollment, is \$13.29 for graded schools and \$7.73 for ungraded schools. The monthly wages paid to teachers range from \$300 to \$12. The average monthly wages paid to teachers is \$51.45 for males and \$37.65 for females. The number of children in the State between the ages of twelve and twenty-one who are unable to read and write is given as 868, but this number is believed by the board to be too small. There are 947 private schools in the State, with an enrollment of 117,235 pupils and 3,159 teachers.

Charities.—The biennial report of the State Board of Charities for the two years ending July 1, 1896, shows that the total expense of maintaining an average number of 8,129 inmates of the charitable institutions was \$1,262,459.81 for 1894-'95, and \$1,238,149.22 for 1895-'96. The average cost per annum for each inmate was \$155.30 for 1894-'95, and \$148.20 for 1895-'96, making an average for the two years of \$151.75. A report for the last quarter of 1896 gives the average number of inmates as 8,956; average cost *per capita* (gross), \$41.58; net, \$39.12. Present at the beginning of the quarter, 8,692; admitted, new, 832; readmitted, 155; number of inmates returned, 320; discharged or absent, 808; died, 112; present at the end of the quarter, males, 4,216; females, 4,863. The total cost to the State for the quarter of the 13 institutions was \$350,393.19.

Military.—The number of men in the State fit for military duty in 1896 was estimated to be 700,000. Out of this number 5,829 men and 415 officers were actually enrolled in the militia, and 400 men with 49 officers in the naval militia. A gain of 990 members in 1896 is shown. The amount expended by the State for the maintenance of these

troops for the year ending Oct. 1, 1896, was \$213,535, or \$31.06 per man. This disregards the national appropriation of \$20,702.70 per annum for the National Guard and of \$2,700 for the naval militia. No armories are owned by the State; all are rented, at an annual cost exceeding \$50,000. The only active service required of the troops during 1895-'96 was at East St. Louis, where two companies of infantry under Major Bennet were on duty for about ten days after the cyclone, assisting the civil authorities in guarding property and preserving the peace.

Prisons.—An amendment to the Constitution in 1896 made it unlawful to let by contract the labor of any convict confined in any of the penal institutions. The State Auditor's report gives the amount of warrants drawn on the State treasury from Oct. 1, 1894, to Sept. 30, 1896, for maintenance of the penal institutions as follows: The penitentiary at Joliet, \$180,975.28; Southern, \$200,730.81; Pontiac Reformatory, \$381,378.50.

Board of Pardons.—A State Board of Pardons was created by the fortieth General Assembly. Under the act as approved the duty of passing upon the applications of convicts for release under the provisions of the parole law is imposed upon this board, instead of upon the commissioners and wardens of the penitentiaries as heretofore. In addition, the board is required to consider applications for pardon and commutation of sentence. The methods of investigation followed are similar to the regular procedure followed by the courts, and all parties interested are given an opportunity to be heard in opposition to any applications presented. The office of the board is purely advisory.

Board of Arbitration.—The annual report of the State Board of Arbitration, made in March, states that but few strikes were had during the year which called for the attention of the commission. This is accounted for by the presidential campaign, when all such differences were held in abeyance. Thorough organization of workmen and contractors in the building trades also kept down the desire to enter upon strikes.

Decisions.—The State Supreme Court in May sustained the inheritance tax, thereby reversing the decision of the county court at Chicago. In sustaining this measure, the Supreme Court holds that in this State the right to devise and inherit property is derived only from existing statutory enactments. This being a tax upon the right of succession instead of upon the property itself, the court holds that it was competent for the Legislature to create the new classes established by the inheritance-tax law and is not inconsistent with the principles fixed by the State Constitution.

The same court filed two opinions at Ottawa which sustain the constitutionality of the indeterminate-sentence law passed two years ago.

A ruling of the same court decides that a physician must give expert testimony without additional fee.

It was decided that the Governor of Illinois is not required to work on Sunday in the performance of his official duties, and that Sundays shall not be counted in figuring up the time allowed him by the Constitution in which to act upon bills after adjournment of the General Assembly.

Legislative Session.—At the regular session of the fortieth General Assembly, which closed June 6, 1897, the following-named bills were the most important that were passed and were signed by the Governor:

To prohibit fusion. This act amends the election law by providing that the names of candidates shall not be placed upon a ballot more than once for the same office or under more than one party appellation.

Amending the law regulating the administration of trusts by trust companies.

To enable corporations in other States and countries to lend money in Illinois, to enforce their securities, and acquire title to real estate as security the same as provided for corporations organized under the State law.

Providing for the appointment of police matrons in cities of 16,000 inhabitants and over.

Providing that fire escapes shall be placed on all buildings which are four or more stories in height, excepting such as are used for private residences exclusively, but including flats and apartment buildings, and on all buildings more than two stories high used for manufacturing purposes, hotels, dormitories, schools, seminaries, hospitals, or asylums. One fire escape shall be provided for every 50 persons.

Placing fraternal beneficiary societies under the supervision of the insurance department the same as other assessment societies.

Increasing the salaries of the Supreme Court justices to \$7,000 a year.

Creating a State Board of Pardons.

Prohibiting the employment of children under fourteen years of age in factories, workshops, laundries, offices, and stores.

Requiring the effects of alcoholic stimulants upon the human system to be taught in the public schools.

Amending the parole and indeterminate-sentence act and placing the release of prisoners under its provisions in the hands of the new Board of Pardons.

Amending the act against trusts by providing that in the mining, manufacture, or production of articles of merchandise, the cost of which is mainly made up of wages, it shall not be unlawful for persons, firms, or corporations doing business in this State to enter into joint arrangements of any sort, the principal object or effect of which is to maintain or increase wages.

Making it unlawful to manufacture butterine that is colored in imitation of butter.

Repealing the libel act of 1895.

Authorizing city councils to grant franchises for fifty years, instead of twenty, and legalizing the operation of such railways by electricity.

Political.—William E. Mason was elected United States Senator at the joint session of the General Assembly on Jan. 22, 1897, for a term of six years, beginning March 4, 1897. On the final ballot Mason received 125 votes and John P. Altgeld 77.

Local elections for county and municipal offices were held on April 6, April 20, and Nov. 2.

INDIA, an empire in southern Asia, subject to Great Britain and governed under general acts of the British Parliament by a Governor General in consultation with and under instructions from the Secretary of State for India, a member of the British Cabinet. The Governor General is advised by a Council, which frames the laws for the government of the empire. The Secretary of State also has a Council, consisting of retired Indian functionaries, whose duties are to conduct the business transacted in the United Kingdom in relation to the government of India and to examine the expenditures of the Indian administration. The Earl of Elgin succeeded the Marquis of Lansdowne as Governor General in October, 1893. The ordinary members of the Council of the Governor General are Sir James Westland, Sir J. Woodburn, M. D. Chalmers, Major-Gen. Sir E. H. H. Collen, and A. C. Trevor, with Sir W. S. A. Lockhart, the commander in chief of the forces. These members are re-enforced by additional members appointed by the Governor General, part of them on the recom-

mendation of provincial councils, to form the Legislative Council, which frames regulations to be submitted to the Governor General and drafts of laws that he forwards to the Government in London, to be laid before Parliament. The Secretary of State for India in the Cabinet of Lord Salisbury is Lord George Hamilton.

Area and Population.—The Indian Empire, with the protected states, has an aggregate area of 1,987,427 square miles. The area under the direct administration of the Governor General is 965,005 square miles. The area and population of the British provinces, according to the census of 1891, are given in the following table:

BRITISH PROVINCES.	Square miles.	Males.	Females.	Total population.
Bengal	151,543	35,563,299	35,783,688	71,346,987
Northwest Provinces and Oudh	107,503	24,303,601	22,601,484	46,905,085
Punjab	110,667	11,255,586	9,610,861	20,866,847
Assam	49,004	2,819,575	2,657,258	5,476,833
Ajmere and Merwara	2,711	288,325	254,033	542,358
Madras and Lac cadives	141,189	17,619,395	18,011,045	35,630,440
Bombay and Sind	125,064	9,763,067	9,093,977	18,857,044
Aden and Perim.	80	30,914	13,165	44,079
Central Provinces	86,501	5,397,304	5,386,990	10,784,294
Berar	17,718	1,491,826	1,405,665	2,897,491
Coorg	1,583	95,907	77,148	173,055
Lower Burmah..	87,557	2,462,296	2,193,331	4,658,627
Upper Burmah..	83,473	1,414,005	1,532,928	2,946,933
Andaman	12	13,375	2,234	15,609
District of Quettah .....	.....	23,864	3,406	27,270
Total	965,005	112,542,739	108,630,213	221,172,952

The area and population of the tributary and protected states are shown in the following table:

NATIVE STATES.	Square miles.	Males.	Females.	Total population.
Bengal states	35,834	1,673,186	1,623,193	3,296,379
Northwest Provinces	13,232	409,470	383,021	792,491
Punjab states	99,190	2,324,091	1,939,189	4,263,280
Madras states	24,886	1,853,976	1,846,646	3,700,622
Bombay states	178,819	4,120,125	3,939,173	8,059,298
Central Provinces...	76,234	1,089,011	1,071,500	2,160,511
Rajputana states...	337,380	6,330,732	5,641,654	11,972,386
Central India	201,514	5,395,536	4,923,276	10,318,812
Baroda	21,304	1,252,983	1,162,413	2,415,396
Hyderabad	82,698	5,873,129	5,663,911	11,537,040
Mysore	27,936	2,483,451	2,460,153	4,943,604
Cashmere	80,900	1,353,229	1,190,723	2,543,952
Sikkim	3,090	.....	.....	30,485
Manipur	8,300	.....	.....	221,000
Tribes east of Assam	11,235	.....	.....	120,000
Lujai and Kachin...	46,823	.....	.....	300,000
Shan states	77,223	.....	.....	1,700,000
Andaman and Nicobar tribes.	3,180	.....	.....	12,000
Beluchistan	121,627	.....	.....	400,000
British Beluchistan.	13,514	.....	.....	145,417
Afghan border tribes	31,663	.....	.....	500,000
Chitral and Dardistan.	27,100	.....	.....	480,000
Aden dependencies..	83,500	.....	.....	295,800
Arab protectorates..	8,066	.....	.....	130,000
Somali coast	74,100	.....	.....	153,800
Socotra	1,382	.....	.....	12,000
Total	1,022,422	.....	.....	70,208,000

Finances.—The final accounts for the year 1895-'96 make the total receipts Rx 98,370,167, including Rx 393,162 in England, and the total expenditures Rx 96,836,169, including Rx 27,453,388 in England. Of the receipts, the land tax furnished Rx 26,200,955; the opium impost, Rx 7,123,922; the salt monopoly. Rx 8,861,845; stamps, Rx 4,727,055; excise, Rx 5,722,417; provincial rates, Rx 3,707,005; customs, Rx 5,017,278; licenses, Rx 1,835,189; forests, Rx 1,660,504; registration, Rx 424,870; tributes, Rx 792,301; interest, Rx 825,052; posts, telegraphs, and mint, Rx 2,840,358; legisla-

tion and justice, Rx 690,172; police, Rx 417,892; navigation, Rx 169,374; public instruction, Rx 407,084; public works, Rx 24,872,974; military department, Rx 978,011; miscellaneous receipts, Rx 1,095,914.

Of the total expenditures, Rx 4,044,799 were for interest on the debt, Rx 1,854,768 for repayments, Rx 8,496,489 for costs of collection, of which Rx 4,097,117 were in connection with the land tax, Rx 2,068,941 with the opium duty, Rx 521,044 with the salt monopoly, Rx 911,161 with forest administration, and Rx 898,226 with the other revenues, Rx 2,594,880 for the posts, telegraphs, and mint, Rx 2,023,394 for administration, Rx 4,047,569 for legislation and justice, Rx 4,040,817 for police, Rx 743,112 for navigation, Rx 1,062,183 for foreign affairs, Rx 2,032,460 for public instruction, Rx 1,223,325 for ecclesiastical and medical affairs, Rx 5,016,118 for pensions and charity, Rx 917,214 for printing, etc., Rx 586,485 for famine relief, Rx 32,273,941 for public works, Rx 25,499,506 for the army, and Rx 379,109 for provincial deficits. Notwithstanding the extraordinary expenditure of Rx 1,670,000 connected with the Chitral campaign, to which were added a considerable increase in famine insurance, a remission of taxation, and a larger grant toward provincial expenditure, the whole amounting to Rx 1,200,000 more, a surplus was realized amounting to Rx 1,533,998.

The estimates of 1896-'97 were affected by the famine and plague, entailing a loss to the treasury estimated for that and the succeeding year at Rx 12,000,000. The frontier-war expenditure and the losses consequent on the earthquake in Assam and Bengal came later. The revised estimates made the Indian Government budget of revenue Rx 58,034,200 and the expenditure in India of Rx 58,034,200, with a resulting deficit of Rx 1,986,900 instead of an expected surplus of Rx 463,100. There was a decrease of Rx 3,029,500 and an increase of Rx 3,045,600 that were due to the famine, but of this expenditure the provincial treasuries bore Rx 1,051,000, making the net cost to the Indian Government Rx 5,024,000, to which was added a loss of Rx 420,100, while against these losses was offset a benefit of Rx 1,728,000 in exchange, the rate of the rupee having been 1s. 2½d. instead of the budget estimate of 1s. 1¼d., also a reduction of Rx 1,143,500 in the net expenditure and an improvement in the revenue of Rx 1,498,200. When the accounts were closed the actual deficit was found to be Rx 1,593,500.

The budget estimates for 1897-'98 made the Indian Government revenue Rx 59,629,700 and expenditure in India Rx 62,093,700, leaving a deficit of Rx 2,464,000. The land and salt taxes and other sources were expected to yield more revenue, other sources less, the net result being an estimated improvement of Rx 1,595,500 in revenue. The increase in expenditure on account of the famine is Rx 1,653,300, and other charges showed an excess of Rx 477,100. Subsequently the estimates of expenditure were increased by Rx 400,000 more for famine charges, Rx 168,000 for discounts on loans, Rx 330,000 for the Tochi expedition, Rx 400,000 for the Malacand expeditionary force, and other items, making a total increase of Rx 1,460,000. A rise in exchange and more promising harvest prospects indicated better revenue returns to offset a part of the deficiency.

In the quinquennial settlement of the provincial balances that took place in 1897 the provincial governments were allowed for the coming period an expenditure of Rx 14,355,900, instead of Rx 13,066,500 as fixed in 1892. Including Upper Burmah, which shares for the first time in the grant, the total amount is Rx 15,628,900.

The consolidated debt in 1897 amounted to Rx 217,692,660, of which Rx 103,788,928 were payable in India and Rx 113,903,732 in England; the unfunded debt was Rx 14,646,368; making the total debt Rx 232,339,028. To meet extraordinary famine expenditure and to carry out its railroad programme the Indian Government proposed to raise in 1897 a loan of Rx 4,000,000 in India at 3 per cent., and English loans to the amount of £4,500,000. As it was not found possible to raise more than Rx 3,000,000 at 3½ per cent., the English gold loans were increased to make good the difference.

The Army.—The European troops on the Indian establishment in 1897 comprised 17 cavalry and 50 infantry officers on the general list, 37 general officers unemployed, 9 officers and 13 men on the invalid and veteran establishment, 489 officers and 12,817 men of the royal artillery, 261 officers and 5,418 men of the cavalry, 285 officers and 74 men of the royal engineers, and 1,508 officers and 52,238 men of the infantry; total, 3,476 officers and 70,560 men. The native Indian army numbered 33 European and 27 native officers and 4,463 men in the artillery, 362 European and 621 native officers and 22,312 men in the cavalry, 58 European and 63 native and 4,085 men (including 84 European non-commissioned officers) in the sappers and miners, and 1,129 European and 2,752 native officers and 110,371 men in the infantry; total, 1,582 European and 2,752 native officers and 141,231 men. The total strength of the European and native army was 5,058 European officers, 2,752 native officers, and 2,111,791 noncommissioned officers and privates, making 219,601 officers and men. The number of volunteers enrolled was 29,039 in 1895, of whom 25,895 were counted as efficient. The native army reserves numbered 13,862. The imperial service troops maintained by the native princes number 19,266. The armies of the native states numbered 349,000 in 1884, but they are badly equipped and without training or discipline, with the exception of these imperial service troops taught and commanded by British officers.

The British and native troops composing the Indian army are divided into four corps. The Bengal corps in 1897 consisted of 63,628 troops, comprising 4,862 artillery, 8,565 cavalry, 1,629 engineers, 48,206 infantry, and 366 miscellaneous officers; the Punjab corps, of 65,143 troops, comprising 6,051 artillery, 11,893 cavalry, 104 engineers, 46,863 infantry, and 232 miscellaneous officers; the Bombay corps, of 44,047 troops, comprising 3,980 artillery, 5,254 cavalry, 1,055 engineers, 33,599 infantry, and 159 miscellaneous officers; and the Madras corps, of 46,761 troops, comprising 2,936 artillery, 3,262 cavalry, 1,777 engineers, 38,619 infantry, and 167 miscellaneous officers.

In 1895, out of 68,331 men in cantonments, the admissions into hospital for venereal diseases were no less than 36,681, or 53·69 per cent. Among all the troops the rate rose from 25·80 per cent. in the ten years ending in 1885 to 44·30 per cent. in the following decade, and in 1895 to 52·23 per cent. Not only in the frequency, but also in a marked degree in the virulence of syphilis, there has been a rapid increase. In 1894 it was found that 28 per cent. of the British troops in India had been treated for this constitutional disease. The ratio for primary syphilis has increased 187 per cent. since 1887, and secondary disease was four times more prevalent in 1895 than it was in 1873. About 13,000 soldiers return to England every year, and of those who returned in 1894 63 per cent. had suffered from venereal disease. The system of medical examination and isolation that was in existence in 1884 was modified in subsequent years, and in 1888 abolished in obedience to the sentiments of moral-

ists in England, expressed in a resolution of the House of Commons, though against the judgment prevailing among military officers and surgeons. An army sanitary committee having established by statistics a direct connection between the increase of disease and the relaxation and abolition of the restrictive and protective measures, Lord George Hamilton, in a dispatch sent on March 26, 1897, recommended that the cantonment rules applicable to cholera, smallpox, diphtheria, etc., should be applied to all contagious and infectious diseases, including venereal disease, and that, while there should be no registration or licensing of prostitutes nor any periodical and compulsory examination, women who refused to attend hospital should be required to leave the cantonment. The new regulations stop short of compulsory inspection, although this is the remedy most strongly recommended by the medical faculty and official authorities. When the medical officer in charge of a cantonment hospital has reason to believe that any person in the cantonment is suffering from contagious disease he may summon such person to be examined, may detain the case till there is no danger of spreading infection, and may treat refusal to attend on summons as an admission that disease exists. Any person refusing to submit to the summons or ignoring it may be expelled from the cantonment and not permitted to return without the medical officer's leave. The Secretary of State for India approved, further, a medical inspection of soldiers who have been in hospital for these diseases, and punishment of such men as conceal the fact of their contagion. A bill giving effect to the new policy of the Government in the matter of contagious diseases affecting the British garrison was passed on July 22 by the Legislative Council.

Commerce and Production.—The total imports in 1896 amounted to Rx 86,304,739, including Rx 69,316,395 of merchandise, Rx 3,620,358 of Government stores, and Rx 13,367,986 of precious metals. The total exports were Rx 118,594,549, comprising Rx 109,545,161 of domestic merchandise, Rx 71,598 of Government merchandise, Rx 4,717,979 of foreign merchandise, and Rx 4,259,811 of precious metals. Of the merchandise imports Rx 47,161,484 came from Great Britain, Rx 6,441,988 from British possessions, and Rx 15,712,923 from foreign countries. Of the domestic exports Rx 35,000,899 went to Great Britain, Rx 21,182,258 to British possessions, and Rx 53,362,004 to foreign countries. The values of the principal imports for domestic consumption were: Cotton cloth, Rx 22,785,000; machinery and railroad material, Rx 4,816,000; iron and steel goods, Rx 4,780,000; sugar, Rx 3,106,000; cotton yarns, Rx 2,971,000; petroleum, Rx 2,967,000; copper goods, Rx 1,809,000; silk fabrics, Rx 1,704,000; clothing, etc., Rx 1,456,000; woolen cloth, Rx 1,446,000; coal, Rx 1,403,000; hosiery, etc., Rx 1,364,000; raw silk, Rx 1,233,000; liquors, Rx 1,695,828; drugs, Rx 846,210; dyeing and tanning substances, Rx 858,893; glass, Rx 741,078; salt, Rx 653,226; spices, Rx 659,329; paper, Rx 409,983; umbrellas, Rx 344,218; grain and pulse, Rx 114,011.

The largest exports and their values were as follows: Raw cotton, Rx 14,090,192; rice, Rx 13,537,289; raw jute, Rx 9,717,432; opium, Rx 8,459,336; cotton manufactures, Rx 8,344,587; tea, Rx 7,664,889; seeds, Rx 9,717,432; hides and skins, Rx 7,639,478; indigo, Rx 5,354,511; jute manufactures, Rx 4,747,443; wheat, Rx 3,913,896; coffee, Rx 2,198,192; lac, Rx 1,833,601; dyes and tans, Rx 872,683; wool, Rx 1,355,108; provisions, Rx 894,794; wood, Rx 801,897; oils, Rx 738,707; saltpeter, Rx 535,945; raw silk and cocoons, Rx 642,169; sugar, Rx 574,745; spices, Rx 489,509; silk manu-

factures, Rx 183,399; woolen manufactures, Rx 182,885.

The trade of 1896-'97 was injuriously affected in the latter part of the year by famine and plague. The imports for the year were Rx 2,990,000 more than in the previous year; the exports, Rx 9,670,000 less. The total quantity of wheat exported was 96,000 tons, against 500,000 tons in the preceding year. The exports of tea, cotton, yarn, and jute were larger. In spite of the famine and the pestilence, India absorbed Rx 2,990,000 of gold and Rx 5,850,000 of silver in 1896-'97. The total value of the imports was Rx 84,990,050, and the exports amounted to Rx 108,840,188.

Out of 539,848,840 acres in British India which is dealt with in Government reports, 151,033,160 are waste lands not available for cultivation, 99,326,526 are culturable waste, 62,065,046 are forest, 30,336,208 are fallow, and 196,600,688 were under cultivation in 1895. There were 69,280,303 acres under rice, 22,761,308 under wheat, 89,534,098 under other food grains, 5,567,007 under other food crops, 2,764,656 under sugar cane, 13,929,969 under tea, 9,717,415 under cotton, 2,275,340 under jute, 1,705,977 under indigo, 1,174,581 under tobacco, and 414,398 under oil seeds. The area cropped more than once during the year was 27,160,672 acres. There were nearly 74,300 square miles of forest demarcated and reserved by the Government.

The average annual cotton crop was 2,070,000 bales, of 400 pounds, from 1863 to 1883; in the last four years it has been 2,987,000 bales, and in 1897 it was about 3,000,000 bales. The quantity shipped to Europe was 898,500 bales, of which 820,000 were sent to the Continent. While the Chinese demand dwindled for many years and has practically ceased, Japan took 373,000 bales in 1897, and 1,255,000 bales were used in the Indian spinning mills, besides which 413,000 bales were taken for local consumption. The plague enabled Japan to sell yarns in the Chinese markets formerly supplied by the Bombay mills. Notwithstanding a decrease of 8 per cent. in the production of cotton yarn in 1897 in Bombay, where 71 per cent. of the Indian yarns were produced, the total production of India was 417,398,935 pounds, against 435,116,545 pounds in 1896.

The area irrigated in 1895 was 8,473,205 acres, yielding a revenue of Rx 3,216,591. Major works irrigated 6,259,870, and minor works 2,213,335 acres.

There were 1,204 joint-stock companies in 1895 engaged in banking, insurance, manufacturing, trading, planting, mining, brewing, etc., with a paid-up capital of Rx 27,668,773. Over Rx 12,500,000 were invested in 144 cotton mills, with 34,161 looms and 3,711,669 spindles, employing 139,578 persons; 28 jute mills and 1 hemp mill, with 10,048 looms and 201,217 spindles, employed 75,157 persons; and there were 6 woolen mills, with 531 looms and 17,244 spindles. The coal raised in 233 mines was 4,371,734 tons, valued at Rx 1,452,084.

Navigation.—The number of vessels entered at Indian ports during 1896 was 5,226, of 4,128,039 tons, of which 2,115, of 3,314,415 tons, were British; 868, of 131,049 tons, British Indian; 693, of 601,607 tons, foreign; and 1,550, of 80,968 tons, native. The number cleared was 5,071, of 4,098,561 tons, of which 2,128, of 3,323,827 tons, were British; 884, of 130,804 tons, British Indian; 605, of 568,093 tons, foreign; and 1,454, of 75,837 tons, native.

Railroads.—The railroads in operation on March 31, 1896, had a total length of 19,678 miles, of which 8,979 miles were state lines worked by companies, 5,742 miles state lines worked by the state, 2,587 miles lines of guaranteed companies, 408 miles lines of assisted companies, 146 miles lines of native

states worked by the Indian Government, 859 miles lines owned by native states and worked by companies, 898 miles lines owned and worked by native states, and 59 miles foreign lines. On March 31, 1897, the total mileage was 20,390. The total cost of all the railroads up to the end of 1895 was Rx 262,344,287, of which Rx 159,477,488 represent the Indian state railroads, Rx 32,450,332 the state railroads leased to companies, Rx 50,022,200 the guaranteed railroads, Rx 6,878,026 lines of assisted companies, Rx 11,001,194 those of the native states, Rx 1,690,527 foreign lines, Rx 514,897 new surveys, and Rx 309,623 coal mines. The gross receipts of all the railroads in 1895 were Rx 26,236,906, of which Rx 9,139,494 came from passenger and Rx 16,369,360 from freight traffic. The number of passengers carried was 153,081,477; tons of freight, 33,628,030. The working expenses amounted to Rx 12,119,886, being 46.19 per cent. of the gross receipts. The net earnings were Rx 14,117,020, giving an average return of 5.78 per cent. on the capital invested. The state and guaranteed lines during the ten years ending with 1897 have been worked at an average profit of $5\frac{1}{4}$ per cent.; but, owing to the fall in exchange, a total net loss of Rx 7,731,914 on the state and Rx 8,679,557 on the guaranteed lines has accrued during that period. The net loss for 1897 was estimated at Rx 2,665,800. In 1896 the Government decided to construct in the next three years 5,000 miles of state railroads, costing Rx 29,665,000, and to sanction the construction of 2,626 miles by private companies at a cost of Rx 16,189,000. It was subsequently decided to postpone this programme of construction so as to reduce the outlay for 1897-'98 by Rx 10,000,000.

Posts and Telegraphs.—The post office in 1896 forwarded 374,223,042 letters and postal cards and 28,928,622 newspapers. The receipts were Rx 1,712,962 and expenses Rx 1,643,317.

The telegraphs in 1896 had a length of 46,374 miles, with 142,925 miles of wires. The number of dispatches was 4,766,399. The receipts were Rx 1,085,940, and expenses Rx 897,853.

The Famine.—The famine of 1897 was more extensive than that of twenty years ago, affecting an area of 322,000 square miles, inhabited by 68,000,000 persons, compared with 257,000 square miles and 58,000,000 people in 1877. The highest number receiving relief in 1877 was 3,178,000; in 1897, 4,224,000. Including the native states, more than 4,500,000 persons were receiving relief during the month of June. The peculiarity of the famine of 1897 was an almost universal shortness of rain. There was a complete failure of crops in only a few districts, in Bundelcund and in the Central Provinces; but almost everywhere there was a partial failure. Out of the 250 administrative districts into which India is divided, no fewer than 115 were classified as famine districts, although none is so classified unless 10,000 persons at least are employed on relief works. Of the districts outside few, except those in Burmah, had any surplus of food to spare. Yet no large imports of food came from abroad, nor were the shipments of supplies into the famine districts such as the experience of previous famines would lead one to expect. On the contrary, there was a falling off in railroad receipts. At the beginning of the scarcity a large shipment of wheat arrived from America at Calcutta and Bombay, but ultimately a large part of it was re-shipped to England, where better prices and a better market were found. High prices according to the Indian standard prevailed over an enormous area, but they were not relatively high when compared with the prices in other countries, and even at the worst period of the famine they were too low to encourage imports of food except at very low

prices. The area of total failure was much smaller than in 1877, when the death rate was terribly high. In 1897 a high death rate prevailed in the Northwest Provinces and in the Central Provinces, while in the famine districts of Bengal, Madras, and the Punjab the rate was generally not above the normal, and in those districts where it was exceptionally high this was almost entirely due to the reluctance of the people to come into the relief works until it was too late, or to constant and severe outbreaks of cholera. Great distress and suffering, however, prevailed over an enormous area. There was an immense improvement in the working of the system of famine relief. A subsistence allowance was given to every man and to every member of his family who applied for relief, and this allowance in the aggregate not infrequently exceeded the wages that the man alone could obtain for his labor in ordinary employment. Hence it was that there was great difficulty in obtaining the requisite amount of labor for carrying on the work of construction in the greatly enlarged Government railroad programme.

The appeal made at the beginning of the year for subscriptions in Great Britain and the rest of the British Empire met with a generous response and resulted in the collection in England, India, and elsewhere of the largest sum ever raised for any Indian object. A fund of £550,000 was collected in Great Britain by the Mansion House Committee, besides which Lancashire contributed £158,000. Other sums were raised in the British colonies, the United States, France, and Germany, and India also contributed a large sum, so that the total amount placed to the credit of the relief committee in India was Rx 1,650,000. Grain and clothing were sent from the United States, and money was collected to be disbursed by various benevolent agencies in India, bringing the total contributions up to Rx 2,000,000. The cost of the direct relief was estimated at Rx 6,000,000, the remissions of taxation and of revenue to an equal sum, and advances to the landowning classes to Rx 2,000,000, making Rx 14,000,000 given by the Government, or Rx 16,000,000 altogether, including the private contributions. Of these contributions about half went toward supplying cattle, seed, and implements to enable the cultivators to resuscitate themselves after the famine.

The Indian Government declined to accept any interference or co-operation from charitable organizations in the direct relief of the famine-stricken population or to have anything to do with an appeal for private subscriptions, declaring that its own means were ample.

The inability of the Indian people to tide over a single failure of crops was attributed by many to their impoverishment and debt. In one or two of the native states agricultural banks founded by the Government had lifted the people out of this helpless condition. In the British provinces nine tenths of the ryots were in the hands of the village usurers, who often charged 6 per cent. a month and were clothed with powers of oppression under the English laws that they did not formerly possess under the ancient Indian system, when payment was made by a share of the crops and their claims were subject to review before the village *punchayet*, or court of arbitration. The great native capitalists who discount bills of exchange average 4 per cent. a month. Excessive taxation is believed by native Indians to be the chief cause of the poverty of the Indian cultivator, who is on the verge of starvation even in ordinary times. The tax on salt is twenty times its cost. They regard the expenditure on railroads as beyond the resources of the people, and that on the Afghan and Burmese wars and the

many little wars for extending the northern and northwestern frontiers, as well as the utilization of Indian troops for imperial purposes, as a use of money that ought to go for education and domestic improvement of the people. The parliamentary committee that inquired into the causes of famine in 1878 found that agriculture in many parts of India must depend on irrigation. Yet the irrigation system then begun has never been completed. Under pressure of English interests the famine fund was diverted to the construction of railroads, which give entrance to foreign manufactured goods, thus displacing native industries. The annual grant for irrigation has been increased to Rx 750,000, but Rx 10,000,000 are annually allotted to railroads. The famine insurance fund of Rx 1,500,000 a year was raised by taxes specially imposed for the purpose of protection against and relief from famine. Owing to the Russian scare and border wars it was practically suspended after a few years. The Government advanced the specious theory that the payment of debt out of this fund or the avoidance of the creation of new debt was the most effective protection against famine. Meanwhile the cost of the Egyptian expedition of 1882 and of the Suakin expedition of 1885, the cost of entertaining the Shah of Persia in England, etc., were charged upon the Indian taxpayers. Although the famine insurance fund was suspended on account of the financial difficulties of the Government the burden of English rule was vastly increased by giving compensation allowances to the great body of civil and military officials in India whose fixed salaries have suffered by the depreciation of the rupee. The higher classes of civilians and the military officers have had their salaries doubled, while in the lower ranks of the civil service half the salaries are paid at the old rate of 10 rupees to the pound. During the past eighteen years Rx 71,400,000 rupees have been expended on frontier expeditions, while the home charges, pensions, and interest, which have risen in inverse proportion to the fall of silver, require a yearly drain of Indian produce to Europe of a value of £20,000,000 in gold without any commercial return whatever. The Indian National Congress, which met on Dec. 28, 1896, in addition to the usual resolutions relating to the injustice of the system of taxation and the way in which the revenues are spent, the inequality of the treatment of natives and Englishmen in the matter of civil-service examinations and the scheme of education for the civil service by which Indians are excluded from the higher posts in direct violation of the Empress's proclamations, the necessity for the separation of the judicial from the executive, and the iniquitous salt tax, passed one declaring that the famine was due to impoverishment of the people resulting from the drain of wealth to England and the excessive taxation and overassessment followed by the Government both in the civil and the military departments, which has so far impoverished the people that at the first touch of scarcity they are rendered helpless and must perish unless fed by the state or helped by private charity. In the opinion of the Congress the true remedy against the recurrence of famine lies in the adoption of a policy that would enforce economy, husband the resources of the state, and foster the development of indigenous and local arts and industries, which have practically been extinguished, and help the introduction of modern arts and industries. The provisions of the existing famine code were pronounced inadequate as regards wages, rations, and oppressive task work. Reminding the Government of the duty, to which it was pledged by the words of successive viceroys, of saving human life and mitigating suffering, the Congress made an appeal

for the restoration of the famine insurance fund to its original footing, asking that a separate account be kept of it and that it should be applied more largely to its original purpose—namely, the immediate relief of famine-stricken people. The attention of the Government was called to the deplorable condition of the poorer classes in India, full 40,000,000 of whom, according to high official authority, drag out a miserable existence on the verge of starvation even in normal years, and the suggestion was made that they should be exempted from the payment of the taxes that specially oppress them. The main safeguard against famine is the movement of the people from the congested centers and the sterile tracts to the large unoccupied tracts within the Indian Empire, of which 100,000,000 acres are found available for cultivation in the British provinces alone, according to official reports, exclusive of the vast districts of lower Bengal. Less than half of the soil of British India is under cultivation, while within a few hundred miles tens of millions of peasants are crowded together at the rate of over 700 to the square mile. In Behar 40 per cent. of the population of 15,300,000 are reported to be in a state of agricultural degradation. There are 50,000,000 cultivators suffering from want of land in Bengal, Behar, Orissa, and the Northwest Provinces and Oudh. In former ages the Indian population could expand over the jungle tracts without restraint, and none suffered from lack of land, as they now do under the land laws of the Anglo-Indian Government.

Rains in November and December, 1896, wrought an improvement in certain districts where the *rabi*, or spring harvest, had been despaired of. Prices of food fell in consequence, but only temporarily. There were food stocks in districts where the dearth was extreme, but they were in the hands of the grain merchants and usurers. The Government, however, refused to interfere with the course of trade by importing food to sell in competition with them, although some private benevolent organizations of native merchants did so. According to official reports in January, the stock of food was adequate in Madras, ample in Burmah, sufficient for a year in Bombay, and sufficient for immediate needs in the Punjab, the Northwest and Central Provinces, and Bengal. The railroad rates for the conveyance of grain were reduced, and arrangements were then complete for supplying the relief camps. The work of relief was conducted on the well-defined system of the Indian famine codes. Every district is divided into circles, in each one of which the machinery of relief is kept in a constant state of readiness in years of plenty as well as in years of scarcity, and its efficiency is reported on by inspectors every year. The head of the district, who is held responsible for the working of the system, is enabled to gauge the approach of scarcity by test relief works, and when the scarcity deepens into famine he provides food for the able-bodied in return for local labor, and supplies those who are unable to work with doles of grain. As the need becomes more intense and widespread the system of relief expands, until it reaches the full development of local relief works, central famine camps, and state kitchens and famine hospitals. This system of local relief counteracts the tendency of the Indian people to wander in time of famine from their own districts in the vain hope of finding employment and food elsewhere. The failure of the rainfall in the autumn of 1896 came after three short crops in the Northwest and Central Provinces. Already in October food was dearer than ever was known before over an area embracing a great part of India. The natives have a belief, founded on ages of experience, that wherever the monsoon fails twice the people perish. The situa-

tion was much relieved by the showers that fell in Madras and Mysore, and later in central and northern India, securing the spring harvest in many sections and fodder enough to save the cattle in others. Still there was a great extent of territory where everything was sere and parched. The number of persons receiving relief increased from 1,200,000 in January, when the system was first put into full operation, to 2,750,000 in the following month, and reached the maximum in May and June. No system of public charity has ever existed in India, and hence, although the public funds drawn from taxation were applied to the purpose, only the low castes, the coolies, and landless laborers were willing to accept relief. The respectable families of the Hindu villages slowly starved to death, though relief was at hand. Great nobles remitted rents and spent millions on relief works. Native asylums in which distinctions of caste were respected fed the people sufficiently at a monthly cost of a rupee a head, a quarter of the dole paid in money at the Government relief works, but of this latter half was often kept back by the dishonest native officials who paid out the wages and sold the grain.

In September abundant rains began to fall over a wide area in India, securing in the famine-stricken regions, particularly in the northwest, a bounteous *kharif* or autumn harvest, and making the prospect of the *rabi* assured. The final reports showed that the cost of the famine to the Government was Rx 8,000,000, while loans and suspensions of revenue amounted to Rx 4,000,000. The charitable contributions from all sources were nearly £1,750,000 sterling.

Earthquakes.—On June 12 the province of Assam and the whole of northeastern Bengal felt severe earthquake shocks. In Assam every European residence was leveled to the ground, and every public building, bridge, and work of masonry was destroyed. The roads and railroads were badly damaged. The loss fell mostly on planters and manufacturers. Tea cultivation in India and Ceylon is a commercial enterprise in which £35,000,000 of English capital is invested. Large factories in Assam and northeastern Bengal were totally destroyed with their machinery, and the villages erected by the tea companies laid in ruins. The costly Assam railroad, which the Indian Government guaranteed for the development of this industry against the protests of the friends and representatives of the native Indians, was seriously damaged. The tea companies have earned an average net profit of 7½ per cent. per annum. The catastrophe left many of the highly cultivated plantations with their matured crop entirely isolated from the outside world.

The Plague.—The bubonic plague, which raged in Canton and swept away the population of whole quarters in Hong-Kong in 1894, appeared in Bombay, and was officially recognized in September, 1896. On Oct. 2 wide powers for dealing with it were conferred upon the chief executive officer of the city. A large sum was voted by the corporation, and a staff of workers was engaged to care for the sick. In December it appeared in Karachi, the other chief port on the west coast. Fugitives carried the infection to Poona, where it broke out later, and, owing to the neglected sanitation of the town, was exceedingly hard to extirpate. The vehicle by which the germs were brought into Bombay is not known. It was first attributed to dates from Syria, then to corn from the interior, and both were destroyed. Before it spread among the people great numbers of rats died, and afterward it attacked pigeons and poultry. The bubonic plague is identical with the epidemic that ravaged London in

1665, and probably with the black death that carried off a large proportion of the population of Europe in the fourteenth century. From one of its homes in China, the highlands of Yunnan, it extended in 1894 to Canton, where it produced appalling mortality; about 50,000 are believed to have died there, and 10,000 later in Hong-Kong. A high fever, accompanied by a swelling of the glands in the groin or under the arms, characterizes the disease, which runs its course in forty-eight hours from the appearance of the symptoms. The period of incubation is five days. When the system is predisposed the infection easily finds lodgment through the skin, or the respiratory organs, especially when they are affected by a cold, or the tonsils. The microbe recognized by bacteriologists as the cause of the plague dies at a temperature of 140° C., and is quickly destroyed by all the antiseptics.

Dr. Yersin, of the Pasteur Institute of Paris, discovered a preventive serum, which inoculates the subject with a mild form of the plague. Dr. Haffkin introduced a curative serum to be used on patients in the early stages. Both methods were tried with apparent success in some cases, though neither furnishes complete immunity. The sanitary authorities in Bombay labored under the greatest difficulties in their efforts to segregate and to treat cases of plague. All Hindus had a horror of hospitals, and none of any pretensions to caste would allow any one connected with him to go into one if by any deceit or concealment it could be avoided. The Mohammedans were not much more tractable, for they had no faith in European medicine, but believed the plague to be a visitation of Providence invited by the sins of Bombay; hence they gathered in monster prayer meetings to supplicate the Deity to lift the scourge from their city. The Parsees, too, were reluctant to enter the hospitals, where their family deathbed and funeral ceremonies would not be permitted.

The commerce of Bombay was completely stopped. The cotton mills were closed, and business men left the city. In January, although only 325,000 people remained in the city, the weekly mortality was 1,750. In the summer, when the plague had been brought under control by the burning of the worst houses and all contaminated household articles, the thorough disinfection and fumigation of all buildings that could be freed from germs in this way, and a complete sanitary cleansing of the city, cholera was added to the plague, and the deaths still numbered 1,000 a week. In September it spread among many towns and hamlets of the Bombay presidency where it had not yet appeared. Outbreaks occurred in the Punjab. The troops began to be affected. It reappeared also at Karachi, and at Poona took on a more virulent form and attacked European officials.

Poona is the focus of Hindu disaffection against British rule. In that city, where are many of the descendants of the Mahratta warrior caste that in the beginning of the century held a great part of India in subjection, the authorities had great difficulty in combating the plague. In this ancient center of Brahman culture and caste traditions to have search parties of British soldiers, even though they were accompanied by Indian gentlemen and English ladies, invade their houses, intrude on the privacy of women and the sanctity of domestic shrines, and forcibly carry off their wives and daughters to a public hospital, seemed worse than death to the orthodox Hindus. Nevertheless a system of house-to-house visitation was organized, and the sick were forcibly removed to hospitals, and the probably infected to segregation camps, from the time that the plague first broke out. Sol-

diers were employed because there was no other European agency obtainable on a large scale. False tales and exaggerations found full credence among the Hindus of the Deccan, and the result was that Mr. Rand, the chief officer in charge of the plague operations, and Lieut. Ayerst were murdered on June 22.

The plague became worse again as cold weather approached, and in Poona and Surat continued with unabated malignity. It broke out in November at Belgaum and at Ahmadnagar, two thirds of whose inhabitants fled. During the autumn it spread to many minor places in Bombay and the native states, and to some of the towns of the Punjab. In the city of Bombay the mortality rose in the winter almost to the figures of the preceding year.

Sedition Trials.—The agitations of the Congress party, complaining of misgovernment and demanding representative institutions, the excitement caused among Hindus by the violations of caste rules in the plague operations, the general dissatisfaction with a Government that had promised to avert famine and had not prevented the most extensive famine ever known, the elation of the Mohammedans over the victories of the Sultan, coupled with their indignation over the attitude of the English Government and the feeling of the English people in regard to the Armenian revolutionary movement and the Greco-Turkish War, and the disturbed condition of the Afghan border furnished a multiplicity of causes for political unrest and disaffection in all parts of the Indian Empire. The Central Government determined to strike terror into the disaffected and crush out the spirit of political criticism and native patriotism that had been countenanced by Lord Ripon and only partially held in check by his successors, though with increasing severity of late years. The law regarding disaffection in India had been considered a dead letter, and no convictions had been obtained under it. It is stringent enough in its terms, declaring that whoever by words, either spoken or intended to be read, or by signs, or by visible representation or otherwise, excites or attempts to excite feelings of disaffection to the Government established by law in British India shall be punished with transportation for life or for any term of imprisonment up to three years or with a fine alone or in addition to imprisonment or transportation. The force is taken out of this section of the penal code by the appended explanation that such disapprobation of the measures of the Government as is compatible with a disposition to render obedience to the lawful authority of the Government against unlawful attempts to subvert or resist that authority is not disaffection; therefore the making of comments on the measures of the Government with the intention of exciting only this species of disapprobation is not disaffection. Under this law political writers and orators have been accustomed to censure the Government and its measures very freely, interspersing or adding some formal expressions of devotion to the Queen-Empress or loyalty to the Government. The Indian Government under the present *régime* is not bound by codes of law if it chooses to act despotically, even if it has to go to the musty annals of the East India Company for precedents. When Dhuleep Singh was returning to the Punjab he was arrested at Aden under a law that gave the executive power in the last century to send back home English adventurers who were caught intriguing with the native princes. Among the leaders of the Mahratta Brahmans were the brothers Natu. The elder brother, Balwantrao Natu, who is a wealthy sirdar of the Deccan, had been summarily carried off to the hospital after he had deceived the authorities when his child died by say-

ing that it was the child of a servant. As they were in consequence of this regarded as martyrs and the disaffection at Poona centered about them, the Governor General issued under this antiquated law a *lettre de cachet* and had both brothers deported and incarcerated at Ahmedabad and Thana without trial. The intellectual chief of the Brahmanical discontent in the Deccan was the editor Gangadhar Tilak, a member of the Bombay Legislative Council, who published a eulogium of Shivaji, the liberator of the Mahrattas from a foreign yoke, and a rhapsodical poem in which that national hero was adjured to awake and witness various vaguely indicated oppressions and indignities that an alien rule now imposed on Hindustan. The poem was symbolical and figurative in the extreme, and yet from that and the patriotic editorial a case was made under the press law mentioned above against Tilak, and under the instructions of a judge who charged that want of affection for the Government was disaffection he was found guilty and sentenced to serve eighteen months in prison. With this precedent there was no further difficulty in obtaining convictions under the law of disaffection. In Lucknow and other Mohammedan centers of northern India the people were holding meetings to congratulate the Ottoman Sultan on his victories. The Deputy Commissioner of Oudh warned the leaders of the community against expressing disloyal sentiments, and when, nevertheless, a Maulvi of Lucknow, Hidayat Rasul, made a speech belittling the power of Great Britain and arraigning the Government of India he was promptly arrested, tried, and sentenced to a year's imprisonment. Tilak had great difficulty in obtaining counsel, and those who were afterward arrested could get no reputable barristers, either European or native, to defend them. Shunker Viswanath Kelkar, another Poona editor, was tried for writing articles in which he described the reign of terror established by the Government; Editor Lele, who published a native journal at Wai, for articles criticising the plague measures. The editor of the "Moslem Deccan," published at Bombay, was banished from the country by executive decree. The arrest of Tilak and the brothers Natu and the threat of a new press act wrought a great change in the native press of Bengal as well as Bombay. Political editorials and cartoons almost ceased to appear. Still arrests continued to be made on account of what had already appeared, for the Anglo-Indian official world has been clamoring for years to have liberty of the press suppressed in India. The editor Keshalkar of the "Protad," published at Islampur, was sentenced to transportation for life for an article in which he urged Indians to follow the footsteps of the Canadians in their efforts to obtain autonomy.

The Legislative Council, rejecting a proposal to re-enact the vernacular press act of 1878, amended the general law relating to sedition and cognate offenses so as to make it more efficient for the purpose. To the section relating to disaffection the following explanation was added: "Comments on measures of government with a view to obtain their alteration by lawful means without exciting or attempting to excite hatred, contempt, or disaffection do not constitute an offense. It was declared to be an offense amounting to sedition to promote or attempt to promote enmity or ill-will between different classes of British subjects. The section of the penal code dealing with the dissemination of false statements, which in its previously existing form required the prosecution to show that the accused person knew the statements to be false, was re-enacted in terms making obnoxious statements punishable, but allowing the accused to show that the mischievous statement or rumor to which he

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had given circulation was true in fact and was not published or circulated with criminal intent. Another section provides that persons who either orally or in writing disseminate or attempt to disseminate obscene, seditious, or defamatory matter may be bound over and required to find sureties to be of good behavior for twelve months. The law was further amended so as to make cases of sedition and cognate offenses triable, not only in a court of sessions before a jury, as before, but also by magistrates with summary jurisdiction. Native members of the Legislative Council vigorously objected to the enactment of these new laws without a full discussion. The separation of judicial and executive functions was again asserted to be the only means of securing the efficient administration of justice in criminal cases.

Mohammedan Disturbances.—The unusual excitement in the world of Islam led to fresh outbreaks of the smoldering religious animosity always existing between the Mohammedan and Hindu communities. The Hindu Pandit Lekhi Ram, who had written a pamphlet violently attacking the Mohammedan religion and also Christianity, was murdered early in March at Lahore by a pretended convert from Mohammedanism. Some Hindus were assaulted at Peshawar, and notices were posted in different towns threatening the lives of Hindu and Sikh leaders. Mohammedan anger had been wrought up by English denunciations of the Sultan as an assassin, and when the commander of the faithful, whom the English people seemed bent on destroying because he represented the might of Islam, achieved a victory over Christian arms the spirit of unrest and disorder spread among the Mohammedans, from the usually loyal, but now sullenly resentful communities in Bombay and Calcutta to the untamed Pathan tribes on the Afghan border. On July 1 and 2 one third of the city of Calcutta was in possession of 5,000 determined anti-European Mohammedan rioters who had the passive sympathy of their Hindu fellow-citizens. The rioting arose in the suburb of Chitpur out of the demolition by the authorities of a building that the Mohammedans claimed was a mosque. In the night 150 workmen rebuilt the edifice, protected by 2,000 Mohammedans, who fought off the police. The troops were called out to disperse the mob, which quickly reassembled and was re-enforced from all quarters of Calcutta. The rioters, exasperated by being fired upon by the police patrols, who killed 11 and wounded a great many, attacked Europeans wherever they were found in the streets, stoning their carriages and dragging them from their horses. After the military had once cleared the streets the rioting broke out afresh, and when it was finally put down it was necessary to patrol the city constantly with cavalry until the original dispute was settled.

Frontier Wars.—The rising passions of the Indian Mussulmans and the triumphs of Mussulman arms in the West communicated a warlike spirit to the mountain tribes on the northwestern border, over whom the British have attempted gradually to extend a military control, partly with the object of absorbing as much as possible of Afghanistan and occupying the country in the northeast up to the very limit of the British sphere acknowledged in the Anglo-Russian agreement, partly in the hope of eventually converting these fierce and intrepid Pathans into material for the Indian army. After the last Afghan war the British retired from the frontier chosen by Lord Lytton's government, involving the retention of Kandahar and Jelalabad in Afghanistan, to the scientific frontier marked by the Khaibar and Kuram passes of the Hindu-Kush and the advanced fortified post of Quetta in

Beluchistan, covering the railroad that preserved the strategic command of Kandahar and Kabul, and, before the last Russian advance, of Herat. The new forward policy was begun by the operations of Sir Robert Sandeman in 1886 and 1887 among the Beluchis. On the whole, it seemed to be more profitable in this quarter to reduce the tribes to military control and civilizing forces than to conduct periodical punitive expeditions against them when they tore up the railroad or attacked outposts. The Kuram pass was left in charge of the tribes of that region, who, being Sunnite Mohammedans, begged for British protection against the Shi'ite Afghans. By subsidizing one of the Mohmand chiefs and paying liberal allowances to the Afridis the British secured an agreement by which those tribes undertook to protect and keep open the two outlets of the Khaibar pass, while the Orakzais, dwelling south of the pass, were paid heavily to abstain from raids and outrages. The agreements made with these tribes acknowledged their full sovereignty over their country and the passes of the mountains. The Durand agreement of 1893 with the Ameer of Afghanistan drew a line through the country west of the Khaibar, placing a part of the Mohmand tribes in the British sphere, and even dividing individual clans in such a way that chiefs whose seats were in Afghanistan ruled over tribes whose country lay mostly within the new Indian frontier. Little has yet been done to give effect to this arrangement, but the rapid encroachments on Afghanistan left no doubt in the minds of these people of what their fate would be. The Indian Government has contemplated demarcating the new frontier, and has only been deterred by the hostile attitude of the Mohmands. The Pamir scare led to political activity of the British in Chitral, in the extreme northeast, beyond the independent states of Swat, Dir, and Bajaur.

When the Government decided on the Chitral expedition in 1895 it issued a proclamation giving notice to the usurping chief to withdraw from Chitral, and stating that its sole object was to put an end to the present, and to prevent any future unlawful aggression on Chitral territory; that as soon as that object had been attained the force would be withdrawn; that the Government had no intention of permanently occupying any territory through which the troops passed or of interfering with the independence of the tribes; and that it would scrupulously avoid any acts of hostility toward the tribesmen so long as they on their part refrained from attacking or impeding in any way the march of the troops. On the strength of this pledge the Government obtained the permission and aid of the tribes of the Swat valley and other intervening tribes to open the road from Peshawar to Chitral, and was thus enabled to rescue the beleaguered English garrison and drive out the invaders. The Conservative Government that succeeded in England decided to perpetuate the occupation of Chitral, and consequently to establish a control over the intervening tribes whose independence their predecessors had promised to respect in order to keep open and maintain the road. The Liberal Government had been partly influenced in their intention of evacuating Chitral by a desire not to break faith with the people among whom the campaign had taken place. The Conservative Government eventually made agreements with the Sultan Khel and Paimda Khel, two of the five tribes of Dir, for the construction of a permanent road over the Malakand pass and its defense by their levies, subsidizing the chief of these tribes, the Khan of Dir, who in addition to liberal money payments thus secured protection against a more powerful claimant for the throne,

Umra Khan, of Jandaul, who had dispossessed him, so that he only recovered his country in 1895, when the British drove Umra Khan out of Bajaur. No definite arrangement was made with the other clans of the Panjkora and Swat valleys, but large subsidies were paid to some of their chiefs to secure their quiescence. In May, 1897, the Ameer of Afghanistan, in ostensible loyalty to his treaty engagements, withdrew the officials and irregular troops that had been in occupation of the Mittai valley in Bajaur for more than a year in contravention of the Durand agreement, but the departure of the Afghans seemed to inflame the Mohmands, who feared that it would be followed by the occupation of their country by the British, to whom the Ameer had abandoned them.

The existing political conditions in India, the revival of the militant spirit of Islam everywhere, and not least in Afghanistan, whose ruler aspired to succeed the ruler of Bokhara as the political head of the Sunnite Mohammedans of Central Asia, and the timorous and vacillating policy of Great Britain toward Turkey indicating in the mind of the Asiatics inability to cope with the military power of the Ottoman Empire, the secret influences also emanating from Kabul, all tended to kindle the fires of fanatic Ghaziism and political patriotism among the warlike tribesmen of the border, who were incapable of any organized common political or military action, but who along the whole Afghan frontier felt the same impulse to put it to the test, at this favorable juncture, whether they could preserve their free and democratic institutions or were to pass under the yoke of the despotic Indian Government.

These tribes on the northwest were bound together by a sort of sympathetic freemasonry, so that those who were too remote from the scene of the British expedition to join in opposing them, nevertheless felt a jealous interest when they heard that the troops had permanently occupied any new tract. They had seen Hunza, Nagar, and Chitral one after another pass into the hands of the British, the Beluchis and Waziris reduced to subjection, and new military posts established all along the frontier, and they anticipated the absorption of the territories recently conceded by the Ameer of Afghanistan.

The advanced positions established among the mountain tribes beyond the settled frontier of the Punjab to overawe the surrounding country were held by about 12,000 British troops, not enough at any single point to deal with a rising of the tribes, and too remote from each other and from their military base for rapid concentration, scattered in detachments which, if surrounded, must be destroyed unless there is time to relieve them. The mullahs, or religious teachers among the hill tribes, had for some time been preaching that the British Raj was doomed, and appealing to the people to drive the invaders from their country. The head men and secular leaders, especially those who were in receipt of large gifts from the Indian Government, attempted in vain to stem the torrent, but were finally compelled to take part in the hostilities already begun under the lead of fanatical mullahs.

On June 10 the Waziris attacked a British fortress in Waziristan. Mr. Gee, the political officer, was engaged in establishing a new outpost in the Tochi valley at Maizar and in collecting a fine from a turbulent village, when his force of 312 men were suddenly assailed by 500 Waziris incited by a fanatical priest, the mullah of Powindah, losing 7 officers and 54 men killed and wounded before re-enforcements arrived from Datta Khel. The mullah had before attempted to stir up a re-

bellion, and was therefore banished by the English, and had since been plotting in Afghanistan. The Waziris, whose country lies between the Kurram valley and Beluchistan, are industriously engaged in agriculture and transport when not stirred by religious or political excitement to warlike acts, in which case they can muster 40,000 fighting men. Waziristan was first incorporated in India in 1894, and the annexation was little more than nominal. Lieut.-Col. Gray was at once dispatched to the Tochi valley to succeed Col. Bunny, who was killed, taking large re-enforcements, sufficient to overawe the Waziris before the rebellion spread beyond the Darwesh Khels, the clan that made the attack, which had been so successful because the troops were surprised while resting. Later Major-Gen. Corrie Bird followed with a punitive expedition of 6,000 men and devastated the country, destroying villages and property by wholesale.

In the latter part of July the whole population of the Swat valley rose in arms against the British. The construction of military forts and the presence of large bodies of troops in their own and neighboring districts filled them with a passionate fear of annexation, and they denied that the British had any right to maintain a road through their country. They attacked a fortified post on the road. The extent and character of this attack were of such a nature that two brigades, one containing four and the other three regiments, with three mountain batteries, were sent forward to support the garrison. After five days of fighting Sir Bindon Blood's force of 5,000 men effectually defeated the Swatis. By this rapid march and successful action the loss of the Malakand fort, the principal fort on the road, was averted, the besieging army of 6,000 Swatis withdrawing. The rising was started by the preaching of a priest known as the Mad Mullah, who appeared at the head of a band of 300 men at the village of Thana, in the lower Swat valley, where his following was rapidly increased by his proclamation of a religious war against the English. On July 26 he led his followers toward Malakand, attacking the fortified post at Chakdara on the way, and in the evening attempted to surprise the garrison of 3,000 men at Malakand, which, however, had been informed of the intended attack by the tribal levies, who fled before the Mad Mullah. Resolute attacks on the fort were made again on the three following nights. Re-enforcements had meanwhile begun to arrive, but these night assaults, prolonged till dawn, so exhausted the garrison that they were unable to take the offensive during the day. The disproportionate number of British officers killed by the Pathans gave proof of their marksmanship. The troops in the Swat valley numbered 3,000 men, but Col. Meiklejohn, who had been forced to abandon his camp and retire to the protection of his guns on the heights when first attacked, remained entirely on the defensive, the garrison being, moreover, short of ammunition, till Gen. Sir Bindon Blood brought up large re-enforcements. He then relieved Chakdara, which the Pathans could not take, having no artillery. The Mad Mullah mustered a force of 40,000 warriors, practically the whole fighting strength of the valley. The Swatis had offered a formidable resistance to the British force that stormed the Malakand pass two years before, and had then subsided into peaceful habits, though the sons of the old Akhund, who formerly exercised a remarkable religious influence over them, had endeavored to stir up rebellion. The British punitive operations in the Tochi valley now roused them to a final effort to preserve their independence. The Bonerwals joined with the Swatis in the rising, and large numbers of British

subjects living near the border crossed over and took part in the fighting. The Swatis lost 700 killed in their attacks on Malakand, 2,000 in the siege of Chakdara, and 500 when that fort was relieved. The British lost 230 killed and wounded. Sir Bindon Blood advanced later toward the upper Swat valley, dispersing with shell and mountain batteries 3,000 tribesmen at Landikai on Aug. 17. He disarmed the inhabitants of the upper Swat valley, and then turned his attention to the Bonerwals.

A mullah of Hadda possessing a great influence over the Mohmands in Afghanistan, and also in Bajaur and the Utman Khel country, and standing in intimate relations with the Ameer Abdurrahman, began preaching against the British Government, as he had before during the Chitral campaign. He collected several thousand men, and crossed over into the British sphere to join in the attack upon Malakand fort, but was too late. Early in August he attacked Shabkadr fort, a small post 18 miles north of Peshawar, and burned a village. When a force of infantry, cavalry, and artillery marched out from Peshawar a party of Afghan raiders recrossed the frontier. The rest, numbering 6,000, were engaged by Col. Woon with 1,200 men on Aug. 9. When the Mohmands threatened to outflank the Indian troops the latter began to retreat, but rallied when Gen. Elles appeared with re-enforcements, and by a hot fire of artillery, followed by a cavalry charge, drove the Afghans from the field, killing over 300. The force led by the Hadda mullah was mainly composed of Afghans from Jalalabad and the Kunar valley and Mohmands of Lalpura. Gen. Gholam Haidar, the Ameer's commander in chief at Asmar, was believed to be in constant communication with the Hadda mullah, who raised the invading force without any effort being made by the Afghan officials to restrain him. Regular Afghan soldiers were recognized among the raiders. The Governor General addressed a serious remonstrance to the Ameer, who in his character of King of Islam had issued proclamations couched in a fanatical Mussulman spirit, and written a book on the duties of Mohammedans when engaged in a holy war, but had left it to mullahs to declare a *jehad* against unbelievers, not wishing to risk his throne in a struggle against the power of Great Britain. He read in public the Viceroy's letter, and swore that he had never induced his subjects or sepoys to take hostile action against the British. He issued orders forbidding the Afghans to have any share in the disturbances. Abdurrahman was in a difficult position between the Afghans, who were everywhere in sympathy with their brothers in their struggle for independence, and the British, whose railroad has pierced the Kojak pass like a sword thrust into his entrails, as he expressed it, and whose subsidy of 16 lakhs a year was indispensable. He went as far as he dared, and the Indian Government dreaded a rupture as much as he did, taking no action when he recalled his agents from Simla, Calcutta, and Bombay. The rumors published about Turkish emissaries in India and Afghanistan drew from the Sublime Porte a denial that any understanding existed between the Sultan and the Ameer of Afghanistan for the purpose of fomenting insurrection in India and preaching a *jehad* against the English. Signs of unrest next appeared among the Orakzais, whose country is north of Kohat and south of the Khaibar, and is overlooked by Fort Lockhart in the Samana range. This powerful tribe numbers 29,500 fighting men, while the neighboring Mohmands can turn out 16,000, and the Afridis, occupying the mountains and valleys to the south of the Kabul river, have a strength of 27,000 men. The Indian Government

poured troops into the country, until by the middle of August the forces had increased to 37,000 men. The whole border seemed to be in a ferment, and through the mountain district, 600 miles long by 200 miles broad, the tribes were all up against the British, or were ready to rise. The Afridis, to whom the guardianship of the Khaibar pass had been intrusted for sixteen years, and who were supposed to be thoroughly devoted to the Government, next caught the infection. They entered into an alliance with the Orakzais and agreed to attack Jamrud if the latter would attack the Kohat border. As the hostile Afridis advanced to the Khaibar pass Fort Maude and Jehangera were evacuated. They captured Ali Mesjid, a small post at the entrance of the pass, which was held by Khaibar rifles or tribal levies, who still formed the bulk of the armed force in this region, although the British had long since departed from their agreement not to station Indian troops there. The Afridi levies soon began to desert to the rebels, taking their Martini rifles and plenty of ammunition with them. The Afridis had indeed been already supplied with a large number of rifles stolen from the Government. The Orakzais advanced through the Kuram valley, where the British abandoned their outposts and fell back on Fort Lockhart and Parachinar. The Tochi valley became again the scene of disturbances, the Powindah mullah having incited the Mahsuds to invade the district. The Afridis captured the fort of Landi Kotal, after a sharp fight with those who remained loyal of the garrison of 500 men. They now held the whole Khaibar pass, and the Indian troops would not venture to attack them in their positions in the hills. They proposed terms on which they would return to their homes, which were the withdrawal of British troops from Swat and the Samana range, the giving up of Afridi women living within the Indian border, and the revision of the salt regulations. The alarm of the authorities at the conflagration that now seemed to envelop the whole frontier was so great that they arrested three of the principal chiefs of Beluehistan. The Khaibar rifles in the garrison at Jamrud were disarmed. The Daulatzai Afridis raided the country about Kohat, and attacked posts in the Samana mountains. Beluehi tribesmen began to assemble on the hills overlooking the Bolan Railroad. The people of Pishin began to migrate into Afghanistan. The Orakzais appeared in great force at Gulistan, which was evacuated. They advanced to attack Shinawari, which also was evacuated. They blockaded Kohat pass. The garrisons at Jamrud and other posts were subject to the "sniping" of the stealthy Pathans, who crept close up to the walls in the dark and picked off the officers with their rifles or stabbed the sentinels.

The English were not ready to assume the offensive before September. When the Hadda mullah gathered 4,000 tribesmen, with the intention of attacking the Khan of Dir and cutting the Chitral road, it was decided to send Gen. Elles from Peshawar with a large field force into the Mohmand country. The Kuram valley was cleared of Orakzai raiders by a flying column under Col. Richardson. There were still 17,000 tribesmen threatening Samana. An expedition was prepared to ascend the Khanki river from Kohat, for the invasion of Tirah, the district north of the Samana range, where the Afridis pasture their flocks. Sir William Lockhart went from England to assume the chief command on the frontier and to direct the Afridi campaign. Imperial service troops of the Punjab were engaged for the campaign. The Mohmand gathering dissolved on seeing the fresh prospect of a British invasion. Gen. Blood moved forward from the Panjkora river to Nawagai, in Bajaur. The

Khan of Nawagai, like the Khan of Dir, had professed fidelity to the English. Gen. Elles advanced simultaneously into the Mohmand country from Shabkadr, so that the tribesmen should be caught between the two forces. The Ameer Abdurrahman now took effective steps to check the incursions of his subjects, which in a letter to the Governor General he ascribed to the preaching of the mullahs. He removed his troops from the border in order to withdraw them from such influences, and he had them disperse Laghmani and Shinwari tribesmen who meant to join the Hadda mullah. The Government of India addressed a letter to the Ameer, saying there was no intention of occupying Afghan territory or of suppressing the independence of the Mohmands, but that the operations were solely intended to punish the followers of the Hadda mullah. Orakzais and Afridis continued to harass the posts on the Samana range and in the Khanki valley, where Gen. Biggs operated with a flying column. On Sept. 13 they captured and destroyed Saragari, one of the Samana outworks. Fort Lockhart and Fort Cavagnari, at Gulistan, were heavily attacked, but were relieved by Gen. Biggs. The raiders were estimated to number nearly 40,000. The means of fighting the Pathans are much more perfect than in former campaigns, when they were able to rush into close quarters, and it was often necessary to carry their stone breastworks on the hills at the point of the bayonet. Now the magazine rifle prevents them from ever charging, and it is easy with mountain guns to shell them out of their *sangars* and enable the infantry to take the heights and drive them into the next valley, where they can be intercepted by the cavalry before they gain the hills beyond.

While Sir Bindon Blood advanced to Nawagai his rear guard, under Gen. Jeffreys, was attacked on Sept. 14 at the foot of Rambat pass by the Mohmands and Salarzais of south Bajaur. The brigade turned back to punish these tribesmen, and on Sept. 16 fought an engagement with 6,000 of them, who defeated the British and Indian troops, killing and wounding 138. The Bonerwals gathered, 5,000 strong, at the Shakot and Mora passes. On Sept. 18 Gen. Jeffreys again attacked the enemy, destroyed a village, and carried off large stores of grain, which the Mohmands attempted to recover. Gen. Blood's force advanced into the Mohmand plateau without encountering opposition till Sept. 17, when it came in touch with the Mohmands, 10,000 strong, between Jarobi and Mittai. In an attack on the camp at Nawagai on Sept. 19 the Mohmand swordsmen charged in the face of withering volleys to within 50 yards of the English soldiers. The unexpected attack of the Khan of Nawagai's people compelled Sir Bindon Blood to give his whole attention to them, leaving Gen. Elles to deal alone with the upper Mohmands. The enemy in Bajaur was largely re-enforced from neighboring tribes. The lower Mohmands remained quiet, and agreed to deliver up their breechloading and other rifles. After destroying the villages and crops in the valley, Gen. Blood received the submission of the Mohmands, and of the Salarzais, who feared that their villages would be punished also. This having been accomplished, he marched against the Hadda mullah, who had 3,000 men in the Badmeni pass. These fiercely attacked the British camp at Lake-rai on Sept. 20. Gen. Elles's division came up shortly, upon which the enemy retired into the hills. On Sept. 23 the British captured Badmeni, dispersing the Haddah mullah's forces with the Maxim guns, and then occupied the Hadda mullah's village of Jarobi, which they burned. Gen. Westmacott on Sept. 27 destroyed the citadel of the Kuda Khels after a severe fight. The Alma Khels were likewise

punished. Some of the Mohmands still held out, refusing to give up their rifles, and against these Sir Bindon Blood continued his operations. The British had lost in the fighting 22 officers and 245 men and the Mohmands 500, while 26 of their villages had been destroyed. On Sept. 30 in attacking the villages of Agra and Gat the British lost 30 men. On Oct. 3 they lost 16 when returning from the destruction of villages, and frequently when retiring to camp after these punitive operations they were subjected to a harassing fire from the Mohmands perched on the tops of the hills, for these were wonderful rifle shots, killing at 1,000 yards and more. Owing to the rising of the Mohmands and the resulting punitive operations, Sir William Lockhart postponed the general advance against the Afridis in Tirah till Oct. 9. The Afridi and Orakzais had decided at a *jirgah* to resist the British advance, being persuaded by the mullah Said Akbar. They hoped to receive aid from Gholam Haidar, who is himself an Orakzai. The Afridis were to concentrate at Chinari, in the Bazar valley, while the Orakzais defended Sempagha pass. A deputation was sent to the Ameer, who stopped it at Jelalabad. The strength of the Tirah field force was 10,092 British and 22,622 native officers and men, besides 20,000 camp followers, with 3,200 reserves at Rawalpindi. Including the troops in Malakand and Bajaur, the garrisons at Peshawar, Rawalpindi, Kohat, Parachinar, and other places, and the Tochi field force, with its supports at Bannu, there were 70,000 men under arms, and these included the best regiments in the British and native armies. No such concentration of troops had ever before taken place in the north-western frontier. During October 10 additional batteries of artillery were sent out from England. All Afridis serving in the regiments marching out against their fellow-tribesmen were sent back to perform garrison duty. The Orakzais and Afridis determined to take the initiative if the British would not accept the proposals they offered for a settlement, and in order to insure combined action they threatened with excommunication from Islam any clans that should make separate terms. The Indian Government announced in a proclamation its intention to punish the Afridis in their own country because they had broken their alliance with the British Government and attacked and destroyed forts that their tribe had engaged to guard, and had made war on British garrisons, killing soldiers and destroying property. The Afghan Ameer likewise issued a proclamation condemning the tribesmen for raising disturbances and rebellions without cause after taking British pay, declaring the religious pretext hollow, because the Mohammedans of India and most of the khans were on the side of the English, and telling them that they knew of the Durand agreement at the time it was made and silently acquiesced, and hence must carry on their necks what they had done with their hands. He declared that he had nothing to do with them, as they had always asserted their independence of him and would acknowledge no king. On Oct. 17 he received a second deputation of Afridis and Orakzais, who begged him to mediate with the Indian Government. He accordingly wrote to inquire if orders for their punishment had been given or if there was room for negotiation, adding that they richly deserved punishment, and warmly asserting his unswerving friendship for the British Government.

The Pathans were already concentrating their strength in the upper Khanki valley and observing the preparations of the enormous British expedition from dominating points in the western Samana range. There were about 2,000 Afridis in the

British ranks who were counted among the best soldiers in the army, but whenever they found an opportunity they now deserted with their rifles to join their countrymen. The Afridis gathered on both sides of the Sempagha pass, prepared to offer a desperate resistance to the British attack, which began on Oct. 18, when, after a stiff fight, Gen. Biggs's division cleared the enemy from the Dargai ridge and destroyed the fortifications. After they had returned to camp the enemy reoccupied the ridge with an increased force, taking a strong position near the top of the Nasik Suk hill, which dominates the flank of any force descending the Chagru valley. On Oct. 20 the division, consisting of Gurkhas, Sikhs, English, and Scottish Highlanders, advanced to capture the position, which was shelled by three batteries. The tribesmen, of whom there were several thousands, reserved their fire till the British were in an exposed position, then delivered their volleys with telling effect, checking the advance, which was difficult, owing to the precipitous nature of the hill. First the Gurkhas, and then the Gordon Highlanders and the Sikhs rushed through the zone of fire, many of them dropping, till they reached a point so close below the enemy's position that the tribesmen could not see them, and when the British rushed the position, after a fierce hand-to-hand fight, the tribesmen fled to the heights, a large number being shot as they were fleeing. The British lost 195 officers and men in this action. On Oct. 21 the advance into the Khanki valley was accomplished and the fortified village of Khangarbur was occupied after a short conflict. While the British halted there over a week for supplies the enemy concentrated in the pass and improved the fortifications, and they fusilladed the British camp nightly, coming within 30 yards of the lines, and harassed foraging parties by day. The skill with which they skirmished and the judgment and accuracy with which they delivered their fire showed a great improvement and the training imparted to the Afridis by their fellows who had served in the Indian army, and this was shown more unmistakably by their altered tactics in battle. Instead of coming on in a wild, undisciplined rush, as formerly, the attacking line advanced in successive rushes, covered by the fire of the main body. Many of the fighting men were furnished with Lee-Metfords, as well as Martinis, revealing to the British commanders the meaning of the thefts of service rifles and ammunition that had been continually reported from the frontier stations. Men were seen directing the movements of the enemy who wore the uniform of the Indian army. In the night of Oct. 25 there were 27 men shot by the Afridi marksmen, and on Oct. 27 a foraging party lost 17. The Sempagha pass was taken on Oct. 30. There were 6 batteries massed in the center. Sir William Lockhart feigned an attack upon the enemy's right, which was immediately re-enforced by the commanders of the tribesmen, who by so doing weakened their center. Acting with great quickness, the British commander, whose experience and reputation in frontier fighting surpassed those of any other Indian general, threw the main column against the enemy's center. The tribesmen were thus taken by surprise, and their leaders did not have time to recall the forces sent to re-enforce their right. As a hurricane of shells from 36 guns swept intrenchment after intrenchment, these were immediately occupied by British soldiers, of whom only 24 were killed or wounded during the engagement. In the rich Mastura valley the Afridis set fire to their villages and grain stores before retreating. The British had to reconnoiter the country and also wait again for supplies to be brought up before assailing the Arhanga pass, which the tribesmen scarcely at-

tempted to defend. Only 1,000 men met the British, while the rest were busy removing their wives and children from the valley. This pass was captured with little difficulty on Oct. 31, one of the British brigades having turned the left flank of the Afridis, who will never continue fighting if their line of retreat is in danger. The force then entered the Maidan valley, the heart of the Afridi district of Tirah, whence Sir William Lockhart had announced that he would dictate the terms of peace. Signs of industry and expert agriculture and of prosperity abounded, the people having evacuated the country in haste, leaving the place full of grain, fodder, poultry, walnuts, etc. The retreat of the tribesmen eastward or through the Khaibar pass was cut off by Brig.-Gen. Hammond's column of 5,000 men, which had moved out from Peshawar to the fort on the Bara river, which is formed by the junction of the Mastura and the Maidan, and near the entrance of the pass. The Kuram column had been engaged in fighting the Masozais and neighboring clans that blockaded the Kuram pass, replying to the proclamation of Sir William Lockhart by protesting against the occupation of Khaibar, Samana, and Swat, and declaring that they would oppose further inroads. A party of 36 Sikh soldiers during a reconnoissance to Esor, on the Khurmana river, were cut off and destroyed.

The terms demanded of the Afridis by Gen. Lockhart were not severe, for the Afridis were still far from subjugated, and their complete subjugation in this difficult country, far from the base of supplies, would exhaust the financial resources of the Indian Government. Furthermore, the English were unwilling to make confirmed enemies of their former pets, who formed as good fighting material as there was in the northwest, and had proved themselves hitherto very faithful to their salt, abstaining from levying blackmail on the caravans in the Khaibar pass after they had accepted the liberal compensation paid by the Indian Government. The British commander demanded from the Orakzai clans that had joined in the revolt the surrender of 500 rifles, besides those that they had captured during the war, and the payment of a fine of 35,000 rupees, the forfeiture of all subsidies formerly agreed upon, and a formal submission of the tribes in full *darbar* within a fortnight. These terms were announced from Maidan on Nov. 12, when both sides had ceased their main operations. The Afridis, ignorant of the power of modern artillery, had failed to defend their supposed impregnable positions; but, on the other hand, they had escaped the crushing military disaster that the English hoped to inflict as a lasting lesson.

A part of the Orakzais had already sued for peace. The Afridis made another appeal for the intervention of the Ameer, into whose arms the British were anxious that they should not be driven, and on this account the terms were made lighter. While encamped in Tirah the troops collected all the supplies they could find to eke out their commissariat and save the costly transport over the mountains. The sappers and miners improved the transport facilities, making camel roads where there had been mule paths. But the tribesmen, expert in guerrilla warfare, were not idle. They captured several convoys, fell upon foraging parties, and continued their harassing night attacks and "sniping" of bivouacs. On Nov. 6 an escort of Sikhs was cut off, and only escaped annihilation by the arrival of supports. On Nov. 9 Gen. Westmacott made a reconnoissance in force, reaching the top of Saran Sar mountain in the range west of the valley, where he found a deserted camp. During the retirement the force was followed up and heavily attacked on

difficult ground. An English regiment was saved from a difficult situation by the gallantry of the Sikhs. Lieut. Macintire and a dozen men were lost through the efforts of the sound to rescue the wounded of the party. The total casualties were 67, including 20 killed. The Governor General ordered an investigation of this disaster, which but for the gallant stand of the rear guard would have been worse. The enemy in their efforts to cut off the rear guard exposed themselves freely, contrary to their wont, and made one fierce rush, which was stopped almost at the bayonet's point by the steady fire of the soldiers, whose strength was all but exhausted and ammunition pouches nearly empty. Through the moonlit night the Afridis kept up their harassing pursuit, though they had suffered severely, losing 400 men. On Nov. 13 Gen. Kempster's brigade marched through the Kandao pass as far as Waran, encountering no opposition; but in retiring on the next day this force also was heavily attacked by Afridis swarming down from Saran Sar, and, after the main body had gone through, a Sikh regiment was seriously pressed on the farther side of the pass, but was saved by the other Sikhs, the same regiment that had rescued the English troops in the previous battle. The casualties were 30 killed and 50 wounded. Throughout the campaign the native troops displayed greater endurance and fortitude and better military instinct and alertness than the British regiments. The gallantry of the two Sikh regiments averted serious disaster in both these rear-guard actions. The troops suffered extremely, especially these Sikhs from the plains of India, from the cold on the mountains, for there were no villages to afford shelter, and the thermometer fell to 19° F. The losses of the British troops were already, before the opening of the Tirah campaign, heavier than had ever been experienced in frontier warfare. From June 10 to Oct. 28 the casualties were 247 killed and 843 wounded, including 24 British officers killed and 52 wounded, a heavy proportion of officers, considering how few of them there were in the native regiments. The number of British soldiers killed was 34 and of wounded 151; among the native ranks 177 were killed and 593 wounded. Sir William Lockhart's generalship had won the two passes with trifling loss, but now the damaging guerrilla tactics of the Afridis were gradually decimating his troops, so that they had to be re-enforced. Sir William Lockhart warned his officers against detaching small parties beyond support, saying that the Afridis were perhaps the best skirmishers and best natural rifle shots in the world, whose strength lies in intimate knowledge of the ground, which is the most difficult on the face of the globe, enabling them to watch the movements of the British unperceived and to take advantage of every height and every ravine. The troops were compelled by the cold to move into the Bara valley, thus changing the base from Kohat to Peshawar. Punitive and foraging expeditions were continued in the Maidan valley. The Orakzais in the Mastura valley began to make their submission and pay the fines demanded. The terms announced to the Afridis on Nov. 21 were the restitution of all stolen and captured rifles and other property, the surrender of 800 breechloaders, and the payment of a fine of 50,000 rupees. The Afridis were required to accept any arrangement that the Government might decide upon relative to the reopening of the Khaibar pass, to forfeit meanwhile all their tribal allowances, the renewal of these depending on the restoration of satisfactory relations with the Government, and to rebuild the forts in the pass that they had destroyed. Hostages were demanded, and a week's grace was allowed for compliance.

The headquarters were removed to Bagh, the site of the principal mosque in Tirah. In their devastating excursions among the surrounding hills the troops suffered severely from the sharpshooters, who, from their unseen coignes on the heights, had the exact range of all the exposed paths and defiles. The troops had soon to be withdrawn from these mountains, and the campaign was abandoned for the winter. As soon as it could be done the march was continued into the Bara valley. The mullah Said Akbar raised a *lashkar* of the still rebellious Orakzai clans for the purpose of cutting off the foraging parties and convoys still in Tirah. To extricate the troops from the labyrinth into which they had been led was a greater task than to win battles with shell and machine guns when the Afridis made a stand. On Nov. 22 Gen. Westmacott's brigade advanced to Dwatoi, at the confluence of the rivers, through a difficult gorge, with flanking columns moving along the precipitous hills. The enemy opposed the advance, and when the troops retired on the next day they engaged the rear guard all the way through the defile. The casualties during the campaign were 433 killed and 1,321 wounded, of whom 36 killed and 81 wounded were British officers. The transport service for this expedition was on an enormous scale, requiring 16,000 camels, 45,000 mules, and 12,000 bullocks. The two divisions forming the expeditionary force numbered 9,500 men each, the rest of the force being detailed for the line of communication. The main camp at Maidan was broken up on Nov. 18. All the heavy baggage and surplus stores were sent back to Shinwari, while the troops, with rations to last till Dec. 14, made their way down the Bara valley. While one of the divisions was engaged in clearing the road for the general retreat, detached columns visited the adjacent valleys to punish the tribesmen by destroying their houses and property. On Nov. 26 a large force entered Masozoi country through the Lozaka pass and encountered strong opposition, but they joined hands with a part of the Kuram column at Esor on Nov. 30. The Kuram force fought a hard battle on Dec. 1 at Thabi, in the Chamkani country, where many villages were destroyed. The difficulties of the Dwatoi defile were not surmounted till Dec. 9, when the main body began its retirement from Bagh into the Bara valley. A junction was effected with Gen. Hammond's force on Dec. 14 at Mamani. The tribesmen grew constantly bolder and more aggressive. The retreat down the Bara valley, where the troops marched through ravines, over bowlders, and often knee-deep in icy waters, involved a continuous rear-guard action during the five days of the march, with losses of 33 killed and 183 wounded.

To counteract the moral effect of the retreat, Gen. Lockhart determined at once to open the Khaibar pass and to operate among the winter settlements of the Afridis in the Baza valley, where several villages were razed to the ground, after which one of the divisions concentrated in the Khaibar. Sir Bindon Blood led a division against the Bonerwals, who had refused to make the reparation demanded of them.

The cost of the frontier operations in 1897 was estimated to amount to £10,000,000. Already within the past twenty years the Government has spent £50,000,000 in frontier wars. The Indian Congress condemned the frontier policy of the Government in strong terms, and called upon the English Government to pay a substantial part of the expenditure. A petition was sent to Parliament praying that, pending the settlement of the question of adjustment between the British and Indian treasuries of frontier war expenses, the cost of the present war should be borne largely by Great Britain.

Burmah.—In April, 1887, Burmah was converted by royal proclamation into a British province, of which Sir Frederick Fryer was made Lieutenant Governor. The Legislative Council consists of 5 official and 4 nonofficial members, all nominated. The guerrilla warfare which the British combated under the name of dacoity or gang robbery after the annexation of the country by Lord Dufferin in 1886 ceased entirely, under the rule of Sir Alexander Mackenzie as Chief Commissioner in 1890-'95, and the frontier raids which succeeded the internal disturbances have given place to friendly durbars between the British officers and the Shan chiefs, whose tribesmen have been enrolled into a frontier police. The pacification of Burmah may be considered complete, and the military occupation has passed into a civil administration. Railroads, roads, irrigation schemes, the introduction of new agricultural staples, the extension of medical relief and vaccination, the provision of veterinary aid, cadastral surveys, public instruction, the cultivation of waste lands, the development of mines and quarries, the rice trade, forest conservation, increased facilities for obtaining judicial redress, the fair adjustment of public burdens, and the settlement of rural rights and obligations are the problems that now take up the attention of the administrators. A railroad is to be built into the center of the southern Shan States. On the northern border the Mandalay and Salween Railroad has been carried beyond Maymyo. The trade across the frontiers of Upper Burmah was Rx 1,860,000 in 1897, against Rx 1,360,000 in 1896. The trade with western China increased from Rx 280,000 to Rx 390,000, with the northern Shan States from Rx 470,000 to Rx 530,000, with the southern Shan States from Rx 600,000 to Rx 930,000, with Zimme from Rx 240,000 to Rx 390,000. There was a decline in the trade with Kareni and Siam. In Lower Burmah the overland trade increased from Rx 750,000 to Rx 820,000. A Burmo-Chinese frontier commission began on Dec. 1 the delimitation of the frontier of Yunnan, which has been altered recently in favor of Great Britain by an arrangement with the Chinese Government (see CHINA).

INDIANA, a Western State, admitted to the Union Dec. 11, 1816; area, 36,350 square miles. The population, according to each decennial census since admission, was 147,178 in 1820; 343,031 in 1830; 685,866 in 1840; 988,416 in 1850; 1,350,428 in 1860; 1,680,637 in 1870; 1,978,301 in 1880; and 2,192,404 in 1890. Capital, Indianapolis.

Government.—The following were the State officers during the year: Governor, James A. Mount; Lieutenant Governor, W. S. Haggard; Secretary of State, William D. Owen; Treasurer, F. J. Scholz; Auditor, Americus C. Daily; Attorney-General, W. A. Ketcham; Superintendent of Instruction, David M. Geeting; State Statistician, S. J. Thompson, resigned in April and succeeded by John B. Conner; Geologist, W. S. Blatchley; Adjutant General, Gen. Gore; Tax Commissioners, Ivan N. Walker and Thomas B. Buskirk; Fish Commissioner, Z. T. Sweeney; Factory Inspector, D. H. McAbee—all Republicans; Chief Justice of the Supreme Court, James H. Jordan, Republican; Associate Justices, L. J. Monks, Republican, and Timothy E. Howard, Leonard J. Hackney, and James McCabe, Democrats; Clerk, Alexander Hess, Republican; Justices of the Appellate Court, W. D. Robinson, W. J. Henley, James B. Black, D. W. Comstock, and U. Z. Wiley, all Republicans.

Finances.—The debt of the State at the beginning of the year stood: Domestic debt, \$484,000; foreign debt, \$6,436,615; total, \$6,920,615.

For the year ending Oct. 31, 1896, the net receipts were \$2,413,100.10. The expenses of the State gov-

ernment, exclusive of any payment on debt principal from the general fund, were \$2,174,554.78.

The State-tax levies were not changed in 1897, and remain as made two years before as follows: General fund, 9 cents on the \$100; benevolent institutions, 5 cents on the \$100; State-debt sinking fund, 3 cents on the \$100; school fund, 11 cents on



JAMES A. MOUNT, GOVERNOR OF INDIANA.

the \$100; for higher education, 1½ cent on the \$100. The total taxable property on tax duplicate of 1895 was \$1,286,050,531.

The bonded debts of the counties amount to \$6,014,703, and the floating debts to \$829,103.

The Treasurer's report for the year ending Oct. 31 gives the following general statement: Balance in treasury Nov. 1, 1896, \$525,694.69; receipts from all sources, \$7,679,994.34; total, \$8,205,689.03; disbursements, \$7,808,964.52; balance, \$396,724.51.

Education.—The Legislature appropriated to educational institutions, for special purposes, the following sums: Purdue University, \$18,500; State University, \$5,000; State Normal School, \$10,000. The income of each from the special tax for higher education under the law of 1895 was computed in July as follows: Indiana University, \$46,780.72; Purdue University, \$35,085.53; State Normal University, \$35,085.53; total, \$116,951.78.

The Normal School graduated a class of 78 in June, and granted diplomas to 34 graduates of 1895 who had taught successfully in the public schools for two years. The biennial report shows that in 1895 there were 1,535 students in attendance at various times, and in 1896 there were 1,570. The average attendance for each term was 800. During the first year covered by the report the faculty cost \$32,334.96, and during the second year \$29,027.98. The total receipts were \$87,209.57, and the disbursements \$62,881.49.

Earlham College graduated 25 students in June, and Butler 34. Coates College for Women, which has been running down for a number of years from lack of patronage, made an assignment in May. It was founded by the late Jane Coates, of Green-

castle, and had about 50 students at the time of the assignment. At the December meeting of the trustees of Wabash College a petition was presented asking that arrangements be made to educate women at the college. There were 278 alumni who signed this petition, and 128 alumni opposed the plan. The number that have been graduated is 753, of whom 149 are dead, 27 whose address is unknown, 24 not approachable, and 143 failed to reply.

The Vincennes Presbytery passed a resolution in April which expresses the feeling of the friends of the denominational colleges as follows: "The Presbytery of Vincennes desires to record its disapprobation of the attempt in the late Legislature to displace the denominational college in the school system in our State, giving the preference to teachers who have taken a course of instruction in the State institutions, thus discriminating against the graduates of the non-State schools, discounting merit, and practically confiscating the valuable property and splendid equipment of the non-State schools. It is with deep regret that we learn this movement is to be continued in favor of State colleges, and we call upon good citizens who value merit, who believe in fairness, and who understand the debt, past and present, of our public-school system to the non-State schools, to oppose the encroachments."

The school enumeration for 1897 shows a total of 749,860, an increase of 16,134 over 1896. The following summary shows the condition of the common-school revenues as computed for apportionment in June: Amount collected from counties, \$1,073,576.07; amount in treasury from all other sources, \$17,837.94; total on hand, \$1,091,414.01; amount apportioned, \$1,072,299.80; balance now remaining in treasury, \$19,114.21; *per capita*, \$1.43.

The State Board of Medical Registration and Examination has adopted rules defining what colleges are qualified to give diplomas that will be recognized by the board. These rules will bar out graduates of certain medical colleges.

Charities and Corrections.—An abstract of the report of the State Board of Charities gives the following statistics: "The number of inmates of the State charitable and correctional institutions upon the last day of the fiscal year five years ago was 6,264. Of this number 4,106 were in the charitable institutions and 2,158 in the correctional institutions. At the close of the past fiscal year the number of inmates of the State charitable and correctional institutions was 7,136, of which 4,654 were in charitable and 2,482 in correctional institutions. From these figures it is seen that the total population of both charitable and correctional institutions has increased 872 in the past five years. The increase in the charitable institutions has been 548 and in the correctional 324. While the population of the charitable and correctional institutions has thus increased, there has not been a corresponding increase in the cost of maintenance. The total cost of maintaining the institutions in the year just closed was smaller by \$6,830.17 than in the year which ended five years ago.

In an address before the State Conference of Charities and Corrections in November the Governor said, urging economy in the administration of State institutions: "The State annually expends \$1,236,736.92 to maintain its benevolent and charitable institutions. It is a matter of congratulation that at the close of the last fiscal year, Oct. 31, 1897, some of the State institutions turned unexpended balances back into the treasury." The Governor had already in June made a move toward reducing the expenses of the institutions by suggesting the abolition of useless offices and more careful scrutiny of the prices paid for supplies.

The report of the trustees of the State Soldiers' Home in December gives the population: Veterans, 312; widows, 36; married women with their husbands, 120. The home is crowded and the number of applications for admission is increasing. The report says that the veterans who receive over \$8 a month pension willingly give up the excess to be sent to their wives or minor children.

The last Legislature appropriated \$8,000 for a new chapel, \$15,000 for an "old men's home," and \$10,000 for a dining room and "widows' home." The old men's home is in course of erection, and the other two are finished and furnished. During the year 11 counties made appropriations for cottages. The cost is about \$150 a year for each inmate, of which the Government pays \$100.

The trustees of the Sailors' and Sailors' Orphans' Home, at Knightstown, submitted their annual report in December. During the year 123 children left the home. There are now in the home 639 children, of whom 363 are boys and 276 girls.

The financial statement shows the expenditure of all the appropriation of \$90,000.

The report of the Central Hospital for the Insane gives: Patients at beginning of year, 1,543; received, 483; discharged, 306; died, 134; treated, 2,026; enrolled at close of year, 1,586; daily average, 1,478.4. The institution is overcrowded. The actual *per capita* cost is \$138.63.

At the Southern Hospital for the Insane, at Evansville, the cost of maintenance during 1895-'96 was \$138,324.71, averaging 48 cents a day for each patient.

The printing office and laundry at the State Reform School for Boys, at Plainfield, were burned June 1, with a loss of about \$7,500.

The Legislature this year passed a law making the Prison South, at Jeffersonville, a reformatory, and providing that all prisoners under thirty years of age, serving their first sentence, should be taken there, while the Prison North, at Michigan City, should be the State penitentiary for older criminals. Transference of prisoners took place April 12, when 291 prisoners were taken from Michigan City to Jeffersonville, and 368 from Jeffersonville to Michigan City. Great precautions were taken, special trains starting simultaneously from the two prisons. The men were shackled in pairs immediately after being fed at breakfast and marched on board trains that had been backed into the prison yards. A company of militia accompanied each train, and in each coach of convicts were three guards.

After the exchange the penitentiary contained 980, while the reformatory had fewer than 800. In December there were in round numbers 900 at the reformatory and 840 at the penitentiary. Already the reformatory is badly overcrowded. The night school is attended by 225 inmates. All illiterates are compelled to attend this school. The wage-earning system is now in full operation, and there is plenty of work for all prisoners under the existing contracts.

The State Prison has been put into order, new buildings including a chapel and an administration building, have been erected, a waterworks plant put in, and shower baths provided.

The following are the amounts appropriated by the Legislature for maintenance and special purposes at the State institutions: Central Insane Hospital, maintenance \$225,000, special \$38,200; Northern Insane Hospital, maintenance \$90,000, special \$7,000; Eastern Hospital for the Insane, maintenance \$90,000, special \$5,000; Southern Hospital, maintenance \$82,000, special \$9,800; Education of the Blind, maintenance \$27,000, special \$3,500; of the Deaf and Dumb, maintenance \$58,000, special \$14,560; Soldiers' Orphans' Home, maintenance

\$90,000, special \$5,300; School for the Feeble-Minded, maintenance \$75,000, special \$12,213; State Prison North, maintenance \$90,000, special \$60,500; Indiana Reformatory, formerly Prison South, maintenance \$56,100, special \$55,000; Reform School for Boys, maintenance \$56,500, special \$6,000; Reformatory and Women's Prison, maintenance \$40,500; State Soldiers' Home, special \$61,355.

Militia.—The report of the adjutant general in November shows that the Indiana National Guard contains 2,822 officers and men, divided into 41 companies of infantry and 3 batteries of artillery.

Insurance.—The report of the Insurance Department shows that 280 insurance companies do business in the State. Of these, 42 are Indiana companies, 3 are Canadian, and 36 are European. The others have their corporate homes in various States, 55 being in New York.

Banks.—The report of the Banking Department shows an improvement in State banks, Oct. 30, 1897, over their condition a year before and a steady improvement during the year. The resources, Oct. 30, 1896, were \$14,711,472.25, and Oct. 30, 1897, they were \$17,325,534.28. During the year the State bank at Ambia became a private bank, the Kewanee Bank went out of existence, and one bank at Sullivan was discontinued, while another took its place, leaving 95 in operation.

The reports of the five savings banks of the State show that their deposits have increased about \$400,000 during the year.

The State has 4 trust companies, 3 in Indianapolis and 1 at Terre Haute. The reports of these concerns show that the resources increased during the year from \$2,742,724.33 to \$3,647,220.79.

The Logansport State National Bank failed May 20, and its failure caused that of the State Bank of Monticello, which was under the same president. The failure was due to the president, John F. Johnson, who had taken about \$300,000 of its funds, and had borrowed on his personal paper \$200,000 more. He was convicted and sentenced to ten years in the Ohio Penitentiary. The banks were reorganized in July.

On Nov. 13 Crawford County was thrown into a high state of excitement by the failure of the Leavenworth Bank and the banks at English and Marengo. These institutions have been under the management of R. H. Willett, who disappeared before the condition of the bank was known. The deposits in each of the banks were heavy, including county and township funds.

Loan Associations.—Fourteen building and loan associations went into liquidation during the year. The report compiled for the whole State by the land department of the Auditor's office, as of Oct. 31, shows that \$6,635,708 of pass books and mortgage loans were repaid during the year, being \$1,014,118.02 more than during the previous year. The withdrawals were \$8,375,462.97, being \$1,006,236.74 more than the previous year, the bulk of this being in Marion County. There were 101,775 investing members in 1896 and 82,449 in 1897; 55,489 borrowing members in 1896 and 55,061 in 1897.

An important decision in a suit brought against a nonresident association was handed down at Anderson in December. Judge McClure sustained a plea of abatement, holding that the building and loan association was an outlaw and had no standing in court, inasmuch as it had failed to file the necessary \$100,000 bond with the State Auditor as required of all building and loan associations that are nonresidents. This relieves the borrower from all liability and payment can not be forced.

Industries and Products.—The official report of the traffic manager of the Indianapolis Belt road and live-stock yards shows that in 1897 there were

received at the yards 1,252,761 hogs, 147,740 head of cattle, 97,269 head of sheep, and 29,247 head of horses and mules. The deliveries to local packing houses in 1897 were the largest since the yards were established, in 1877, being 788,285 hogs, 90,402 cattle, and 4,107 horses to the sales stables.

The report of the statistician for 1895-'96, rendered in February, gives statistics covering 40 industries, with 968 establishments in 128 cities and towns. The reports of the proprietors of these factories, shops, and mines show a capital of \$42,507,737. The past year the value of materials used was \$83,202,319, and the gross value of the merchandise manufactured was \$132,788,421. Labor was paid \$28,062,083. The number of persons employed was 80,184, of whom 9,735 were boys and 8,894 were women and girls. The State geologist shows that no State possesses clay deposits superior to those of Indiana, and that, instead of importing vitrified brick from other States, this State should supply the entire home demand and become an exporter as well. During the past year one large brick concern has begun operations near Montezuma, and another new plant has been erected at Martinsville. A large pottery establishment has been constructed at Brazil. The geologist has discovered some new deposits of marl, and at Syracuse a plant costing \$75,000 has been put in for the manufacture of Portland cement.

Waste of Natural Gas.—There is as yet no indication of the giving out of the gas supply, which has been in constant use for ten years. Besides the great amount consumed in the gas area proper, 26 pipe lines are transporting it to other places, much of it going to Ohio and Chicago. The pipe lines aggregate more than 1,000 miles, not including tributaries and feeders. The fuel is flowing from 2,000 wells, each well producing an average of 2,000,000 feet of gas a day.

But the waste of the gas by oil companies and prospectors, who allow it to escape in order to get the oil beneath, has aroused apprehension, and the courts have been applied to for injunctions upon the oil operators. There is a State law which, if enforced will put a stop to the practice.

Mob Violence.—Five men were taken from jail at Versailles on the morning of Sept. 15, and hanged by a mob. The men constituted a gang of desperadoes who had long been the terror of the county as robbers and burglars.

At Decatur, on the night of Oct. 2, whitecaps dragged Constable James Parrish from his home and lashed him nearly to death with a cat o' nine tails. Officers made four arrests of suspects, and the grand jury returned indictments in December against them and two others who had fled.

Labor Interests.—Reports that the miners in the State were suffering, and many were on the verge of starvation, led the Governor to appoint two commissioners—J. B. Conner and T. H. Terhune—to investigate their condition in July after the general strike began. One of the commissioners said on his return: "The treasury of the miners was depleted by the strike of last year, and they had not yet got out of debt when this one came. In most places they have had but three days' work per week, at 47 cents, the lowest price ever known, and thus they had no chance to pull out. Some of the operators with whom we talked admitted that the present state of affairs is all their own fault. During the past three years they have been cutting each others' throats by taking contracts at ruinous prices and then reducing wages to meet them."

Legislative Sessions.—The session of the General Assembly began Jan. 8, and ended March 8. Lieut.-Gov. Haggard presided over the Senate, and Henry C. Pettit was Speaker of the House. The

Governor and Lieutenant Governor were inaugurated Jan. 11.

Charles W. Fairbanks was chosen by the Republican caucus as candidate for the office of United States Senator to succeed Daniel W. Voorhees. Other names before the caucus were those of Gen. Lew Wallace, W. R. McKeen, R. S. Taylor, John H. Baker, Benjamin Harrison, and Frank Posey. Mr. Voorhees was the Democratic candidate, and Leroy Templeton the Populist. The vote stood: Fairbanks, 85; Voorhees, 58; Templeton, 6.

The number of acts passed and signed was 190, besides which were two joint and two concurrent resolutions. Seven measures were vetoed by the Governor, only one of which was passed over the veto. This was for dividing a court circuit.

The apportionment law of 1885, which is the only one that has not been ruled unconstitutional by the Supreme Court, was repealed, and a new apportionment of senatorial and representative districts was enacted; it was drawn on the lines indicated by the decisions of the court.

The ballot law was amended so as to prevent fusion of parties. It is provided that no candidate's name shall be placed on the ballot more than once, and requires that any candidate nominated by more than one political party shall make and file with the proper election commissioners his choice in writing, properly signed and acknowledged, stating which nomination he accepts. Unless he files this choice before the time arrives for printing the ballots, the election commissioners shall choose for him on which ticket his name shall be placed.

The voter is to use a blue pencil furnished by the election officers, instead of a rubber stamp and ink, in marking his ballot, and a circle instead of a square is to be placed around the party device.

Another political act relates to the business of taking a poll. It requires a person questioned to answer truthfully as to how many male persons inhabit the premises, whether they are of voting age, and how long they have resided in that particular place. The law does not require them to answer as to the politics of these persons.

The metropolitan police boards in eleven cities are to be reorganized under an act requiring the Governor to appoint new boards with no more than two from the same political party; it applies to Elkhart, South Bend, Muncie, Anderson, Terre Haute, Richmond, New Albany, Jeffersonville, Lafayette, Logansport, and Michigan City.

A general street-car law was made which terminates all existing street-railroad charters in Indianapolis in 1901, provides a method for appraisal of the property of the existing company and its sale at such appraised value to its successor company, and gives the city authorities power to regulate fares in the franchise contracts.

A three-cent-fare law was passed to reduce the limit of fares permitted to be charged in cities of 100,000 inhabitants to three cents.

An important law affecting business interests is that on building and loan associations. The first section changes the cost of incorporating building and loan associations, making the fee to be collected by the Secretary of State \$5 on every \$50,000 of capital stock. Section 2 abolishes the expense fund and withdrawal fees. This section limits membership fees to 50 cents on \$100, and gives the association the right to set aside a contingent fund not to exceed 5 per cent. of the assets.

Next in importance in the way of business legislation is the antitrust law. It provides that all arrangements, contracts, agreements, trusts, or combinations between persons or corporations, who control the output of any article of merchandise, made with a view to lessen, or which tends to lessen,

full, free competition in the importation or sale of articles imported into this State, and all arrangements, contracts, agreements, trusts, or combinations between persons who control the output of said articles of merchandise to control the cost of such articles to the producer, shall be unlawful and void. A violation of the act by a corporation shall operate as a forfeiture of its charter and right to do business.

Several laws were passed in the interests of labor, of which three were of great importance—the arbitration law, the child-labor law, and the law abolishing prison-contract systems.

The arbitration law creates a nonpartisan board of arbitration or conciliation, composed of two labor commissioners and the judge of the circuit court where the dispute arises. The labor commissioners are appointed by the Governor and hold office two years. One of the commissioners must, for at least ten years of his life, have worked for wages, and shall be at the time he is appointed affiliated with the labor interests. The other shall have been at least ten years an employer of labor in some similar department of industry, and shall be when appointed affiliated with the interests of employers. The commissioners are to offer their services as mediators in case of any labor complication, and with the judge of the circuit court of the county where the difficulty arises are to form a board of arbitration. If the parties refuse to submit to arbitration the commissioners shall investigate the trouble, and make a report thereon, which shall be published for general distribution.

The child-labor law, or factory-inspection law, provides for the appointment by the Governor of a factory inspector, at a salary of \$1,500 a year. This inspector has charge of all manufacturing establishments in the State, which term is declared to include all establishments for manufacturing that employ ten persons or more. He may issue permits to carry on business without complying with the regulations of the act as to fire escapes or size of room in which a given number of persons are employed; may require a manufacturer to paint or whitewash his ceiling, and in various other ways exercise a discretionary power over the employers' affairs. The act forbids the employment of any boy under sixteen or any woman under eighteen in any factory for more than sixty hours in any one week. It also forbids the employment about a manufacturing establishment of any child under the age of fourteen. And children between the ages of fourteen and sixteen can only be employed during the vacation of the public schools or after they have learned to read and write. The law forbids the manufacture of garments or cigars in "sweat shops."

The prison-labor law provides that "the contract prison labor in the State prisons and reformatories be abolished, and authorizes the board of directors of the State penal and reformatory institutions to establish the public-accounts system, to institute in said prisons an industrial and labor system by which the convicts shall be employed at such trades and vocations as will be required to supply the institution as nearly as possible with all necessary articles of prison consumption, or as will, in the judgment of the directors, be expedient and wise."

A law in the interest of miners makes it unlawful for any one to serve as mine boss, hoister, engineer, or fire boss without a certificate of competency from the State mine inspector.

Another act provides for the construction of exits after mines have been worked a certain distance and for keeping these exits clear.

The law on garnishment was amended, making the amount of exemption of wages \$25; but to en-

title the householder to the \$25 as exempt, he is to remain in the employ of the corporation or person garnisheer¹.

It is provided that there shall be appointed by the Governor a State board of medical registration and examination of five members, upon which no school of medicine shall have a majority representation and not more than three shall be of the same political party, but all shall be graduates of medical colleges within this State and reputable physicians.

The dependent-children law provides for the establishment of children's asylums by the commissioners of a county or of several counties joining together, and the making of arrangements with charitable societies for conducting these asylums.

Another measure makes it incumbent upon each township to care for its own paupers.

The only temperance legislation was the "anti-quart-shop" law, including drug stores as well as quart shops. It provides that section 5312 of the Revised Statutes of 1881 be amended to read as follows: "It shall be unlawful for any person, directly or indirectly, to sell, barter, or give away, for any purpose of gain, any spirituous, vinous, or malt liquors, without first procuring from the board of commissioners of the county in which such liquor is to be sold a license. If said applicant desire to sell spirituous, vinous, and malt liquors he shall pay the treasurer of said county \$100 as a license fee for one year before license shall issue to him. Such fees shall be paid into the school fund of the county in which such licenses are obtained." The act does not apply to any dealer who does not sell in less quantities than five gallons at a time.

The life of the appellate court was extended four years.

A compulsory education act requires that every child physically and mentally able shall attend school at least twelve weeks each year, and provides for the employment of truant officers in cities and towns.

Five bills were passed for the purpose of securing better treatment of prisoners. The most important of these is the law converting what was formerly the Prison South into a Reformatory.

Another important measure for prison reform is the indeterminate-sentence law, applying to all crimes except treason and taking of human life.

A third measure with a like purpose is one establishing the grading already in use with good results at the Prison South.

The power of appointment of the directors of the State Prison is restored to the Governor.

The method of selecting boards for the State benevolent institutions was changed by an act which provides for their government by boards of three, appointed by the Governor, no more than two members of any one board being of the same political party. Another bill relating to State institutions provides that the Governor shall appoint a non-partisan committee of three members-elect of the Legislature at least forty-five days before the meeting of each General Assembly to visit the penal, benevolent, and educational institutions of the State, and make a report to the Legislature of their condition and needs.

Many measures affecting insurance were enacted, of which the most important probably was that repealing the section of the old law which imposed a penalty of 10 per cent. upon home fire insurance companies for failure to adjust and pay losses within sixty days. Another provides for the organization and regulation of assessment life and accident insurance companies.

An anticigarette law forbids the sale or gift of cigarettes to minors. A pure-food law declares unlawful all adulterations of food products or drugs.

An impeachment law was enacted, which provides for impeachment and trial of State officers by the Legislature. For county officers the method is through the grand jury or by affidavit and trial by the circuit or criminal court.

The special verdict law of 1895, which made it almost impossible for a plaintiff to secure a verdict in a damage suit against a corporation, was repealed.

Another act declares that the standard half-bushel measure shall be the only measure used in testing wheat in less than car-load lots. Another was passed declaring the number of pounds to the barrel, bushel, ton, etc., of the principal articles of produce, and making it a misdemeanor, punishable by a fine of from \$1 to \$25, for any one to buy or sell any of these articles by weight at a measure differing in weight from the standard.

Two acts were passed for the protection of fish, and one to prevent the slaughter of quail or grouse by any other method than that of dog and gun. Another measure prevents the killing of Mongolian pheasants for two years.

Among other measures passed were the following:

Appropriating \$5,000 for a statue of Oliver P. Morton in the Capitol at Washington.

Broadening the scope of surety companies so that they may serve where freehold surety has heretofore been required.

Taxing transient merchants.

Requiring certain county officials to execute pension papers free of charge.

Giving to cities and incorporated towns power to tax and regulate clairvoyants, street fakirs, itinerant dealers, vehicles, branch stores, and trolley and telegraph poles.

Authorizing the Attorney-General to institute suit to recover the claim of the State against the Vandalia Railroad Company for \$1,000,000.

A joint resolution declared "The Story of Liberty" an improper book for school children. It is a book put out for use in the schools, a story of the Inquisition, and is regarded by Catholics as slanderous toward their Church.

Contested Laws.—The constitutionality of the law passed this year limiting street-car fares in Indianapolis to three cents was disputed on the grounds that it impaired the validity of contracts and was special legislation; but the State Supreme Court sustained the law.

The General Assembly of 1895 passed an act providing for relocation of county seats under certain conditions. The only county coming under the conditions was Jackson County, and the law made necessary a special election to determine the question of removing the county seat from Brownstown to Seymour. This was resisted on the ground that the law was special legislation. The Supreme Court upheld the law because the entire power over the removal of county seats is vested in the Legislature.

The Indiana and Ohio laws enabling the local State authorities to tax all the property of railroad, telegraph, and express companies were sustained in all their parts by the United States Supreme Court Feb. 1. This decision gives the State \$100,000 from the express companies and \$125,000 in the case of the telegraph company. The latter appealed only on the ground of the 50-per-cent. penalty which the State sought to collect for the company's failure to pay the tax when it was due. The law imposing the tax was declared valid in 1896; the company then tendered the tax without the penalty; the Treasurer refused to receive it, and the suit decided this year sustained the Treasurer in collecting the 50-per-cent. penalty.

The right of the tax commissioners to tax paid-up life insurance policies and policies that have a cash surrender value was tested in the Marion circuit court, and it was declared that there was no law authorizing such a tax.

The city of Muncie passed an ordinance for the purpose of excluding saloons from the residence portions of the city, which was to be operative even in the case of persons already holding licenses. A saloon keeper who held city and county licenses continued to keep his saloon in a location coming under the terms of the ordinance and was prosecuted. On appeal, the Supreme Court sustained the city, holding that a license is a mere permit, revokable at the need of the public welfare.

Decisions have been given in several courts against the garnishee law, declaring it unconstitutional.

Political.—The question of the right of women to vote in this State was settled against them by the Supreme Court in a decision, March 2, in the case of a woman who appealed a suit against the election officers of her precinct in Lafayette. The opinion said, in closing: "Whatever the personal views of the justices upon the advisability of extending the franchise to women, all are agreed that under the present Constitution it can not be extended to them."

A special election was held in the Fourth District, Aug. 10, for a member of Congress to succeed the late W. G. Holman. The Democratic candidate, Francis M. Griffith, was elected by a majority of 1,152, over Rev. C. W. Lee, Republican, and Rev. M. W. Broader, Populist.

INGELOW, JEAN, an English author, born in Boston, England, in 1820; died in London, July 19, 1897. Few people in this stirring time have passed seventy-seven years that were as little touched by outward changes of circumstance as did Miss Ingelow. She was so successfully averse to publicity that even the events of her life (if there were

contemporary poets. Miss Ingelow was always a dispenser of unostentatious charity—that which gave herself as well as her worldly goods. One of her stated acts of kindness consisted in the giving, three times a week, of what she called "copyright dinners." To these she invited twelve needy persons, generally selecting those who had just been discharged from a hospital.

England has given to the world during this century three woman poets of wide fame and of apparently enduring reputation. One was an English-woman who gave back in her poetry the thought and spirit she imbibed during a life in Italy; another of them wrote, during a life in England, the fervor and mysticism that was the blossom of Italian heritage; the third was of English and Scottish ancestry, and passed her days in her native atmosphere. But in one thing these writers were singularly alike—in the quality of womanliness. The "Sonnets from the Portuguese" of Mrs. Browning are perhaps the finest love poems in our language, unless we except Shakespeare's sonnets. His are masculine, hers feminine. Christina Rossetti set devotion in a niche where it appears half saint, half woman. Jean Ingelow gives both emotions free play in the clear sense of her sturdy race. She is at all times sane and reasonable, which is not true of either of the others. The dictum "There is no sex in brain" is as unfortunate as it is uncomplimentary and untrue. Man should be able to give to the world of thought something that woman can not, something that will appeal to the well-constituted womanly mind as the work of woman does not. Woman should be able to give to the world something that man can not, something that in like manner awakes a response in his mind, because it is a way of believing or judging not native to himself. This has nothing to do with the question which is superior. The judgment passed upon woman's work is now uninfluenced by considerations of sex; but if that work shall to any large degree lose the quality that sex environment can give to mental processes, the world will be poorer for the change.

The three poets just mentioned have dwelt almost continuously upon love and faith. It has been woman's work to present the living ideals of these two supreme passions from the beginning—true love and true faith, or evil love and erroneous faith. Jean Ingelow's teaching is wholesome, pure, and attractive. She has nothing of the mystic, nothing of the cynic. Her poems are sweet at their source and steady in their flow. In closing the poetic philosophy of her poem entitled "Honors," she says in regard to the so-called conflict between science and religion:

Then all goes wrong: the old foundations roek;
One seorns at him of old who gazed unshod;
One striking with a pickaxe thinks the shock
Shall move the seat of God.

A little way, a very little way
(Life is so short), they dig into the rind,
And they are very sorry, so they say—
Sorry for what they find.

But truth is sacred—aye, and must be told:
There is a story long beloved of man;
We must forego it, for it will not hold—
Nature had no such plan.

And then, if "God hath said it," some should ery,
We have the story from the fountain head:
Why, then, what better than the old reply,
The first "Yea *hath* God said"?

The garden, oh, the garden, must it go,
Source of our hope and our most dear regret?
The ancient story, must it no more show
How man may win it yet?



JEAN INGELOW.

any) never have come to the public ear. Her father was a wealthy banker; her mother was from Scotland. They were people of cultivation, the father being especially a student and lover of the best literature. Jean was bashful and quiet. She published a volume of poems anonymously, in 1850, with the title "A Rhyming Chronicle of Incidents and Feelings." Her first acknowledged volume of poems appeared in 1862. It found hearty recognition at once, and placed her high in the ranks of

Oh, marvelous credulity of man!
If God indeed kept secret, couldst thou know,
Or follow up the mighty Artisan
Unless he willed it so?

And eanst thou of the Maker think in sooth
That of the Made he shall be found at fault,
And dream of wresting from him hidden truth
By force or by assault?

But if he keeps not secret—if thine eyes
He openeth to his wondrous work of late—
Think how in soberness thy wisdom lies,
And have the grace to wait.

Wait, nor against the half-learned lesson fret,
Nor chide at old belief as if it erred,
Because thou eanst not reconcile as yet
The worker and the word.

Jean Ingelow is a wonderful preacher of righteousness. She has sounded the depths of Christian experience, and, in true imagination, can put herself in the place of those whose lives are unlike her own, except in the one great need of our common humanity—the need of escape from sin. The most remarkable example of this power of religious sympathy, and of its ability to touch the mind and move the heart, is seen in her long poem in blank verse entitled "Brothers and a Sermon." Two young men of the upper class had accidentally strayed into vesper service in a fishing village. At the close of the simple but touching discourse the aged minister questions:

"And is this all:

Trouble, old age and simpleness, and sin?
This all: it might be all some other night.
But this night, if a voice said 'Give account
Whom hast thou with thee?' then must I reply,
'Young manhood have I, beautiful youth and strength,
Rich with all treasure drawn up from the crypt,
Where lies the learning of the ancient world—
Brave with all thoughts that poets fling upon
The strand of life—as driftweed after storms:
Doubtless familiar with thy mountain heads,
And the dread purity of Alpine snows,
Doubtless familiar with thy works concealed
For ages from mankind—outlying worlds,
And many moonèd spheres—and thy great store
Of stars, more thick than mealy dust which here
Powers the pale leaves of auriculas.
This do I know, but, Lord, I know not more.
Not more concerning them—concerning thee,
I know thy bounty; where thou givest much
Standing without, if any call thee in
Thou givest more'—speak, then, O rich and strong;
Open, O happy young, ere yet the hand
Of him that knocks, wearied at last, forbear;
The patient foot, its thankless quest refrain,
The wounded heart for evermore withdraw."

I have heard many speak, but this one man—
So anxious not to go to heaven alone—
This one man I remember, and his look,
Till twilight overshadowed him. He ceased,
And out in darkness with the fisherfolk
We passed and stumbled over mounds of moss,
And heard, but did not see the passing beck.
Ah, graceless heart, would that it could regain
From the dim storehouse of sensations past
The impress full of tender awe, that night,
Which fell on me. It was as if the Christ
Had been drawn down from heaven to track us home,
And any of the footsteps following us
Might have been his.

Jean Ingelow was singularly unfortunate in the matter of titles. Nothing could be worse or less inviting than "Brothers and a Sermon," "Scholar and Carpenter," "An Afternoon at the Parsonage," "Supper at the Mill," or "The Star's Monument." "Divided" is a beautiful and characteristic poem. The following are the opening and the closing sections:

An empty sky, a world of heather,
Purple of foxglove, yellow of broom;

We two among them wading together,
Shaking out honey, treading perfume.

Crowds of bees are giddy with clover,
Crowds of grasshoppers skip at our feet,
Crowds of larks at their matins hang over,
Thanking the Lord for a life so sweet.

Flusheth the rise with her purple favor,
Gloweth the cleft with her golden ring,
'Twixt the two brown butterflies waver,
Lightly settle, and sleepily swing.

We two walk till the purple dieth
And short dry grass under foot is brown,
But one little streak at a distance lieth
Green like a ribbon to prank the down.

After the long parting that grew out of apparently accidental and trivial hindrances to meeting, at the end of a life-long separation, the affection of faith says:

And yet I know past all doubting, truly—
A knowledge greater than grief can dim—
I know, as he loved, he will love me duly—
Yea better—e'en better than I love him.

And as I walk by the vast calm river,
The awful river so dread to see,
I say, "Thy breadth and thy depth forever
Are bridged by his thoughts that cross to me."

One of the most charming of her poems is weighted with the cumbrous title "A Mother showing a Portrait of her Child." Here is a pleasant picture:

Is it warm in that green valley,
Vale of childhood, where you dwell?
Is it calm in that green valley,
Round whose bournes such great hills swell?
Are there giants in the valley—
Giants leaving footprints yet?
Are there angels in the valley?
Tell me—I forget.

Answer, answer, for the lilies,
Little one, o'erstop you much,
And the mealy gold within them
You can scarcely reach to touch.
Oh, how far their aspect differs,
Looking up and looking down!
You look up in that green valley—
Valley of renown!

Among the best-known and loved of Miss Ingelow's poems are those published collectively under the title "Songs of Seven," in which the seven ages of woman are told most musically from seven to seventy-seven. Her lyrical genius is perhaps best realized in the songs interspersed in "Brothers and a Sermon." Here is one:

Coo, dove, to thy married mate,
She has two warm eggs in her nest,
Tell her the hours are few to wait
Ere life shall dawn on their rest;
And thy young shall peek at the shells, elate
With a dream of her brooding breast.

Coo, dove, for she counts the hours,
Her fair wings ache for flight:
By day the apple has grown in the flowers,
And the moon has grown by night;
And the white drift settled from hawtborn bowers,
Yet they will not seek the light.

Coo, dove; but what of the sky!
And what if the storm-wind swell,
And the reeling branch come down from on high
To the grass where daisies dwell,
And the brood beloved should with them lie,
Or ever they break the shell?

Coo, dove; and yet black clouds lower,
Like fate, on the far-off sea,
Thunder and wind they bear to thy bower,
As on wings of destiny.

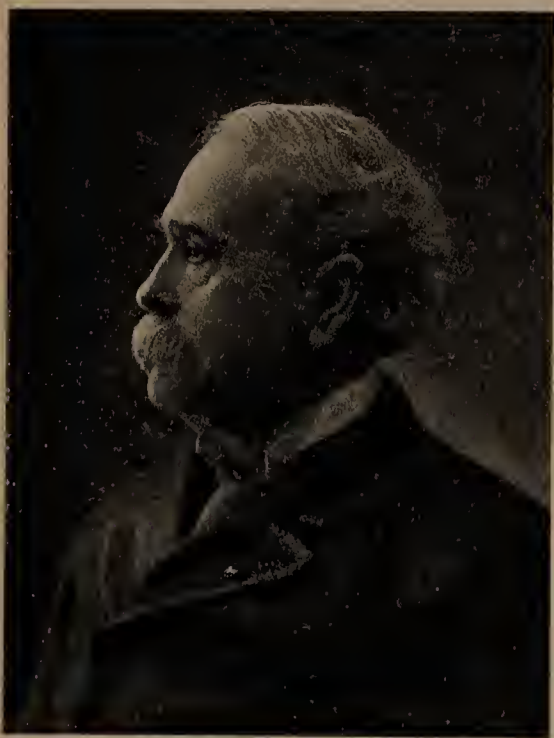
Ah, what if they break in an evil hour,
As they broke over mine and me!

Miss Ingelow's most famous poem is "The High Tide on the Coast of Lincolnshire," which has been so widely copied in the popular anthologies that it need not be quoted here.

Besides the books already mentioned, she has published two other volumes of poems and several prose works, among which are: "Studies for Stories" (1864); "Poor Matt" (1866); "Stories told to a Child" (two series, 1866 and 1872); "A Sister's Bye-Hours" (1868); "Mopsa the Fairy" (1869); "Off the Skelligs" (1872); "Fated to be Free" (1875); "Don John" (1876); and "Sarah de Benger" (1880).

IOWA, a Western State, admitted to the Union Dec. 28, 1846; area, 56,025 square miles. The population, according to each decennial census since admission, was 192,214 in 1850; 674,913 in 1860; 1,194,020 in 1870; 1,624,615 in 1880; and 1,911,896 in 1890. By the State census of 1895 it was 2,058,069. Capital, Des Moines.

Government.—The following were the State officers during the year: Governor, Francis M. Drake; Lieutenant Governor, Matt Parrott; Sec-



FRANCIS MARION DRAKE, GOVERNOR OF IOWA.

retary of State, George L. Dobson; Treasurer, John Herriott; Auditor, C. G. McCarthy; Attorney-General, Milton Remley; Railroad Commissioners, G. W. Perkins, C. L. Davidson, and E. A. Dawson; Superintendent of Instruction, H. H. Sabin; Adjutant General, H. H. Wright; State Chemist, S. R. Maey; Mine Inspectors, J. A. Campbell, J. W. Miller, and Morgan Thomas; Bacteriologist, Eli Grimes; Labor Commissioner, W. E. O'Brien; Dairy Commissioner, G. E. Delevan; Chief Justice of the Supreme Court, L. G. Kinne; Associate Justices, Scott M. Ladd, C. T. Granger, H. E. Deemer, Josiah Given. All are Republicans, except Judge Kinne, who is a Democrat.

Finances.—According to the biennial report of the Auditor, on July 1, 1895, there was a cash balance of general revenue in the treasury amounting to \$312,857.41. During the biennial term ending June 30, 1897, there was paid into the treasury, on account of general revenue, \$4,101,376.84, which made a total of \$4,414,234.25 available for current expenses. During the same period the Treasurer

redeemed warrants amounting to \$4,358,213.85, and paid as interest \$19,347.44, or a total of \$4,377,561.29, leaving balance cash on hand of \$36,672.96. There are warrants outstanding amounting to \$447,500.73, leaving a net deficit of \$410,827.77. The total estimated revenues of the next biennial period are \$4,047,672.96. The causes assigned for the deficit by the Auditor were the decrease in the assessed valuation of the State, which fell from \$566,529,971 in 1893 to \$555,061,274 in 1897; the increasing delinquency of some counties in the collection of taxes and in the remittance of dues to the State, the balances overdue on account of general revenue having risen from \$654,056.84 in 1893 to \$971,644.08 in 1897, while the amounts overdue from counties on account of State institutions have also increased more than half in the same time; the increasing needs of the State institutions for support and contingent expenses; the large appropriations to the institutions for buildings and improvements; and the cost of the special session of the Legislature and printing of the new code.

The State Treasurer made a statement to the Assembly showing by comparison with expenditures of other States that the finances of Iowa have not been extravagantly managed.

Education.—By the biennial report for 1896-'97 it is shown that the enumeration of persons between the ages of five and twenty-one is 727,694, an increase of 14,553. The enrollment is 546,836, a gain of 13,012; and the average attendance reported is 347,620. The number of schoolhouses is 13,744, of which 241 were built during the past year. The value of the schoolhouses is \$16,355,842, or \$710,299 more than in 1895.

The enrollment of the Normal School in 1897 was 1,441, a gain of more than 25 per cent. in two years. A new building was erected in 1895, yet the demands of the school for more room are as urgent as before it was built.

The report of the State University in November showed 1,331 students enrolled, an increase of 40 per cent. since 1892. In June the library was burned, with an estimated loss of \$82,000. The income of the university for its support for the biennial period amounted to \$264,525.85, of which \$113,775.83 was from tuition and fees and \$32,249.97 from investments. The remainder was from the State treasury. The expenditures for the same period amounted to \$270,262.16, of which \$104,091.22 was the cost of the collegiate department.

The Agricultural College graduated 55 seniors in November and conferred the degree of Master of Agriculture on United States Secretary of Agriculture Wilson. During the biennial term 105 were graduated in 8 courses; \$132,879 was expended in the operation of the college, \$30,292.14 on account of the experiment station, and \$74,128.72 in repairs and improvements.

A Baptist educational conference was held at Marshalltown, Dec. 21, to consolidate the Pella and Des Moines colleges. A vote was taken on the location of the institution, which resulted in 85 for Des Moines against 26 for Pella and 10 for other places. The College of Law graduated 39 this year.

Pharmacy.—By the annual report of the Board of Commissioners of Pharmacy it is shown that there are 1,500 drug stores in Iowa; that at no time have there been so few complaints of the violation of the pharmacy law; that there have been assessed in fines for violations of the law \$8,850, of which \$6,069 has been paid into the county school funds; and that while the board has raised the standard of the pharmaceutical examinations, the percentage of successful applicants has not decreased. Notwithstanding this fact, at no time since the passage of the law placing the sale of liquors in the hands of

the pharmacists has there been so little complaint of violation of the law by pharmacists as at present.

State Institutions.—The following table shows the number of inmates in the State institutions during the biennial periods ending with 1895 and 1897:

INSTITUTIONS.	1895.	1897.
Hospitals for the insane	2,392	2,526
Feeble-Minded Children Institution.....	570	672
Industrial schools.....	583	651
Soldiers' Orphans' Home.....	466	498
Soldiers' Home.....	545	644
School for deaf.....	301	304
Anamosa penitentiary.....	550	618
Fort Madison penitentiary.....	441	526
College for Blind.....	158	118
Agricultural College.....	545	530
Normal School.....	1,049	1,414
State University.....	1,134	1,331
Totals.....	8,734	9,857

The number in 1889 was 5,703, so that the increase in attendance has been 72.8 per cent. The net cost of maintenance, exclusive of buildings and improvements, in 1888-'89 was \$798,721.90, and in 1896-'97 it was \$1,236,827.01, showing an increase in cost of 55 per cent. The appropriations for the institutions for 1895-'97, including those for buildings and improvements, amounted to \$882,648.53 over those for 1893-'95.

The report of the trustees of the hospital for the insane at Independence shows that in the past two years 131 patients have been discharged as incurable. During the period the population has increased 40, and it is now 986. The number of patients cured was more than one third of the whole number received.

The hospital for the insane at Clarinda has admitted 288 men and 193 women. Of these 450 have been supported by counties and 31 by the State.

The receipts for the period are \$241,761.58; disbursements, \$241,037.76.

There have been 1,587 patients in the Mount Pleasant Hospital during the last biennial period, 43 more than has ever been in the institution before.

The commissioners of the new Iowa Hospital for the Insane at Cherokee report that \$400,000 has been spent in putting in the foundations and completing the superstructure, and ask for an appropriation of \$279,000.

The number of insane persons who have no legal settlement in the State, or whose legal settlement can not be ascertained, during the biennial term cost the State \$117,344.04.

There were 698 children in the Institution for the Feeble-Minded in September. The \$112,000 granted by the Legislature to replace the building burned in 1896 has been used for a new fireproof building.

The industrial schools had 651 inmates at the close of the biennial period; the Orphans' Home, 498; the School for the Deaf, 304; and the College for the Blind, 118. There were 644 at the Soldiers' Home. The amount received by the home during the year was \$145,639.71; the total amount expended was \$136,050.78. The new hospital cost during the year \$40,583.33 for building and \$4,891.39 for furnishing. The action of the authorities of the home in retaining a part of the pensions of the inmates who have no relatives dependent upon them caused suits to be brought against them. A decision was rendered in the Supreme Court affirming the right of the commissioners to take the money. Then an action was brought in the Federal court on a charge of violating a Federal statute. The commissioners, commandant, and adjutant were arrested, but the cases against them were dismissed. A statement covering the year May 1, 1896, to May 1, 1897, shows that the whole amount paid for pen-

sions was \$43,339.10; the amount handed over to pensioners, \$27,858.93; to dependent relatives, \$10,214.04; to the State, \$5,266.13.

The penitentiary at Anamosa had 625 inmates at the close of the biennial period, and the one at Fort Madison 526. Both institutions have returned to the State treasury parts of the allowances or appropriations made for their support.

Fish.—The Fish Commissioner's report states that during the biennial period more than 500 poachers have been arrested, and fines aggregating \$6,458 have been collected. He calls attention to the fact that the fines collected by the department have aggregated \$458 more than the entire sum paid by the State during the two years for maintenance of the department. A large number of public and private bodies of water in the State have been stocked with fish, and many millions of fish have been gathered from the bayous of the Mississippi river at Sabula, carted over the State in the commission's car and dumped into the rivers and lakes.

Banks.—The quarterly report on the condition of the 205 State banks and 168 savings banks at the close of business Oct. 5, 1897, showed that since the report made at the close of business June 30, 1897, there was a wonderful increase in business and a general betterment of conditions. As compared with the last report there was an increase of deposits of \$5,048,631.91. The cash increased \$529,566.51. The bills receivable increased \$2,066,234.31. The net increase of assets was \$4,735,088.42. Following is the statement including both State and savings banks: Assets—bills receivable, \$51,557,821.90; cash and cash items, \$3,920,486.60; credits subject to sight draft, \$10,698,387.85; overdrafts, \$763,028.08; real and personal property, \$3,594,804.95; total, \$70,534,529.38. Liabilities—capital stock, \$16,212,200; due depositors, \$50,491,525.60; due banks and others, \$274,213.58; surplus, \$1,814,083.49; undivided profits, \$1,742,506.71; total, \$70,534,529.38. During the year ending June 30, 1897, five savings banks and one State bank were placed in the hands of receivers.

For receiving \$200 for deposit in the Bank of Waukon after it was insolvent the owner of the institution will have to serve five years in the penitentiary. The Supreme Court in October affirmed the decision of the lower tribunal and held that his guilt was very clear from the evidence.

Railroads.—The assessment of railroads, given out in April by the executive council, shows the number of miles to be 8,495, and the valuation \$44,494,431, which is a little more than \$113,000 above the valuation of 1896.

By the annual report of the Railroad Commissioners in June it appears that the earnings of the Iowa roads during the year amounted to \$41,841,292.55. The biennial report, in December, says: "In the opinion of the board one of the most important decisions relating to transportation that has been rendered was made by the Supreme Court of this State in the case of *Barris et al. vs. the Chicago, Burlington and Quincy Railroad Company*. The opinion refers to a railroad company making what was alleged to be an unreasonable freight charge, the court holding that the company is not relieved from liability to the shipper in treble damages therefor, although the rate charged was that fixed by the Railroad Commissioners. One of the eogent reasons, among others, for the enactment of the law giving the Board of Railroad Commissioners the right to establish reasonable maximum rates undoubtedly was to establish uniformity in rates and to prevent railway companies from discriminating against places or persons. In the opinion of this board this decision destroys and abrogates that element of the law.

Loan Associations.—In a decision rendered by the Supreme Court in October it is held that in winding up the affairs of a building and loan association a *pro rata* payment must be made to all stockholders regardless of notices of withdrawals.

Insurance.—The insurance report issued by the Auditor in July covers the year 1896. It shows that the premiums collected by all kinds of insurance companies amounted to \$7,128,680.28. The losses paid during the same period amounted to \$2,581,179.05. The per cent. of premiums returned to insured, therefore, in payment of losses was 37.3, leaving a gross profit to the companies of 62.7 per cent.

There has been a net increase of nine fire insurance companies and eight fire insurance associations over the number during the previous year.

Of the companies doing business in 1896-116 were fire, 38 life, 57 mutual benefit assessment, and 149 mutual fire, hail, tornado, etc.

Thirteen Iowa companies were barred this year from carrying on business in Minnesota.

In July the Minnesota commissioner withdrew the bar to the Iowa companies, and the trouble was at an end.

In reference to the law regarding taxation of premium incomes of foreign insurance companies (see under "Legislative Session," this article) Secretary-of-State Sherman wrote to the Governor: "It has been represented to this department by the minister of Switzerland at this capital that Iowa has laid a tax upon the premium income of European insurance companies greater than the tax imposed upon the premium income of American. As this operates to the disadvantage of Swiss insurance companies doing business in Iowa, the minister submits that it is a violation of the treaty rights of Swiss citizens as set forth in Article XI of the treaty concluded Nov. 25, 1850, between the United States and Switzerland. I have the honor to quote the pertinent provision of said Article XI, 'No higher impost, under whatever name, shall be exacted from the citizens of one of the two countries residing or established in the other, than shall be levied upon the citizens of the country in which they reside nor any contribution whatever to which the latter shall not be liable.'"

Products and Industries.—The Chief of the State Weather and Crop Service gave in July a report on farm statistics. The acreage was: Winter wheat, 194,466; spring wheat, 1,076,837; corn, 8,610,145; oats, 4,405,782; barley, 551,867; rye, 226,198; tame hay, 2,159,334; wild hay, 1,156,638; flax, 249,882; potatoes, 163,248. The number of cattle was 3,008,024; of horses, 1,220,068; of sheep, 464,791; of hogs, 5,598,691. The loss of hogs by cholera in 1896 was 2,192,592.

The value of the dairy products of the State in 1896 was \$41,573,000.

The biennial report of the mine inspectors shows the following totals of the coal-mining business in 1896 and 1897: Total expense of tracking, props, etc., at mines, \$681,993; average selling price per ton at mines, \$1.30; total value of product at mines, \$9,534,677; total amount paid miners, \$5,642,342; total amount paid all other employees, \$2,161,754; average price per ton paid for mining, 77 cents; average number of miners employed, 8,483; average number of all other employees, 2,987; number of tons of coal produced, 7,325,224; average number of mines in operation, 358.

The number of business failures in Iowa during 1897 was 308, with assets of \$1,774,588 and liabilities of \$2,688,441. In 1896 the Iowa failures were 391, with assets of \$4,470,547 and liabilities of \$5,392,576.

The Mulet Law.—This law, which was designed to reduce liquor selling to a minimum in counties

where the prohibition law had failed to work satisfactorily, seems to be successful, according to the answers given by county auditors to questions sent out from the office of the Traer "Star-Clipper." The questions were, in brief: 1. Is the mulet law in force in your county? 2. What financial benefits? 3. Is the experiment successful? The returns made to the "Star-Clipper" show that the mulet penalty law is in force in 40 out of the 99 counties. The collection by counties aggregated last year \$878,441.84, to which must be added amounts collected by cities, making the total probably \$1,500,000 a year. Of the 40 auditors, 32 pronounce the mulet law an unqualified success. Only one auditor answers unqualifiedly "No" to the third question, and that is the auditor of Appanoose County, where there has been considerable friction on this question. The Supreme Court decided in February that the law does not apply to cities organized under special charters.

Semcentennial Celebration.—The fiftieth anniversary of the settlement of Pella was appropriately celebrated Sept. 1. The first settlers were from Holland, and were among the first foreigners to come into the State. It is estimated that the Dutch and their descendants in Iowa occupy an area about one fifteenth as large as Holland.

India Relief.—The final report of the India Relief Commission shows that a total of 79 cars containing 2,650,310 pounds of grain was given by the people of Iowa for the relief of the starving and plague-stricken inhabitants of India. The expenses of the commission have been almost nothing, and what has been spent was for postage, stationery, printing, and for drying corn. Not one cent was used for clerical or other personal work.

Legislative Session.—An extraordinary session of the Legislature was called to meet Jan. 19, in accordance with a concurrent resolution passed at the regular session in 1896. The subjects for consideration mentioned in the call were the report on the revision and codification of the laws and provision for repairing the damage to many of the buildings of State institutions. The work of the session virtually closed May 11, when a recess was taken to July 1, and the final adjournment took place July 2. This was done in order to postpone the time when the new code was to go into effect, a constitutional provision making it ninety days after the adjournment. The cost of the special session, including the printing, was \$170,497.53. Lieut.-Gov. Parrott presided over the Senate, and H. W. Byers was Speaker of the House.

Many salaries and allowances for expenses of State officers were reduced, and provision was made for increase of revenue. The total net gain to the State treasury was declared by the Speaker to be about \$165,000 a year.

The mulet law was passed with an amendment allowing the manufacture of liquor in the State. There was much opposition to this bill, and many petitions against it were sent to the Legislature. The manufacture of liquor may not be carried on in any city of less than 5,000 unless 50 per cent. of the voters at the preceding election have signed a statement of consent, and it is permitted only in towns that have the mulet saloon. The mulet law is made applicable to cities of over 2,500 and under 5,000 when a petition is signed by 80 per cent. of voters.

The sum of \$112,900 was appropriated for rebuilding the Institution for Feeble-Minded Children, at Glenwood.

Among other changes in the laws the more important are summed up by the "State Register" as below:

Revenue laws: All property is to be listed at its

actual cash value and assessed at 25 per cent. of such value. Professional libraries are exempt only to the amount of \$300. The homestead of a Union veteran is exempt to the amount of \$800 if he is dependent upon his labor and becomes unable to work; and also that of a widow of such soldier if she owns no other real property. The amount of tax that can be levied is limited to the amount that might have been produced on the average of assessed valuation for the years 1896 and 1897. The assessed value of property may be increased, but there can be no increase of taxes. Private bankers and all corporations must make itemized statements to the assessors of their assets and liabilities, so that the stock may be assessed at its actual cash value. Stocks of State and savings banks are to be assessed to the banks, and the tax paid by them. Shares in building and loan associations are to be taxed to the individual stockholder in the county of his residence. Telegraph and telephone companies are required to make a much fuller statement than under the old law. Each taxpayer is required to make a sworn statement of his moneys, credits, and debts, and penalties are prescribed for failure of officials to assess justly. All insurance companies organized outside the United States are to pay $3\frac{1}{2}$ per cent. on gross premiums. Stock insurance companies organized in the United States outside of Iowa pay $2\frac{1}{2}$ per cent. on gross premiums. Iowa companies and all mutual assessment companies pay 1 per cent. on their gross premiums. In addition to this Iowa stock companies pay tax as other corporations on their stock.

Other laws concerning insurance companies are as follow: Natural premium companies are forbidden to use that term and must be known as "stipulated premium" companies. Fire insurance companies can not rebuild when the loss is total. No agent not a resident of Iowa may write insurance in the State.

Laws concerning banks: Savings banks are authorized to rediscount—that is, to borrow money to pay depositors. A reserve fund is required in savings banks of 15 per cent. of the commercial and 8 per cent. of the savings deposits in towns of less than 3,000. In other cities the cash reserve shall equal 20 per cent. of the time and 8 per cent. of the savings deposits. State bank reserves in towns of less than 3,000 must be 10 per cent.; in other cities or towns it must be 15 per cent. of the deposits. It is made embezzlement for any officer of a bank to use its funds or borrow except on order of the board of directors. Fraudulent banking is to be punished by fine of \$10,000 and ten years in the penitentiary.

Building and loan associations may not charge more than 12 per cent. interest on foreclosure of mortgages.

Several laws were made affecting the powers of the executive council. The expenditures of the State institutions are to be strictly supervised, and annual reports published. The taking of the State census is reduced to the enumeration of the males and females, voters and militia. The law giving the executive council the right to expend money under emergencies is repealed.

Counties are authorized to issue bonds payable at a time stated, not exceeding twenty years. The right to payment for animals killed by dogs is repealed.

Laws for regulating the practice of medicine prohibited osteopaths from practicing, and required Christian Scientists to pass examination for certificates from the State Board of Health. Itinerant physicians must pass the examination and pay annual license fees of \$250 each. State certificates are required of dentists unless they have practiced seven years in one place.

Several changes were made in the prescribed forms of election ballots. No candidate's name may appear more than once on any ballot.

Wills executed in other States in accordance with their laws are to be admitted to probate in this State.

Administration may be granted upon the estate of one whose whereabouts is unknown for seven years.

The husband or wife is made a competent witness in an action by one against a third party for alienating the affections of the other. Witnesses may be compelled to give incriminating testimony in gambling cases or illegal sales of liquors, but such testimony can not be used against the witness. Common-law arbitrations are made of the same force and effect as contracts.

The formation of school libraries is encouraged by the authorization of an expenditure not to exceed \$25 annually for each schoolroom, to be paid out of the contingent fund.

To be ranked as first class, cities must have 15,000 or more inhabitants; second class, 2,000 to 15,000. Municipal corporations of less than 2,000 shall be deemed towns, and unincorporated towns shall be called villages. Town officers are to be elected for two years instead of one. The powers of cities and towns as to taxation have been revised, and the amount of tax that may be levied for each purpose is prescribed—as 3 mills for a curbing fund, 5 mills for a city improvement fund, 5 mills for operating waterworks, 2 mills for constructing or purchasing waterworks, 5 mills for lighting, etc.

Some changes were made in the fish and game laws. All harmless birds are specially named in a list of birds that are not to be killed at any season. Blue jays and English sparrows are not included in the list. October and November constitute the open season for the killing of quail. A closed season is provided for timber squirrels between Jan. 1 and July 1.

Directors and officers of a corporation are held personally liable for all debts of the corporation if it exceeds its limit of indebtedness, or if they pay dividends which deplete its capital stock, or commit any other fraud forbidden by law. All foreign corporations other than manufacturing or mercantile are required to file their articles and become domesticated and pay a State incorporation fee. This is retroactive back to 1886.

Among miscellaneous enactments were these:

Making Washington's Birthday and all general election days legal holidays.

Abolishing the Soldiers' and Sailors' Monument Commission.

Fishing is permissible on Sunday.

Baseball and football on Sunday are permissible so long as no private family or place of worship is disturbed.

The wild rose is made the official State flower.

An amendment to the Constitution regarding the basis of representation in the Legislature was passed and referred to the next General Assembly for action.

There were charges that dishonesty and extravagance in the management of certain State departments and institutions were largely responsible for the deficit in the State finances, and investigations were ordered. The chief scandal was in connection with the taking of the State census. The investigating committee found that it cost over \$128,000. Of this, \$64,030.44 was expended after it reached the office of Secretary of State. The clerical work in the office of the Secretary of State cost \$37,000. The committee estimated that it could have been done for \$12,000. The committee made two charges:

First, that some of the clerks were carried on two pay rolls at the same time, receiving \$3 or \$4 a day from the census fund, while drawing pay as clerks in the office of the Secretary of State in sums ranging from \$25 to \$65 a month; and, second, that "a larger number of clerks employed on the census, on one pretext or another, through fear of dismissal, were compelled to contribute of their earnings sums varying from \$10 to \$30 a month to the then Secretary of State.

Investigation was also made of charges against the State printer and binder. The report of the majority of the committee said, in part: "The prices charged for both composition and press work on various kinds of blanks has been exorbitant in the extreme, varying from two to twenty times as much as expert printers have testified that the work could be done for in open competition, and in the opinion of your committee there are more than a hundred instances where these charges have been unwarranted under the law and the bills should not have been paid." The minority report expressed belief that the investigation had been "limited in scope, partial and unfair in its manner of conduct," and asked for another more complete and thorough.

A bill was prepared by the committee and passed which fixes the prices the State printer and State binder shall receive for their work, after the terms of the present officers shall have expired.

Hon. Rudolph Lehfeldt, a State Senator for the past four years, returned his salary for the extra session of the Legislature to the State. The sum returned was \$678, the amount paid to the members for their labors in revising the code.

Publication of the Code.—The Legislature elected Chancellor Emlin McClain annotator of the revised code. He had made annotations to the former code which had been published under the title "McClain's Annotated Code and Statutes of Iowa," by a firm in Chicago. This firm now applied to the Federal court for injunctions against him and against the State printer to restrain them from publishing the new code with his annotations, on the ground that the notes had been clipped from the work published by them and formed the greater part of those used in the new, and that in a clause in the contract made with them in 1886 the editor had agreed not to "prepare, edit, or cause to be published in his name or otherwise, anything which may injure or interfere with the sale of the aforesaid book," the last two words referring to McClain's annotated code. The injunction was refused on the ground, apparently, that the damage to the Chicago publication was done by the revision of the code.

Political.—An election was held Nov. 2 to fill the offices of Governor, Lieutenant Governor, Judge of the Supreme Court, Superintendent of Public Instruction, Railroad Commissioner, and members of the State Legislature. There were six tickets in the field, a fusion ticket on which the free-silver forces were united, and Republican, National Democratic, People's, Prohibition, and Socialist-Labor tickets.

A free-silver conference was held in May, and, according to an agreement made there, the Democrats, Republicans, and Populists who were in favor of free coinage held conventions at the same time, June 23, in Des Moines. All nominated the same ticket, on which each party was represented. Each convention adopted its own platform, all agreeing in demanding free coinage of silver; also in arraigning the Republican party for extravagance and mismanagement in State affairs, and for legislation favoring corporations. The "antifusion law" passed by the last Legislature was denounced in the Populist platform. The Democratic and Populist resolu-

tions contained the following on the so-called "Temple amendment":

"We demand that the statute in operation in Iowa for more than a generation, holding every railroad corporation to strict liability for negligent injury to employees through the acts of agents or other employees, shall be restored according to its original beneficent spirit."

Fred. E. White was nominated for Governor, B. A. Plummer for Lieutenant Governor, L. G. Kinne for Justice of the Supreme Court, G. F. Rhinehart for State Superintendent, and S. B. Crane for Railroad Commissioner. A delegation of "Middle-of-the-Road" Populists withdrew from the convention.

The National Democrats held a State convention at Des Moines, July 7. The resolutions called for economy in public expenditures, and a board of control for the State institutions, and condemned the prohibitory and mulct laws. Following was also among the declarations of the platform:

"The doctrines of paternalism, class legislation, and debased coinage, to which each of the three contracting parties making up the free-silver, populist triple alliance in this State have recently pledged themselves in their several platforms, are as abhorrent to every true Democrat when advocated by Populists under the name of Democracy as when taught by Republicans. Democracy is a necessary foe of each, and we repudiate them as unworthy of the support of every true Democrat."

The ticket follows: For Governor, John Cliggitt; Lieutenant Governor, S. H. Mallory; Supreme Judge, W. I. Babb; Railroad Commissioner, Peter A. Dey; State Superintendent, J. B. Knoefler.

The Prohibitionists met in convention at Des Moines, July 27, with about 300 delegates. The following were among the resolutions:

"We declare that the so-called regulation by license, mulct, or taxation whereby a revenue is derived from this traffic is contrary to good government, is complicity with the liquor crime, and corrupting the public conscience.

"Experience teaches us that any political party not openly opposing this traffic will court the power of the liquor interests, and will shape legislation to secure or retain this support.

"We demand that every citizen of the United States shall be allowed to cast a free and unrestricted ballot at all public elections, and that such ballots shall be returned as cast, and that this sovereign right shall be denied to no citizen on account of sex."

The ticket nominated was: For Governor, Dr. E. L. Eaton; Lieutenant Governor, M. W. Atwood; State Superintendent, Mrs. M. H. Dunham; Supreme Judge, N. T. Hellyer; Railroad Commissioner, A. U. Coates.

It was discovered that Dr. Eaton had not been a resident of the State long enough to be eligible under the law, and the name of S. P. Leland was substituted.

The Republican convention met at Cedar Rapids, Aug. 18. The resolutions reaffirmed the principles of the party, and praised the national and State administrations. On the railroad question, the Temple amendment, the following declaration was adopted:

"We believe in the justice of those laws heretofore enacted by Republican legislatures securing to employees of railways the right to indemnity for personal injuries resulting from negligence, and we favor such legislation as may be found necessary to perfect such right and prevent its impairment or nullification in letter or spirit."

The ticket was as follows: For Governor, Leslie M. Shaw; Lieutenant Governor, J. C. Milliman; Supreme Judge, Charles M. Waterman; Railroad Com-

missioner, C. L. Davidson; Superintendent of Public Instruction, Richard C. Barrett.

The Socialist-Labor party nominated J. M. Klemmer for Governor.

The "Middle-of-the-Road" Populists held their State convention in Des Moines, Aug. 19. The platform declared in favor of the principles of the national platforms of the party adopted at Omaha and St. Louis, and contained also the following:

"We declare that through direct legislation as embodied in the principles of the initiative and referendum, the people will find relief from wicked laws which now distress them, and until they can so vote directly trusts and monopolies will continue to unduly influence our legislation and courts."

The ticket nominated was: For Governor, Charles A. Lloyd; Lieutenant Governor, D. L. Perkins; Judge Supreme Court, J. A. Loneburg; Superintendent of Instruction, William Blain; Railroad Commissioner, L. H. Griffith.

The election resulted in the success of the Republican ticket. The vote for Governor stood: Shaw, Republican, 224,501; White, Fusion, 194,514; Leeland, Prohibitionist, 8,357; Lloyd, Populist, 5,269; Cliggett, National Democrat, 4,268; Kremmer, 881. In the Legislature of 1898 the House will be made up of 62 Republicans and 39 Democrats, and the Senate 39 Republicans and 11 Democrats.

ITALY, a constitutional monarchy in southern Europe. The throne is hereditary in the line of Savoy by male descent in the order of primogeniture. The reigning King is Umberto I, born March 14, 1844, the eldest son of Vittorio Emanuele II, of Sardinia, the first King of united Italy. The heir apparent is Vittorio Emanuele, Prince of Naples, born Nov. 11, 1869. The legislative power is vested in a Parliament consisting of a Senate and a House of Deputies. The Senate is composed of the princes of the blood royal and 390 members nominated for life from among men who have rendered eminent services to the nation, or have filled certain positions, or pay 3,000 lire annual taxes. The Chamber consists of 508 members, elected by the direct suffrage of all citizens able to read and write and paying 20 lire a year of direct taxes. The Council of Ministers constituted on July 14, 1896, was composed as follows: President of the Council and Minister of the Interior, Marchese Antonio Starrabba di Rudini; Minister of Foreign Affairs, Marchese E. Visconti Venosta; Minister of the Treasury, Prof. Luigi Luzzatti; Minister of Finance, Ascanio Bricca; Minister of Justice and of Ecclesiastical Affairs, Giacomo Costa; Minister of War, Lieutenant-General Luigi Pelloux; Minister of Marine, Benedetto Brin; Minister of Commerce, Industry, and Agriculture, Conte Francesco Guicciardini; Minister of Public Instruction, Prof. Luca Emanuele Giannettini; Minister of Public Works, Giulio Prinetti; Minister of Posts and Telegraphs, Emilio Sineo.

Finances.—The receipts of the treasury for the year ending June 30, 1896, were 1,839,753,509 lire, and the expenditures were 1,841,386,659 lire, leaving a deficit of 1,633,150 lire. For the year ending June 30, 1897, the ordinary receipts were estimated at 1,649,871,782 lire, the extraordinary receipts at 35,401,970 lire; total, 1,685,273,752 lire. The ordinary expenditures were estimated at 1,571,079,216 lire, the extraordinary expenditures at 103,575,131 lire; total, 1,674,654,347 lire. The revenue from railroads and other property is 90,869,222 lire; from direct taxation, 482,821,800 lire, including 287,706,800 lire from the income tax, 106,615,000 lire from the land tax, and 88,500,000 lire from the tax on buildings; from taxes on transactions, 214,892,900 lire, including 68,500,000 lire from stamps, 58,000,000 lire from registration, 19,617,900 lire from railroad receipts, 10,500,000 lire from commercial companies

and banks, 37,500,000 lire from succession duties, 6,300,000 lire from mortmain revenues, 7,300,000 lire from a duty on mortgages, 6,500,000 lire from various concessions, and 675,000 lire from consular fees; from customs, monopolies, and excise, 668,565,000 lire, including 188,000,000 lire from the tobacco monopoly, 73,700,000 lire from the salt monopoly, 45,500,000 lire from duties on the manufacture of beer, alcohol, mineral waters, gunpowder, and sugar, 65,500,000 lire from the lottery, 51,865,000 lire from excise duties, and 244,000,000 lire from customs duties; from public services, 86,805,700 lire, including 53,200,000 lire from the post office, 13,100,000 lire from telegraphs, 1,300,000 lire from the cadastral survey, 3,020,000 lire from assay stamps, 7,060,000 lire from scholastic fees, 5,405,200 lire from prisons, 1,560,000 lire from fines, and 2,160,500 lire from various services; from repayments, 22,261,933 lire; from various departments, 18,267,000 lire; from the rent of domains, 15,510,555 lire; from interest on invested funds, 19,093,034 lire; communal contributions of Rome and Naples, 27,960,957 lire; miscellaneous receipts, 2,823,681 lire; from railroad-construction account, 419,941 lire; effective extraordinary receipts, 9,253,467 lire; from sales of domains, 2,418,000 lire; from sales of ecclesiastical lands, 2,810,000 lire; from redemption of lands, etc., 9,617,274 lire; from recovery of debts, 4,000,000 lire; miscellaneous extraordinary receipts, 6,883,288 lire. The expenditures are: Interest on the consolidated debt, 473,638,387 lire; interest on extinguishable debt, 62,655,634 lire; annuity for the purchase of the railroads of upper Italy, 26,964,857 lire; floating debt, 116,313,499 lire, including 18,062,197 lire for interest on treasury warrants, 15,525,307 lire due to railroad companies, 78,972,995 lire on railroad guarantees, and 3,753,000 lire on accounts current; pensions, 80,850,000 lire; civil list and appanages, 16,050,000 lire; Senate and Chamber of Deputies, 2,155,000 lire; general expenses of the Ministry of the Treasury, 9,766,210 lire; various services, 1,021,260 lire; reserve for unforeseen expenses, 3,500,000 lire; service of the amortizable debt, interest, and domains, 21,726,542 lire; amortization and other extraordinary expenditures, 38,479,982 lire; administration of the Ministry of Finance and the cadastral survey, 16,415,645 lire; cost of collecting revenues and of monopolies and lottery, etc., 145,952,225 lire; extraordinary expenditures of the Ministry of Finance, 3,682,571 lire; Ministry of Foreign Affairs, 9,392,100 lire for ordinary and 23,000 lire for extraordinary purposes; Ministry of Grace and Justice, 33,061,030 lire for ordinary and 27,000 lire for extraordinary purposes; Ministry of Public Instruction, 41,774,307 lire for ordinary and 623,891 lire for extraordinary purposes; Ministry of the Interior, 56,767,743 lire for ordinary and 2,368,701 lire for extraordinary purposes; Ministry of Public Works, 25,982,524 lire for ordinary and 50,974,473 lire for extraordinary purposes; Ministry of Posts and Telegraphs, 56,404,679 lire for ordinary and 60,016 lire for extraordinary purposes; Ministry of War, 235,598,283 lire for ordinary and 980,000 lire for extraordinary purposes; Ministry of Marine, 96,899,646 lire for ordinary and 4,275,000 lire for extraordinary purposes; Ministry of Agriculture, Commerce, and Industry, 8,446,348 lire for ordinary and 2,080,497 lire for extraordinary purposes. The total expenditure on account of the debt was 590,974,378 lire for interest and 5,248,420 lire for amortization.

The Minister of Finance stated on Dec. 1, 1897, that the returns for the financial year 1897 showed a net surplus of 3,800,000 lire, of which 3,000,000 lire were devoted to naval construction. For 1898 he anticipated a surplus of 7,160,000 lire after providing for an increase of nearly 14,000,000 lire in military and 4,000,000 lire in naval expenditure.

In 1899 there would probably be a surplus of 12,000,000 lire, possibly 21,000,000 lire, which could be devoted to the reduction of the paper currency, an operation calculated to diminish the gold premium. The equilibrium of the budget in these three years had been attained without new imposts, notwithstanding the losses involved in the revision of the land tax, and to consolidate this situation Signor Luzzati thought it necessary to check the increase of pensions, which otherwise would soon reach 100,000,000 lire a year, and gradually reduce them to 62,000,000 lire, to reduce African expenses, on which 2,300,000 lire would be saved by the transfer of Kassala, to 5,000,000 lire, and to transform and diminish the treasury debt, substituting registered bonds for 100,000,000 lire of the 4-per-cent. treasury bills, which amounted at the end of 1897 to 265,000,000 lire, and gradually paying off 90,000,000 lire more.

The Army.—The obligation to serve in the army begins at the age of twenty and lasts nineteen years, two or three years with the colors, or six years in the reserve of the permanent army, three or four years in the mobile militia, and seven years in the territorial militia. The present peace effective was fixed for 1897 at 205,000 men. By the law of July 12, 1896, the contingent called to serve with the colors was fixed at 98,000 men, and all others capable of bearing arms and not required for the support of families were placed in the second category, which receives from two to six months of military instruction. By the law of June 28, 1897, there are in time of peace 12 *corps d'armée*, each comprising 2 divisions, except one corps of 3 divisions, distributed in 88 military districts. The effective strength of the army in 1897 was as follows: General staff, 290 officers; 340 battalions of infantry and 98 district companies, 8,017 officers and 143,750 men; 144 squadrons and 24 cavalry depots, 960 officers and 23,590 men; 207 field batteries, 76 companies of fortress artillery, and 40 companies of train, 1,739 officers and 34,980 men; 64 companies of engineers and 10 companies of train, 597 officers and 8,969 men; 12 sanitary companies, 585 officers and 2,593 men; 12 commissariat companies, 325 officers and 2,036 men; administrative officers, 1,185; 12 legions of carabinieri, 551 officers and 23,945 men; military schools, 1,388 men; veterinary corps, 191 officers; total, 14,438 officers and 241,151 men, not including the African troops. The number of horses and mules was 49,304. In case of war armies will be formed, each consisting of 3 or 4 army corps and 1 division of cavalry. Each *corps d'armée* comprises 32 officers and 209 men at headquarters, 2 or 3 divisions of infantry, 1 regiment of *bersaglieri*, 2 divisions of artillery, with 48 guns, 1 regiment of cavalry, 1 artillery park, 1 park of engineers, 1 park of telegraph troops, 1 section of sanitary troops, 1 section of commissariat troops, several columns of provisions, and a reserve commissariat park. The total war effective of the army consists of 14,438 officers with the colors, 9,890 officers on leave from the permanent army or with the mobile militia, 4,732 officers of the territorial militia, 1,279 officers in the auxiliary services, and 6,086 officers of the reserve, making the total of officers 36,425; 241,151 rank and file serving with the colors in the permanent army and 501,527 in the permanent army on leave of absence; 349,204 rank and file of the mobile militia; and 296,386 in the territorial army; total war strength, 1,424,693 officers and men, not including 368,898 in the second category, who have received a partial military training, and the third category, consisting of 1,506,775 men with scarcely any military instruction, who are inscribed in the territorial militia.

Gen. Pelloux's army-reorganization bill was

adopted by the Chamber by 163 votes against 83 and passed the Senate on June 27 by 68 votes to 27. The chief feature is the retention of 12 army corps as against the proposal made by Gen. Ricotti in 1896 to reduce them to 10. Under Gen. Pelloux's scheme the average peace strength of each company will be raised from 83 men to 88, whereas Gen. Ricotti proposed to fix the minimum peace strength at 110 men in order to improve the quality of the troops in case of mobilization. The ordinary army estimates for the financial year 1898 are 230,000,000 lire. The extraordinary estimates are 15,750,000 lire, of which 9,500,000 lire are for 100,000 new small-bore rifles needed to complete the armament of the regular infantry and the mobile militia, and, 1,500,000 lire are devoted to the improvement of the frontier defenses.

The Navy.—The Italian navy contains the barquette ships "Lepanto" and "Italia," of 15,900 and 15,654 tons displacement, 19 inches of armor on the sides, each carrying 4 17-inch guns, besides smaller ones, the former having a speed of 18.4 and the latter of 17.8 knots; the "Re Umberto," "Sardegna," and "Sicilia," of 13,893, 13,860, and 13,298 tons, with 14-inch armor, carrying 13½-inch guns in their barbettes, with a powerful secondary battery, and capable of making from 18½ to 20 knots; the "Lauria," "Andrea Doria," and "Francesco Morosini," of over 11,000 tons, having 18-inch plates and a similar armament, with a speed of 16 to 17½ knots; the turret ships "Dandolo" and "Duilio," 15-knot vessels, with 22-inch armor, carrying the one 4 10-inch and the other 4 17.7-inch guns in the central citadel; the old ironclads "Palestro" and "Affondatore"; and, in process of construction, the "Ammiraglio di Saint-Bon" and "Emmanuele Filiberto," of 9,800 tons, with 10-inch armor, carrying 4 10-inch guns in barbettes, and designed to steam 18 knots. Of cruisers there are 4 of 6,500 and 6,840 tons, armed with 10-inch and 6-inch guns, and engineered for a speed of 20 knots, and 5 more between 4,000 and 5,000 tons, with a speed of 13 knots and a strong armament of 6-inch and lesser guns. The torpedo fleet consists of 6 first-class and 94 second-class torpedo boats, each armed with 2 guns, 38 of the third class, and 6 of the fourth class. In the new battle ships now building the protection is better than in the monster ironclads. The 10-inch belt of steel armor extends all the way round, and the heavy guns are coupled at each end of the armored redoubt containing the secondary armament. It is intended to replace the 120-ton guns in the earlier battle ships with lighter ones. The *personnel* of the Italian navy in 1896 consisted of 1,549 officers, 18,822 noncommissioned officers, marines, gunners, stokers, pilots, and seamen, and 4,189 marines and gunners on shore; total, 24,560.

The vessels in course of construction in 1897 were, in addition to the 2 first-class battle ships, 4 of the second class, 2 small cruisers, and a number of torpedo boats and torpedo catchers. The organic law of 1887 contemplated a navy of 28 new battle ships, supplemented by 61 torpedo boats, to be built in eight years at a cost of 105,000,000 lire. The financial condition of the Government has prevented this programme from being carried out. The ordinary naval estimates for the financial year 1898 amounted to 88,300,000 lire. Admiral Brin asked for an extraordinary credit of 7,000,000 lire, making up a total sum of 26,000,000 lire to be spent on new construction. The Chambers approved the proposals for the resumption of new construction and for restoring the efficiency of the existing fleet, which had suffered much during the period of financial depression from the reduction of the *personnel*, economy in fuel, and the decrease of expenditure on maintenance. The increase voted for 1898 was

7,500,000 lire, making the total expenditure 101,000,000 lire. In succeeding years the Government intended spending 10,000,000 lire more on the navy than the average annual naval budget of the past few years. Some of the Deputies proposed an internal loan to enable the Government to carry out as speedily as possible the whole programme of 1887, but the Minister of Marine rejected this plan. There was a pressing need of swift torpedo-boat destroyers, some of which were already under construction. The country was generally pleased with the increased credit for construction, hailing it as a sign that the decadence of the navy would be arrested. The hope then inspired was strengthened by the launch of the cruiser "Varese" at Leghorn in July and of the "Garibaldi" at Genoa in September. The "Garibaldi," belonging to the new type of warships of medium size in the construction of which the Italians excel, has a displacement of 6,840 tons, an extreme length of 326 feet, a breadth of 60 feet, and an average draught of 23 feet. She is protected by a 7-inch belt, 54 inches wide at the prow and 47 inches at the stern. Her armament will consist of 2 9.75-inch 80-ton guns, 6 4.75-inch and 10 12-ton or 5.75-inch quick-firers, and the usual complement of Maxims, mitrailleuses, and torpedo tubes. The engines, of 13,000 horse power, will give a normal speed of 19 knots. The cost of the vessel is 14,000,000 lire. On Sept. 29 the "Emmanuele Filiberto," the first example of the new Italian type of battle ship, was launched at Castellamare. Her dimensions are 342 feet over all, with an extreme breadth of 68½ feet and a mean draught of 24½ feet. The hull is of steel throughout, with a double bottom rising to the level of the deck in the vital parts, while from stem to stern extends an armored deck varying from 1.5 to 2.7 inches in thickness. Harveyized steel armor protects the guns, while the turrets fore and aft are covered with 7-inch armor. The armament consists of 4 9.9-inch guns, 2 in each turret, 8 5.9-inch quick-firers in a central citadel, and 10 small-bore quick-firing guns distributed fore and aft, with 4 torpedo ejectors.

Commerce and Production.—The land of Italy is very much subdivided, and the system of peasant proprietorship is rapidly gaining ground. In some places cultivation on shares is prevalent. Rented lands are taken on nine-year leases in upper Italy and in southern Italy for two, four, or six years. Agriculture is carried on in a primitive fashion, and the severe competition of foreign wheat has caused distress among the peasantry and a deterioration of the land, which is not properly fertilized after being cropped year after year with corn and hemp. The wholesale deforesting of the country, especially in southern Italy, renders the rainfall deficient and deprives the farmer of the protection of birds against the common insect pests. The wholesale trapping of the migratory birds to supply the dinner tables of London and Paris has caused a serious diminution in these varieties in several countries besides Italy. Silk culture is carried on in all parts of Italy, employing 550,048 persons in 1895, while 173,000 were employed in the manufacture of silk. The wool product in 1894 was valued at 16,683,000 lire. The yield of the forests, the most important of which are subject to Government regulations, is worth 88,000,000 lire a year; production of cereals, fibers, wine, fruit, etc., is valued at 2,805,500,000 lire per annum; that of animals, wool, milk, cocoons, etc., at 1,424,000,000 lire. The exports of minor agricultural products, such as vegetables, mushrooms, poultry, and eggs, amount to 80,000,000 lire a year. The mineral products include sulphur, zinc ore, lead, iron, copper, and manganese ores, anthracite coal, mercury,

silver, gold, antimony, salt, graphite, and boric acid, and their total value is 52,000,000 lire a year, nearly half of which represents sulphur. There are 22,000 boats engaged in the fisheries, which employ over 70,000 men. The value of the fishery products is over 16,000,000 lire a year, including tunney, anchovies, coral, sponges, etc.

The commerce with the different foreign countries in 1896 is shown in the following table, which gives in lire the values of the imports of merchandise from, and of the exports of domestic produce and manufactures to each one:

COUNTRIES.	Imports.	Exports.
England	229,900,000	109,600,000
France	133,700,000	153,100,000
Germany	144,800,000	160,000,000
Austria-Hungary	131,300,000	121,400,000
Switzerland	44,700,000	170,300,000
Russia	118,800,000	12,800,000
Belgium	27,900,000	18,600,000
Turkey in Europe	22,600,000	16,500,000
Spain	9,500,000	12,900,000
Netherlands	5,900,000	11,200,000
Roumania	20,000,000	1,300,000
Greece	3,900,000	5,900,000
Sweden and Norway	7,400,000	4,200,000
Malta	600,000	8,900,000
Rest of Europe	3,100,000	6,400,000
Turkey in Asia	3,900,000	3,600,000
British India	66,700,000	25,500,000
Rest of Asia	17,300,000	1,500,000
Egypt	5,500,000	14,200,000
Rest of Africa	9,000,000	14,400,000
United States and Canada	121,600,000	86,500,000
Brazil	5,000,000	13,500,000
Argentine Republic	27,400,000	57,400,000
Rest of America	10,400,000	19,800,000
Australasia	2,300,000	2,600,000
Total	1,173,200,000	1,052,100,000

In the special commerce for 1896 the importations of merchandise were valued at 1,173,200,000 lire, and of precious metals at 10,300,000 lire; special exports of merchandise, 1,052,100,000 lire; exports of precious metals, 19,900,000 lire; transit trade, 100,200,000 lire. The principal imports were cereals for 137,000,000 lire, cotton for 112,900,000 lire, silk for 91,500,000 lire, coal for 85,700,000 lire, hides and skins for 48,500,000 lire, iron for 44,400,000 lire, machinery for 36,800,000 lire, cattle for 35,000,000 lire, timber for 34,500,000 lire, chemical products for 34,200,000 lire, wool for 31,900,000 lire, woollen tissues for 29,700,000 lire, fish for 29,300,000 lire, coffee for 27,700,000 lire, colors for 27,500,000 lire, tobacco for 22,500,000 lire, silk tissues for 21,800,000 lire, sugar for 20,800,000 lire, seeds for 17,600,000 lire, jewelry and precious stones for 17,200,000 lire, cotton tissues for 16,600,000 lire, petroleum for 11,000,000 lire, and linen yarn for 11,000,000 lire. The principal articles of exportation were silk for 288,700,000 lire, olive oil for 54,900,000 lire, wine for 51,500,000 lire, wood and straw manufactures for 47,000,000 lire, hemp for 37,400,000 lire, lemons for 33,100,000 lire, silk tissues for 33,100,000 lire, eggs for 29,000,000 lire, coral goods for 27,600,000 lire, sulphur for 27,300,000 lire, cotton tissues for 25,400,000 lire, fruits for 23,400,000 lire, hides and skins for 21,100,000 lire, cattle for 20,000,000 lire, almonds for 20,700,000 lire, marble and alabaster for 14,600,000 lire, tartar for 14,000,000 lire, colors for 13,900,000 lire, cheese for 12,400,000 lire, poultry for 12,100,000 lire, rice for 10,800,000 lire, butter for 10,600,000 lire, and zinc for 9,500,000 lire. The export of silk has increased in ten years more than 25 per cent., and that of wine about 12 per cent. The foreign trade received a severe shock from the tariff war with France, the exports to which fell off nearly two thirds between 1887 and 1894, and the total trade suffered for four years a loss of 12½ per cent.; but this loss in the past four

years has more than been made up, the exports in 1896 amounting to over 7½ per cent. more than in 1887. The wine exports to France, which amounted to 42,000,000 lire in 1887, have ceased, but Austria, South America, and Switzerland now take the wine. The loss of the olive-oil trade with France has been a real gain, as Italy now ships the oil direct to the former customers of France. The export trade in cotton goods has grown up in ten years. The home trade is steadily increasing, as is shown by the fact that with a large increase in the population the imports of agricultural produce do not sensibly increase, while those of manufactured articles have decreased 50 per cent. in ten years, and the imports of raw materials have increased in the same ratio.

Navigation.—The number of vessels entered at Italian ports during 1896 was 100,615, of 26,794,395 tons, of which 85,187, of 18,403,319 tons, were engaged in the coasting trade; the number cleared was 100,158, of 26,677,952 tons, of which 84,561, of 18,063,669 tons, were coasting vessels. Of 15,428, of 8,391,004 tons, entered from distant ports, 8,874, of 2,076,219 were Italian, and 6,554, of 6,314,785 tons, were foreign vessels. The number entered with cargoes in ocean commerce was 12,805, of 7,770,865 tons, and the number cleared with cargoes was 11,106, of 5,789,850 tons. The total number of steam vessels entered was 33,940, of 23,817,051 tons, of which there were engaged in ocean commerce 1,546 Italian steamers, of 1,539,806 tons, 5,226, of 6,166,733 tons, were foreign steamers in the ocean trade, 23,144, of 11,963,828 tons, were Italian coasting steamers, and 4,024, of 4,146,684 tons, were foreign coasting steamers.

The Italian merchant fleet in 1896 numbered 6,166 sailing vessels, of 555,569 tons, and 345 steamers, of 220,508 tons; total, 6,511 vessels, of 776,077 tons.

Communications.—The total length of railroads in operation Jan. 1, 1896, was 9,655 miles.

The postal traffic in 1895 comprised 161,881,000 internal, 37,997,000 foreign, and 2,376,000 transit letters; 63,644,000 internal, 5,733,000 foreign, and 296,000 transit post cards; 234,835,000 internal, 21,227,000 foreign, and 2,000 transit printed inclosures and circulars; and 11,324,000 money letters and post-office orders in the internal service, amounting to 1,645,491,000 lire in value, 92,905,000 in the international service, amounting to 92,905,000 lire, and 2,000, amounting to 776,000 lire, in transit.

The telegraphs in July, 1895, had a total length of 26,105 miles, with 75,095 miles of wire. There were 7,322,703 internal, 1,741,517 international, 324,489 service, and 122,430 transit dispatches sent in 1895; total number, 9,511,139. The telegraph receipts, were 17,275,109 lire; post-office receipts, 50,700,687 lire; expenses common to the two services, 51,099,589 lire; special telegraph expenses, 3,776,078 lire.

Attempted Regicide.—While King Umberto was driving on April 22 to the race course an anarchistic ironworker of Artegna made a rush for the carriage and, leaping upon the step, struck at the King with a dagger that he had concealed in a handkerchief. The King, partly rising, turned the blow by striking the man's wrist with his elbow, and the man was seized by the escort. "These are our little professional perquisites," Umberto quietly remarked. At the trial the assassin said that he had acted alone and in despair, as men do when they commit suicide; that if the deed had been premeditated he would have thrown a bomb; the object of his attempt upon the life of the King was to strike the chief representative of the class living in comfort. When sentenced to the galleys for life, on May 29, he shouted for anarchy and the revolution and said that the turn of the

bourgeois Government would come. A lax condition of the Italian police was revealed by the circumstances attending this case. The police had taken no extraordinary precautions, although the father of the criminal had forewarned them of the intended assassination. A man named Romeo Frezzi was arrested on suspicion of complicity in the crime, and a week later his family learned that he was dead. The police reported that he had committed suicide, but an autopsy showed that he had been murdered in his cell.

General Elections.—After the meeting of Parliament on Feb. 25, 1897, the attitude of the various groups in the Chamber was such that no mere reconstruction of the ministry without a dissolution was likely to give a working majority of any duration. When Signor Crispi fell in consequence of the Abyssinian disaster the Marquis di Rudini obtained an overwhelming majority in the Chamber that had been elected under the Government of his predecessor and opponent, to whom previously it had been entirely subservient. The Radicals who follow Signor Cavallotti and the Rudinist Conservatives were bound together before by their common opposition to Crispi, and when the enemy was overthrown the conditions of the alliance had to be fulfilled, for the Conservatives in the Chamber were not numerous enough to form a majority by themselves, and the help of the Radicals was indispensable. The Rudini Cabinet, in framing its foreign and home policies and in carrying them out, made large concessions to the Radicals. The Conservative Premier held views on the foreign relations of Italy that were singularly like those of the Radicals, but he was restrained, as they would be to a great extent if they were responsible for the government of the country, from making any sudden revolutionary break from the policy established by Crispi. The triple alliance he was firmly committed to and bound to uphold by the general force of public opinion, but he was not equally committed to the close friendship with England established by Crispi, though his Conservative colleagues were in favor of preserving it with all its obligations. The Rudinists were as anxious as the Radicals to restore friendly relations with France, but they were not willing to sacrifice the alliance with the central powers, and re-establish the military alliance with France. When public opinion seemed to favor the abandonment of Erythrea the Marquis di Rudini favored this solution of the African difficulty, not alone on financial and military grounds, but as a means of escaping from the entanglement with England and of gaining the good will of the dual alliance. His design to evacuate the African possessions he was afterward constrained to give up when the public, recovering from the first shock of defeat, evinced a strong desire to preserve the colony for which so much blood and treasure had been spent. The Radicals were disappointed on receiving this and other checks to the policy that they endeavored to impose on the ministry. They desired a dissolution, believing that the electorate would strengthen them in the Chamber and perhaps enable them to demand a controlling voice in the ministry or to form one of their own. The decree of dissolution was issued on March 4. The elections were held on March 21, the second ballots a week later. The new Chamber was composed of about 150 members of the Right and 350 members of the Left, including with the Constitutional Radicals the Republicans and Socialists. These latter groups profited most at the polls, and formed a large element in the new Parliament. The wing of the Constitutional party that was identified with the policy of the late Premier Crispi was defeated with heavy loss, but what the Crispini lost was not gained by the Constitutional adherents of

the Marquis di Rudini. By the exercise of official pressure and influence the Prime Minister drove out the Crispiani only to let in the Socialists in their place. No fewer than 85 of the Extremists were elected, of whom 28 were avowed Republicans. It was the first time since Italy became a kingdom that candidates came forward to canvass openly as Republicans. The Constitutional Opposition numbered only 170. The Ministerial majority was composed of 180 members of the Right and Center and 135 members of the Giolitti and Zanardelli groups; the Opposition of 90 followers of Baron Sonnino, the 85 members of the Extreme Left, and a few irreconcilable Conservatives who refused to countenance the Marquis di Rudini's alliance with the Left. About 15 Deputies were attached to no party.

The Parliamentary Session.—The first session of the twentieth Italian Parliament was opened at Montecitorio April 5. The speech from the throne invited the attention of Parliament to measures that for a long time had awaited settlement, such as educational, judicial, administrative, and social reforms and projects tending to give stability to the military organization, the Government desiring to complete the programme of army reorganization once for all. The events going on in the Mediterranean and the increase of emigration suggested the duty of strengthening the navy, which was rendered possible by the budget equilibrium, which had at last been attained, marking the close of the era of sacrifices. This equilibrium the Government was certain of maintaining, and by putting an end to expenditure that was not indispensable it would be possible to favor the productive development of the country. In future budgets would be consolidated for the development of national economy by freeing the latter from severe fiscal burdens through an equitable revision of taxation and by an administration aiming honestly to repair the country's credit. The principal project in social legislation was a bill for promoting the welfare of workmen. A project contained in the Conservative electoral manifesto for modifying the system of local suffrage by the introduction of plural voting was left out of the legislative programme, for the Marquis di Rudini was now more than ever a prisoner of the Left and could not afford to break with the Radicals in order to follow a Conservative policy. The majority of the important portfolios in the Cabinet were held by Conservatives. As the result of the elections Signor Cavallotti had it in his power either to control the policy of the Cabinet or to attack it and secure the substitution of Radical for the Conservative elements. Instead of drawing any advantage from its concessions, the Government had only strengthened the influence of the Extreme Left. Signor Zanardelli, the leader of the old Left, was elected president of the new Chamber by 303 votes to 128 given for other candidates.

The Marquis Visconti Venosta, in replying to criticisms on the foreign policy of the Government, repeated the words of the King's speech: "We shall remain faithful to our alliances." While co-operating in the maintenance of peace, which is the great permanent interest of the country, the Government would cultivate with other nations friendly relations inspired by feelings of concord and of reciprocal confidence; and, in regard to France in particular, would follow a policy in harmony with the dispositions of the Italian nation, which only desired to live on good terms with its neighbor. The Government was always disposed to examine with the French Government the totality of commercial relations between the two countries with a view to the substitution of an equitable compromise of interest for the present condition of those relations. The minister defended the abandonment of Italian

claims in Tunis and the cessation of an embittered dispute that might entail an embarrassing division of strength. The intentions of the Government in regard to Africa were to cease the occupation of Kassala, in accordance with the protocol of April 15, 1891, as soon as Egyptian power was sufficiently re-established in the Soudan; to create a state of things that would permit the reduction of the military occupation to Massowah alone and render possible the abandonment of the high plateau; but to maintain the occupation of that port and Italian suzerainty on the Red Sea coast district, as any change effected there might raise international questions such as it was in the interests of Italian policy not to provoke. The King persistently refused to sign a decree appointing Signor Bonfadini, a politician, to the governorship of Erythrea.

The question of annulling the election by the constituency of Forlì of the revolutionary Socialist Amilcare Cipriani, who for his connection with the Sicilian riots had been deprived of civil rights, was the last thing discussed before the Chamber, on July 15, adjourned till Nov. 30. Cipriani had won distinction by leading the band of Garibaldian volunteers in Greece, and was wounded in the battle of Domoko, where the Socialist Deputy Antonio Fratti, to whose vacant seat he was elected, met his death.

Ministerial Crisis.—The difficulties of governing with a ministry mainly Conservative and a majority mainly Liberal taxed Premier di Rudini's political art to the utmost, and before the reassembling of Parliament he tried to form a ministerial combination that would correspond more nearly with the parliamentary situation. After the death of Giacomo Costa, in August, the Ministry of Justice remained vacant for some time. Senator Canonico refused it, saying that in the present political and parliamentary atmosphere he would waste his energies without being able to accomplish anything for the good of his country. On Sept. 19 Signor Gianturco was transferred to the Ministry of Justice and the Conte Codronchi, a Senator, took his place as Minister of Public Instruction. Foiled by unforeseen occurrences in his efforts to provide a Radical successor to Signor Costa, the Marquis di Rudini welcomed an occasion for repressive action against the Catholic party, which had been in local elections, while still obstinately abstaining from all participation in national politics, to carry on a violent agitation against the dynasty and the existing system of government. The Prime Minister has himself been held chiefly responsible for the rise of the Clerical party and had connived in its successes, but he was willing to renounce his past and to break with the Right, of which he was the accredited chief, if he could form a strong ministry from the predominant political elements. An open alliance with the Left would necessarily provoke the resignations of the more Conservative members of the Cabinet, such as Signor Prinetti and the Marquis Visconti Venosta. If Signor Zanardelli, and perhaps Baron Sonnino, could be induced to take portfolios in his Cabinet, the Marquis di Rudini would establish himself as leader of the Left and one of the line of indispensable Italian Premiers. His skill in political balancing was wittily characterized in the saying that he never performed a political act without previously having taken the precaution of denouncing it as ruinous to the country. About the beginning of October circulars were issued by the Marquis di Rudini to the provincial prefects with a view to the prevention of the use of churches for political meetings by the Clerical party. The ground was taken that, churches being public property, any political meetings held therein came within the scope of the police regulations re-

lating to public gatherings, and further, that since the object of the Clerical party is the overthrow of the state by the re-establishment of the temporal power of the Pope, Clerical meetings are open to the same treatment as those of socialist, anarchist, and other subversive associations. These pronouncements from a minister of the Clerical antecedents of the Marquis di Rudini produced lively indignation and dismay in militant Catholic circles. The position taken in the circulars was regarded as proper by the majority of the Liberals throughout the country, but they blamed the ministry for having permitted the Clerical excesses more than they did the Clericals for having made use of the license accorded them. The circulars themselves were regarded by Liberals and Clericals alike as a mere move in the parliamentary game and, when Signor Zanardelli did not enter the ministry after all, as a failure in tactics. Cardinal Rampolla, the papal Secretary of State, made use of the circulars as material for an indictment of the Italian Government in a letter to the nuncios, denouncing them as "sacrificing the Catholic party to the bitterest enemies of the Church, not because it has offended against the law or against the so-called institution of the state, but because it is hated by the Freemasons."

The ministry was discredited by the course it took in regard to a riotous demonstration in Rome. The periodical revision of taxation on incomes and personal property was expected to produce a larger revenue from this source. The tax assessors were first instructed not to be rigorous in their assessments, but these were revoked. In Rome, where the trading and working classes had not yet recovered from the effects of the building crisis, the increase in the assessments was regarded as extremely unjust, and was an undoubted hardship to many. The existence of a large floating population in that city ready to profit by disturbance and of strong revolutionary and Clerical elements anxious to fan popular discontent should have suggested either the avoidance of any cause for disorder or preparation to repress disorder with a strong hand, but in both respects the Government failed. The Roman Chamber of Commerce organized an imposing popular demonstration on Oct. 11. All shops were closed, and about 20,000 persons escorted a committee to the Ministry of the Interior. While the Marquis di Rudini was giving vague and unsatisfactory assurances to the committee, a small force of carabinieri endeavored to prevent the great crowd from pressing into the building. When another detachment arrived and proceeded to clear the Piazza Navona with fixed bayonets some roughs began to throw stones. Other soldiers were sent for, and finally the crowd was driven from the square, but the stone-throwing increased until some of the soldiers were provoked into firing, and before the streets were finally cleared orders were given to fire again at the principal group of stone-throwers. About 30 of the soldiers and people were badly wounded and 2 killed. The Minister of Finance afterward instructed the assessors to amend their assessments and to abstain from increasing any assessments until they have ascertained that the taxpayer's income has increased. The charges of corruption brought against ex-Premier Francesco Crispi on information received from the convicted director of the Banca Romana were quashed Nov. 8 by the Court of Cassation on the ground that the ordinary tribunals are incompetent to try ex-ministers for acts performed when they were in office.

Sanitary Conference.—A conference of plenipotentiaries of the European powers met at Venice in February to discuss sanitary precautions against the introduction of the bubonic plague into Europe.

The object of the conference was to apply in regard to the bubonic pest the principles affirmed at the Dresden and Paris conferences in reference to the prevention of cholera, and to induce Turkey, if possible, to join in these international conferences and to ratify the agreement. The Paris agreement had not been ratified by Great Britain. The present congress was called at the suggestion of Austria, Italy concurring. It was proposed by Austria and Italy, supported by Germany, Russia, and Turkey, to construct a large international quarantine station and hospital in the Red Sea somewhere near Suez, at which it would be obligatory for all ships coming from suspected countries to stop for examination. Whether a further quarantine was necessary at the port of destination for vessels arriving with a clean bill of health from this station was a question on which the governments favoring the quarantine at Suez suggested no conclusion. Another question to be considered was, whether the Sultan should not be requested to forbid pilgrimages to Mecca in years of pestilence, and other governments be asked to prevent the departure of pilgrims from their territories. England, which sent the largest delegation of sanitary experts, wanted her ships coming from infected ports to be quarantined only at ports of destination, claiming that, with sanitary departments organized as well as the English, this would be entirely effectual. The question of stopping pilgrimages to Mecca was brought up immediately by a French delegate, who was seconded by the Austro-Hungarian and Russian representatives, but the English delegates had no power to discuss or vote on the question without instructions. Later the English delegates announced that the Indian Government had stopped pilgrimages to Mecca. The Austrian and Russian governments had taken similar action, and France and Italy announced their intention of doing so. It was voted to complete the quarantine station on the island of Camaran, in the Red Sea. The Technical Committee approved of the methods of disinfection adopted at the last conference—saturation by steam at 100° C. maintained for fifteen minutes. A sublimate solution, in which salt may be substituted for hydrochloric acid, was approved, also an alkali solution and *savoneuse* of carbolic acid. Papers of value were exempted from disinfection. The extreme period of incubation of the bubonic plague was taken to be ten days.

At the beginning of the winter session the Chamber annulled Amilcare Cipriani's election. Signor Crispi, having established the point that the ordinary courts are incompetent to deal with the charges against him, demanded an investigation by the Parliament. A commission of five Deputies was appointed to conduct the inquiry. The charges were based on the confession of one Favilla, an ex-director of the Bologna branch of the Bank of Naples, who was prosecuted for embezzlement and convicted. The examining magistrate at Bologna, on information obtained during the judicial inquiry, issued an order for the arrest of Signor Crispi on March 20, 1897. He was re-elected a Deputy on the day following, and thus obtained parliamentary immunity, but nevertheless he voluntarily made a deposition before the magistrate at Naples on March 25. Two months later, however, he took exception to the competence of the courts to try the charges, on the ground that, according to the Italian Constitution, a minister is answerable to the Senate alone for acts done while in office. He admitted having borrowed 300,000 lire of Favilla for state purposes, but declared that he had repaid a part of this sum while still minister, and the remainder with interest and commission after his fall from power.

On Dec. 6 the ministry resigned, the Marquis di Rudini taking advantage of a chance minority di two votes on a technical military question, which impelled Gen. Pelloux to insist upon retiring, to bring about a reconstitution of the Cabinet. After long negotiations a Cabinet including Signor Zanardelli, and corresponding more nearly to the actual political forces, was constituted on Dec. 14 as follows: President of the Council and Minister of the Interior, Marchese di Rudini; Minister of Foreign Affairs, Marchese Visconti Venosta; Minister of Justice, Signor Zanardelli; Minister of War, Gen. di San Marzano; Minister of Marine, Signor Brin; Minister of Finance, Signor Branca; Minister of Public Works, Signor Pavoncelli; Minister of Public Instruction, Signor Gallo; Minister of Agriculture and Commerce, Signor Coccu-Ortu; Minister of Posts and Telegraphs, Signor Sineo. Of the new ministers Signore Gallo and Coccu-Ortu were Zanardellian Liberals, Signor Pavoncelli a Conservative, and Gen. di San Marzano nonpartisan. The Chamber, which had adjourned during the crisis, on coming together again on Dec. 20 rejected a motion of want of confidence coming from the Right by the narrow majority of 16 in a house of 394 Deputies. The followers of the Marquis Vis-

conti Venosta censured him for entering into such a combination by voting against the Government, which was only saved from defeat by the votes of the ministers themselves and of the undersecretaries of state. After approving a new monetary convention of the Latin Union and two other nonpartisan measures the Chamber adjourned on Dec. 21 till Jan. 25.

The Transfer of Kassala.—On Dec. 25 the Italian commandant formally evacuated Kassala, which was occupied by 900 Egyptian troops under Col. Parsons. Nearly 500 Mohammedan regulars and 150 irregulars in the Italian service enlisted for the same pay for service under the Egyptian flag. The frontier line runs 20 kilometres to the east of Kassala, leaving the post of Zabderat to Italy. The British commander had already led his new troops against the dervish position on the Atbara, capturing El Fasher and besieging the fort of Osobri, which fell on Dec. 29 after a stout defense. The English, when they had thus succeeded in expelling the dervishes, restored Sidi Ali, the former chief of the district. On Dec. 29 Ferdinando Martini, the new Governor of Erythrea, who was believed to be capable of organizing the colony on a civil and commercial basis, embarked for Massowah.

J

JAPAN, an island empire in Asia and a long and narrow archipelago eastward of the continent in the Pacific Ocean. Of the known islands, exceeding 4,000 in number, about 500 are inhabited. The total area is 169,140 square miles, and the coast line, including Formosa, is 186,679 miles long. The Emperor Mutsuhito ("peaceful man") was born Nov. 3, 1852. The Empress Haruko, born May 28, 1850, was married Feb. 3, 1869. The Emperor has no family name, and is traditionally the one hundred and twenty-second in the line of the oldest political dynasty in the world. The Empress has had no children. Thirteen children have been born of the ladies in the harem, Madame Sono being the mother of five, one of whom, a son, Yoshito, born Aug. 31, 1877, is the heir apparent. Article II of the Constitution of 1889 declares that the imperial throne shall be succeeded to by imperial male descendants. The Emperor's person is sacred and inviolable. He combines in himself the rights of sovereignty, exercising legislative power with the consent of the Imperial Diet, composed of an upper house of 316 peers and imperial nominees and a lower house of 300 members elected by male voters paying national taxes to the value of 15 yen annually. His Cabinet consists of the heads of departments moderated by a Minister President of State. The Privy Council is composed of 20 statesmen of wide experience. The eleventh session of the Diet was called to order Dec. 21, 1897, but on the next day the House of Representatives was dissolved by imperial command. The Government has power to take all necessary financial measures in times of emergency by means of an imperial ordinance. The ministers are responsible to the Emperor, and not to the Diet. The movement of Japanese politics is toward curtailment of imperial prerogative and in the direction of democracy.

Population.—A careful and minute census is taken annually by the Home Department and published in the "Official Gazette." In 1895 there were, exclusive of Formosa, 42,270,620 people, dwelling in 7,935,969 houses. Of these, 3,518 were nobles, 1,617,686 of the gentry, and 32,368,288 of the people. The cities having more than 100,000 people

were Tokio, Osaka, Kioto, Nagoya, Yokohama, Kobe, and Hiroshima. The proportion of male to female births is 105:16 to 100. There were 22,111 natives given passports to travel abroad, of whom 4,378 were women, the larger numbers going to Korea, Russian countries, Hawaii, China, and the United States respectively. On Dec. 31, 1896, the total population of the whole Japanese Empire was 45,279,628, of whom 21,345,750 were males and 20,924,878 were females.

Finances.—The annual budget submitted to the Diet forms an octavo volume of more than 1,000 pages, carefully printed in Japanese, with elaborate explanations. After being discussed and voted, it is officially reprinted. The digest of the budgets during the past ten years will be found in the annual "Résumé Statistique l'Empire de Japon," published by the secretary of the imperial Cabinet in June of each year. The chief items of revenue for the thirtieth fiscal year of Meiji (1897-'98) are (in yen): Taxes, 90,084,459, of which those on land furnished 38,668,991; sake, 29,823,852; tobacco, 2,234,146; soy, 1,479,994; trades and professions, 5,874,168; customs, 6,626,829; stamp duties and registration, 7,525,616; Government industries and properties, 21,280,598; posts and telegraph, 12,132,137; railway profits, 5,425,733; which, with other taxes and miscellaneous receipts, gave a total of 121,410,245 yen of ordinary revenue. Extraordinary revenue, such as money raised by public loan, cash brought over from last year, and appropriation from the war indemnity, gave a total of 119,189,237 yen, or a grand total of 240,599,482 yen. In ordinary expenditures there were disbursed (in yen) to the Crown, 3,000,000; foreign affairs, 1,494,816; home affairs, 6,490,983; Treasury Department (17 bureaus), 41,670,441; war, 9,870,289; justice, 3,552,037,287; education, 2,005,375; agriculture and commerce, 1,424,295; communications, 11,671,748; colonization, 2,020,914,716; making a total of ordinary expenses of 112,330,280 yen. In the extraordinary expenses the chief items were: Home affairs, 10,821,699; war, 30,088,797; navy, 66,994,126; communications, 6,726,053; making, with other items, a total of extraordinary expenditures of 127,344,178, or a grand total of 240,-

505,926 yen. The budget for 1898-'99 calls for an expenditure of 234,170,000 yen. Japan's national debt stands thus (in bonds): Consolidated, 172; war, 120; naval, 15; railway, 6; capitalized pension, 30; old, 5; making a total of nearly 350,000,000 yen; adding to this the public-undertaking loan of 135,000,000, we have a total of 485,121,382 yen.

The Army.—On Dec. 31, 1895, there were in the military organization of the empire 965 generals and superior officers, 5,729 officers, 21,140 subordinate officers, 2,307 cadets, and 225,273 soldiers, making a total of 255,504, which, with 1,713 functionaries in the War Department, gave a grand total of 257,217. Besides the central organization in Tokio and the military schools, there are the six great military divisions of Tokio, Sendai, Nagoya, Osaka, Hiroshima, and Kumamoto, in each of which are large garrisons containing a division of from 8,000 to 10,000, though at Sendai there are two divisions of over 20,000 troops. With the Imperial Guard of 8,000 men in Tokio, there is also a body of drilled gendarmes, the military police of Yezo, the reserves, and the territorial army, the two latter bodies numbering altogether 165,905. In the recruiting service during 1894 436,246 young men were brought under Government notice, of whom 22,354 were placed in active service, 98,247 assigned to the reserves, and the remainder had service postponed, were exempted, allowed to resign, excused, or were condemned criminals.

The Navy.—In 1895 Japan had 45 vessels of war, of which 11 were in active service, 12 at Yokosuka, 10 at Kure, and 12 at Sasebo (the chief navy yards), of 82,994 tonnage, with engines of 128,591 horse power, and armed with 458 guns, besides non-equipped war vessels, and 30 torpedo boats of 1,898 tonnage and 19,227 horse power. The *personnel* consisted of 65 superior officers, 512 subordinates, and 6,268 noncommissioned officers and sailors. On July 1, 1897, besides 27 torpedo boats and 26 vessels sunk or fallen into disuse, there were 43 effective war vessels, of which 3 were steel-armored battle ships, including the "Fuji," of 12,649, and the "Yashima," of 12,517 tons, each mounting 38 guns, and the "Chin-yen," of 7,335 tons and 20 guns. Of the other vessels, mostly cruisers, 5 have a tonnage of over 4,000, 4 over 3,000, 6 over 2,000, and 9 over 1,000, the others being gunboats—6 of wood and the rest of steel and iron. The "Kasagi," a steel cruiser of 4,978 tons, was launched at Philadelphia, Jan. 20. Eleven other war ships are now under construction, and most of them launched. The battle ships "Shikishima" and "Asahi," to be completed in October, 1899, the largest in the world, are of 15,037 tons and 50 guns each.

Administration.—On Dec. 31, 1895, there were in the employ of the National Government 46,698 salaried officers, whose stipends amounted to 11,405,425 yen. In the diplomatic and consular corps there were 41 ministers and 129 consuls, a total of 170, the countries having the largest number being, in their order, Korea, 85; China, 21; Russia, 12; United States, 11; England, 7.

There were 467,887 national electors, compared with 452,156 in 1891, and 49,243 persons who paid 15 yen national taxes, but were without the electoral right, the number of national voters to every 1,000 inhabitants being 11. In the 45 local assemblies of the empire there were 2,115 members. In the communal councils of great cities, villages, and assembled cities and villages, numbering in all 14,344, the numbers of electors were 4,186,767. An elector in the commune must be a free native twenty-five years old, domiciled, and having paid taxes for two years.

Railways.—In 1896 there were 261 miles of private and 792 miles of Government railways, of which

1,697 private and 593 Government lines were open to traffic—an increase of 171 miles over 1895. The railway budget for 1897-'98 shows a net profit to the Government of more than \$2,500,000. About 30 companies, with a capital of \$68,467,550, have obtained charters, and the total length of road already surveyed and to be constructed is 2,931 miles. The Tokaido Railway is to be changed from single to double track. Construction of railways in Formosa is to be left to private enterprise. Only nine engines have been built in the Kobe shops.

Resources.—Experts calculate the total wealth of the empire at 10,000,000,000 yen. The chief item of revenue is the land tax. Of all the ground occupied, it is roughly estimated that one fifth is in rice fields, one sixth in arable land, one fortieth in house lots, one half in forests, and one thirtieth in other lands. The revenue has grown from 62,000,000 yen in 1878 to 120,000,000 in 1897. This increase leaves the agricultural population untouched, the land tax remaining the same that it was twenty years ago—viz., 2½ per cent. of the officially assessed value of the land, which is about one third of the market value. The increase of agricultural products in 1895, compared with 1878, was in rice as 8 to 5, in barley as 19 to 9, in raw silk as 52 to 19, in tea as 8 to 2. In minerals the increase between 1893 and 1895 was of gold, threefold; of silver, sevenfold; of copper, fivefold; of iron, twofold; and of coal, sixfold. In textiles, cotton yarn has increased over threefold, the number of spindles having much more than doubled between 1890 and 1895; silk fabrics have more than doubled in quantity, but cotton fabrics somewhat less. In maritime enterprise the tonnage of coasting vessels in 1895, compared with 1868, is nearly five times as great, and in vessels sailing abroad fourfold. From 65,500,000 yen in 1879, foreign trade has grown to 290,500,000 in 1896. The total receipts of the Government in 1896-'97 were 179,720,380 yen. In 1880 the Mitsubishi firm, by investing 1,000,000 yen in the Takashima coal mine, astounded the commercial public. A few years later the Mitsui house paid 4,000,000 yen for the Miike coal mine. Recently this same house purchased from the imperial household the Sado and Ikuno gold and silver mines and the Osaka melting works for 3,000,000 yen. Recently the Third Bank invested 17,000,000 yen in Osaka Harbor Works bonds. In 1895 the paid-up capital of the banks of the empire amounted to 127,807,715 yen, and the reserve fund to 34,623,518 yen, while in 1896 the figures reached 245,134,544 yen as capital. In July, 1897, there were 1,487 banks in Japan, their capital amounting to 292,885,514 yen.

Foreign Trade.—The "Official Gazette" shows that the total value of foreign trade in 1896 was 289,517,234 yen, of which the exports amounted to 117,842,760 yen; and of this, 116,575,578 yen stood for home products. The total of imports was 171,674,474 yen. The movement in coin and bullion showed an export of 11,598,883, and an import of 39,142,208 yen. Of the countries trading with Japan, Asiatic took 106,819,274 yen of exports; European, 125,755,774; American, 49,558,574 (of which 47,905,760 yen were with the United States); and Australia and Oceanica 4,156,634. The customs revenue amounted to 211,661 yen. American competition with Great Britain and Germany is noticed in the supply of machinery, rails, nails, and pig iron. German nails have been driven out of the Japanese market, and 30,000 tons of American rails were sold at lower prices than British makers were willing to accept. The total demand for rails in Japan is about 200,000 tons annually, and four railways, to be completed in 1898 or 1899, have decided to adopt the American rail. As British makers were not

able to supply Japan's requirements within the specified time, orders for 60 or 70 locomotives have gone to firms in the United States. By means of the American system of through rates of freight and bills of lading, goods are conveyed across the continent and by steamer to Japan for less money than by the sea route from Liverpool or Glasgow. Great increase is noticed (60 per cent.) in the imports of spinning machinery, raw cotton, certain kinds of cotton manufactures, in all metals except tin, in machinery, and in petroleum. The oil wells of Echigo are being worked with American machinery. The Tokio Kisen Kaisha has been formed, with a capital of 7,500,000 yen, for the establishment of a line of steamships across the Pacific, and to keep tank steamers plying between Batoum and Japan for petroleum. In 1896 the cotton-spinning companies produced 165,866,084 pounds of yarn, compared with 150,000,000 in 1895. From Jan. 1 to Aug. 1, 1897, the total imports were valued at 139,089,603 yen, and the total exports at 100,314,726 yen.

Insurance.—There are 1,828 life insurance societies, whose receipts in 1895 were 1,674,353 and expenses 906,614 yen. There are also 693 fire insurance companies and 427 marine insurance companies.

Education.—In 1894 there were 25,000,640 public schools, of which 24,046 were primary, with a total of 70,358 teachers, of whom 64,784 were males, and in which were 3,623,725 pupils. Of special and technical schools there were 59, with 778 teachers and 11,792 pupils. Apart from the Imperial University, there were 25 libraries with 374,193 volumes of Japanese and Chinese, and 41,331 volumes in the European languages. The local and communal taxes to sustain these educational facilities amounted to 7,500,493 yen, which, with various other receipts, amounted to 11,904,602 yen, or 27.79 yen to every 100 inhabitants. The total valuation of accumulated funds, land and buildings, furniture and instruments, amounted to 24,548,426 yen. There were published 814 periodicals, which issued 357,735,426 copies; 518 serial publications appeared and 506 disappeared during the year; 8,962 works printed in single volumes and 18,831 numbers of serial works were published.

Events.—The Empress Dowager died Jan. 11. The official funeral, which took place Feb. 8, with amazing pomp and close adherence to ancient customs, cost 700,000 yen, which was voted by the Imperial Diet. The burial was in Kyoto. One hour was consumed in lowering the coffin into the grave. In celebration of the event, an imperial gift of 400,000 yen was distributed to the people, 63,485 convicts had their terms of service commuted, and 15,782 were released. The bill changing the national standard from silver to gold was introduced Feb. 3, and passed March 23. After ninety days' existence, in which the peers sat twenty-six and the House thirty-two days, the Imperial Diet adjourned. Of 103 Government bills, 88, and of 57 private bills, 17 were passed. The severe press regulations were so modified that the suspension of a newspaper can now take place only after an action in court. On March 22 "The Japan Times," a first-class newspaper in English, conducted by Japanese, was established in Tokio. Count Itagaki resigned the leadership of the Liberal party.

In Formosa all inhabitants had been compelled to declare their citizenship by the 8th of May. The civil government had been badly mismanaged, and the immorality and cruelty of the Japanese officials resulted in many scandals, against which Judge Takano vainly protested, but on determining to remain in office was removed from his official residence by force. The strikes and other labor troubles, which now occur frequently, show the changed con-

dition of the industrial problem in Japan. The rise in wages, great as it is, does not keep pace with the rise in prices, which since 1887 has been more than 50 per cent. A great fire at Hachoji destroyed 3,700 houses and 50 lives. From Oct. 1, when the new gold coin was to be issued and the standard changed from silver to gold, the term of exchange of the old silver coin was ordered to be nine months instead of five years, and no silver yen were to circulate after March 31. In one transaction the Government sold 10,000,000 yen worth of Japanese silver to Hong-Kong. On the Kansei Railway, six locomotives, at \$8,540 each, were ordered from the United States. Count Okuma resigned the portfolio of Foreign Affairs, and Baron Nishi, educated in Russia, succeeded him, Mr. Hamao entering as Minister of Education. The Akashi, a third-class man-of-war of 2,800 tons, was launched at Yokosuka, Nov. 8. Several new treaties or conventions were made with other nations during the year, and a new legation was established in Siam. The estimates of the rice crop show a yield of 170,000,000 bushels, compared with 180,000,000 in 1896.

Formosa.—Tai-Wan, or the main island, and Hokoto, or the Pescadores, are included in the new possessions of Japan, ceded from China in 1895, the former with its 29 islands and the latter with 47. The total area under settled government is about 9,000 square miles. The population is 2,041,809, of whom 44,820 are in the Pescadores. The islands are rich in resources of coal, iron, gold, rice, camphor, indigo, spices, fruit, grain, with an astonishing variety of forest products. The two chief ports are Tamsui and Kelung, the foreign trade of which, in 1896, amounted to \$7,013,645, and an increase of \$238,105 over 1895, the exports being slightly in excess. Of American products, flour shows an increase of 50 per cent. over 1895, and 1,150,000 gallons of American petroleum were imported. Camphor and tea are the chief articles of export. Chinese junks import pigs, poles, and paper. Taipei is the capital of the island.

JEWS. The chief event of the year was the Zionist Conference, at Basel, Aug. 29. It was an outcome of the plan suggested by Dr. Theodor Herzl, of Vienna, in a pamphlet entitled "A Jewish State," and in various addresses for the establishment of a Jewish state in Palestine. After a three days' session a programme was adopted and an executive central committee elected. The programme declares that "the aim of Zionism is to create for the Jewish people a public, legally assured home in Palestine," and that the means to be adopted are the promotion of the settlement in Palestine of individual Jews, "the centralization of the entire Jewish people," and the strengthening of Jewish sentiments and national self-consciousness. The Executive Committee consists of 9 representatives from Austro-Hungary, 4 from Russia, 3 from the Balkan states, 2 from Germany, and 1 each from France and "the Jews of the East." That England, the United States, Italy, Holland, and other countries are not represented, and the disproportion between the importance of the various Jewish communities of the world and the number of representatives on the committee are to be explained by the fact that it is only in Russia or parts of Austro-Hungary and in Roumania that Zionism in its pronounced form has aroused special attention. In other lands it has awakened opposition or indifference. In Germany the Union of German Rabbis issued an appeal calling on Jews, in the name of religion and patriotism, to hold aloof from the movement. The chief rabbi of England called Zionism "an egregious blunder," and the chief rabbis of France and Belgium have condemned it. In fact, so general was the agitation

against the movement for a Jewish state that the congress paid more attention to the subject of colonization than to the establishment of an independent Judean commonwealth. Less objection was felt to a movement that would aid existing Jewish colonies in Palestine and promote agricultural effort. The prevalent wretchedness of the Jews in countries abroad due to harsh laws and restrictions was fully revealed at the Basel congress, and an effective impetus was given to the movement to divert them from inhospitable lands and settle them, wherever possible, under new and more favorable conditions. Dr. Theodor Herzl and Dr. Max Nordau were the leaders of the congress, which was attended by about 200 persons. Among the more prominent were Dr. K. Lippe, the educator of Jassy; Dr. J. Bodenheimer, of Cologne; Prof. Mandelstamm, of Kieff; Prof. Schapira, the mathematician of Heidelberg University; Dr. N. Birnbaum, of Berlin; and Dr. Kaminka, of Prague.

The growth of anti-Semitism within the past few decades has had much to do with the Zionist movement, for it is only in countries where civil and religious liberty is denied to the Jew that there is a desire to colonize in Palestine under any form. During the year there has been a gratifying lull in the storm and a hopeful improvement in quarters that were thought to be hopeless. It is true that Jewish hatred has been felt in Russia, Germany, Bohemia, Austria, Algeria, Tripoli, and Persia. But these were sporadic outbreaks, readily quelled. The conditions in Russia have certainly improved, and there is a strong likelihood of further legislative reforms under the new Minister of the Interior. The volume of Jewish emigration from Russia has notably declined, and this is the best indication of improved conditions. In Vienna the administration of the anti-Semite Dr. Lueger has aroused much dissatisfaction; the breach has widened between two opposing sections of his party. The riots in Bohemia in November were not directed against the Jews alone, although they are always the first victims of political and social disorder. In Germany notable anti-Semites like Stoecker and Sedlatzeck have suffered at the hands of the law. In France it is thought that anti-Semitism is responsible for the Dreyfus case, and there was some agitation in the latter part of the year, Zola championing the cause of the exiled officer and refuting the charges of the anti-Semites. Prof. Monod also joined in the vindication of Dreyfus.

The condition of the Jewish colonies in the Argentine Republic was so unsatisfactory that it was determined to found no further settlements, but to maintain those existing. Different opinions are held as to the value of these colonies. It is feared that many of the immigrants are hardly adapted for agricultural work. Yet some of the settlements show fair results, despite a plague of locusts and other drawbacks. In Palestine there are now 22 villages, with an area of 92,000 acres, under cultivation. An agricultural school of 593 acres, serving as an experimental station and model farm, makes earnings sufficient to support all the teachers and the 100 pupils. The colonists raise vegetables, wine grapes, and fruit trees, and are engaged also in bee culture. Mulberry trees are being planted, with a view to silkworm culture. The village of Rishon l'Zion, with an area of 22,239 acres, possesses 1,500,000 vine stocks, 20,000 mulberry trees, 10,000 fruit, almond, walnut, fig, and other trees. An exhibition of the products of the Palestine colonies was held in Berlin, and a company has been organized to promote their sale in Europe and America.

Mr. Schechter, reader of rabbinic at Cambridge, returned to England from Egypt and Palestine

with a great mass of Hebrew manuscripts, some of rare value, which he rescued from secret hiding places. Prof. Sternthal's fiftieth year as a teacher was celebrated in Berlin in November. M. Sylvain Levi, professor at the Collège de France, received a subvention of 8,000 francs from the Paris Academy of Inscriptions, to enable him to continue his researches into Buddhism in the lower Himalayan regions. At the International Russian Medical Congress there were 13 Jewish delegates from Germany alone, while other countries were fairly represented. Statistics for the year estimate the Jewish mechanics in Jerusalem as 2,019, divided as follow: Joiners, 367; tailors, 290; shoemakers, 288; blacksmiths, 50; coppersmiths, 20; tinsmiths, 89; goldsmiths, 71; watchmakers, 22; bookbinders, 32; olive-wood workers, 72; wood carvers, 18; masons, 112; stone cutters, 92; quarrymen, 28; painters, 31; upholsterers, 65; stocking knitters, 35; millers, 30; printers, 44; scribes, 67; parchment makers, 13; weavers, 20; bakers, 64; gardeners, 17; brushmakers, 20; jacks-of-all-trades, 62. Thirty-five technical and industrial schools, with 5,439 pupils, are now carried on by the Baron de Hirsch fund in Galicia and the Bukowina. These are open to non-Israelites, who are provided with religious instruction from teachers of their own faith at the cost of the fund. During the year 245 pupils were apprenticed to trades, and 14 are being educated in the Agricultural School near Hanover. The Jewish Congregation Unversia Israelitica of Rome concluded an agreement with the municipality of Rome to surrender a prominent part of the Ghetto to the city authorities, for the purpose of erecting an imposing structure. In exchange for this the city gave to the Jewish congregation a plot of ground, which is valued at 100,000 lire, and is situated on the bank of the Tiber, for the erection of a synagogue.

Oswald J. Simon, of London, proposed in January a plan to make Judaism a missionary religion, and elicited interesting opinions from English Jews and Christians. Baroness de Hirsch made many lavish benefactions, Jewish and general. The banker D. Flick, of Düsseldorf, bequeathed in January 500,000 marks for needy widows and orphans, without distinction of creed, and 300,000 marks for a Jewish hospital open to all creeds. The eightieth birthday of Dr. Max Ring, the novelist, was celebrated in Silesia. The seventieth birthday of Frederick D. Mocatta, the London philanthropist, was duly observed, as well as a similar jubilee of the writer Herzberg-Fränkell in Teplitz, near Berlin. Hon. W. E. Cohen was appointed a judge of the Supreme Court of New South Wales. The Montefiore College, at Ramsgate, England, was reopened.

At home the chief trend of the year's activity has been along educational lines. Further effort was made to reach the people and establish more intelligent methods. In Baltimore and Philadelphia classes for normal instruction were opened, with a view to improving the training of Jewish Sabbath-school teachers. In New York the Religious School Union arranged an admirable series of conferences and teachers' meetings, showing marked advance. The issues of the Jewish Publication Society and the American Jewish Historical Society are educational and stimulating. The successful summer assembly of the Jewish Chautauqua at Atlantic City in July was enthusiastic and varied in its meetings, many rabbis and teachers participating, and a gratifying impetus was given to systematic Bible study. The English translation of the Talmud by Mr. Rodkinson made further progress, as did Dr. Jastrow's Talmudic dictionary. The project of an encyclopædia Judaica was favored at the Montreal Conference of American Rabbis, while the new translation

of the Old Testament, under the auspices of the Jewish Publication Society, is slowly progressing. The establishment of the National Farm School at Doylestown, Pa., due to the Rev. Dr. Joseph Krauskopf, of Philadelphia, is an experiment which its friends regard hopefully as a new departure in education—the training of Israelites as agriculturists. Fresh benefactions of Baroness de Hirsch have given new life and increased efficiency to technical and industrial education among the children of Russian and Roumanian immigrants in New York and elsewhere, under the auspices of the Baron de Hirsch fund. The faculty of the Gratz College, at Philadelphia, was appointed in November. Its special work at first is to be the training of teachers for Sabbath religious schools. The Young Men's Hebrew Association of New York received large gifts from Jacob H. Schiff and Mrs. Esther Herrman. The Jewish Orphans' Home of Chicago obtained a donation of \$25,000 from Abraham Slimmer, of Waverly, Iowa. By the death of Mrs. Lucien Moss, of Philadelphia, in November, the Jewish Hospital of that city came into possession of her husband's bequest of nearly \$200,000, to be used for a Home for Incurables. At the Montreal Conference of American Rabbis papers were read and discussed on the following themes: "The Rabbi as Teacher," "The Origin and Aim of Reform Judaism," "The Theology of the Old Prayer Book," "The Messianic Idea in Judaism." The Zionist movement aroused some interest, but with few exceptions it was confined to a small number of Russian-American Jews. At the meetings in New York, attended by representative rabbis and laymen, it was resolved to show no sympathy for Dr. Herzl's project so far as it contemplated a Jewish state, it being held that Judaism was not dependent on Palestine but had a universal character.

Commendable progress was made by the Woodbine Agricultural Colony, managed by the Hirsch fund. It was started in 1891 and has 25 miles of well-graded, tree-bordered streets, 2 public and 2 night schools, an agricultural college, hotel, brick synagogue, public bath house, several stores, 4 factories, a machine shop, 150 houses, 3 beneficial societies, and 2 educational clubs. The existing colonies may be thus summarized: In Canada, 85 farms, covering 18,000 acres, and with \$100,000 invested

capital; in New Jersey, 450 farms, with 10,000 acres, and \$500,000 invested capital; in Connecticut, 418 farms, covering 30,000 acres, and \$500,000 invested capital. Besides these there are enough individual farmers on Long Island and near Kansas City, Chicago, and St. Paul engaged in growing poultry and vegetables to make the total exceed 1,000 families, with 80,000 acres, and \$1,250,000 of capital.

At the county fair at Woodbine, N. J., on Sept. 15, the Russian colony received the highest prizes for field and greenhouse products, bee culture, dried collections of flowers, and poultry. The United Hebrew Charities of New York secured \$35,000 for permanent membership—a new feature in the organization. At its annual meeting, Nov. 10, the disbursements were shown to be \$133,000. There were 16,420 Jewish immigrants during the year, a marked decrease; \$16,000 was spent in monthly stipends and \$38,000 in occasional money relief; 5,462 new cases were treated and 25,626 recurrent applications; 6,594 secured employment out of 8,569 registered applications.

William N. Cohen, of New York, was appointed by Gov. Black to fill the vacancy caused by death of Judge Sedgwick. President Julius Bien, of the Order of B'nai B'rith, returned from Europe and expressed himself highly gratified at the remarkable growth of the order in Europe and the East. Temporary quarters of the Clara de Hirsch Working Girls' Home were opened in November in New York. The Montefiore Home for Chronic Invalids in New York opened a country home at Bedford Station. During the year 493 patients were treated, at the expense of \$221.51 *per capita*. Two gifts of \$10,000 and \$5,000 each were made to the Guskys Orphanage, of Pittsburg, by Aaron Cohen and L. I. Aaron. E. Deinard's plan of colonization met an untimely death in San Francisco, as was predicted. The Anshi Maariv Temple, in Chicago, celebrated its fiftieth anniversary in November. New temples were erected in Toronto, St. Louis, New York, Paterson, Philadelphia, San Francisco, Chicago, and Brooklyn. Some excitement was created in New York by Judge Prior's refusal, in January, to grant a charter to a Jewish society because its annual meeting was to be held on Sunday. Four rabbis were graduated at the Hebrew Union College, Cincinnati, in June.

K

KANSAS, a Western State, admitted to the Union Jan. 29, 1861; area, 82,080 square miles. The population, according to each decennial census, was 107,206 in 1860; 364,399 in 1870; 996,096 in 1880; and 1,427,096 in 1890. By the State census of 1895 it was 1,334,668. Capital, Topeka.

Government.—The following were the State officers during the year: Governor, J. W. Leedy; Lieutenant Governor, A. M. Harvey; Secretary of State, W. E. Bush; Treasurer, D. H. Heflebower; Attorney-General, L. C. Boyle; Auditor, W. H. Morris; Superintendent of Education, William M. Stryker—all Democrat-Populists; Secretary of the Board of Agriculture, F. D. Coburn, Republican; Railroad Commissioners, William M. Campbell, W. P. Dillard, and L. D. Lewelling; Oil Inspector, E. V. Wharton; Bank Commissioner, J. W. Breidenthal, Populist; Insurance Commissioner, Webb McNall; Grain Inspector, W. W. Culver; Labor Commissioner, W. L. A. Johnson; State Printer, J. K. Hudson; Librarian, James L. King; Chief Justice of the Supreme Court, Frank Doster, Populist; Asso-

ciate Justices, S. H. Allen, Populist, and W. A. Johnston, Republican.

Population.—Figures compiled by the Secretary of the State Department of Agriculture in August show a net increase in the population of Kansas in 1896-'97 of 30,130. The total is 1,366,789. There are 100 cities and towns having 1,000 inhabitants or more, an increase of 4 in the year; 8 have more than 10,000. They are: Kansas City, 41,150; Topeka, 31,842; Leavenworth, 21,536; Wichita, 20,160; Atchison, 15,501; Pittsburg, 12,195; Fort Scott, 11,309; Lawrence, 10,914.

Finances.—The general-revenue bill passed by the Legislature placed the levy at 4 mills. It will give the State \$2,526,000 for the next two years. An additional 0.1-mill levy was made for the payment of interest on the bonded indebtedness. Provision was made by which the State Treasurer may pay out of the general-revenue fund \$50,000 of the \$200,000 of 7-per-cent. bonds issued in 1867. The remaining \$150,000 are to be refunded at 4 per cent. and sold to the School Fund Commission.

Bonds issued in March, 1868, to the amount of \$220,000, and due June 1 and July 1, 1898, and \$159,000 of the issue of February, 1869, were to be paid from the general-revenue fund. The State debt at the beginning of the year was \$682,000. On July 1 \$50,000 of the State debt was paid and \$150,000 refunded.

In October it was announced that the general-revenue fund was exhausted, and warrants were returned marked "unpaid for want of funds"—for the first time in fifteen years. The deficit is explained by the facts that the tax levy has been reduced by each Legislature, that the valuations decreased down to 1896, that the counties are \$367,000 behind on their dues to the State, and that bonds to the amount of \$50,000 have been taken up during the year.

The aggregate valuations of property of all kinds increased from 1896 to 1897 by \$4,024,285.



JOHN W. LEEDY, GOVERNOR OF KANSAS.

Education.—The school population, as reported this year, is 493,820. The apportionment in August gave 43 cents *per capita*. A circular issued by the Superintendent in November says: "The greatest injustice is in the present method of school taxation. The reports show that 833 districts levy less than 6 mills for school purposes, 3,679 districts levy from 6 to 10 mills, 2,777 districts levy from 11 to 15 mills, 546 districts levy from 16 to 19 mills, while 879 districts levy the full 20 mills allowed by law. District bonds can only be voted to build a schoolhouse."

Much trouble and loss have arisen through the investment of school funds in county and municipal bonds. Some of these were bought in violation of the law, which forbids the buying of bonds from corporations whose indebtedness exceeds 10 per cent. of their valuations. Others were bought at a time when the debt of the corporations was less than 10 per cent.; but later, other bonds have been issued until the amount has become excessive and interest payments upon all the issues have been stopped.

The School Fund Commissioners bought bonds this year issued by Graham County. The State

Treasurer refused to register them and pay for them. The bank where the bonds were deposited brought suit to compel him to do so. The Supreme Court declared that the sale was invalid, but did not base the decision on the same ground that the Treasurer had taken.

Some of the county boards of education made contracts for schoolbooks before the new law for uniformity of text-books and a State text-book commission came into operation; but the courts decided that the new boards which came in after the elections were not bound by those contracts. The validity of the text-book law was assailed, and an injunction applied for; but the court upheld the law and dissolved the restraining order.

There was some trouble with the text-book on civil government adopted for the schools. The Superintendent found in it statements which he deemed at war with true principles of finance. The book defined greenbacks as promises to pay money. These, it recites, circulated from 1862 to 1879 without being redeemed by the Government, and were consequently at a discount. Now that they are redeemed in gold and silver they are as good as money. The Superintendent ordered this and other sentences omitted, and the following inserted in its place: "The power to coin money conferred upon Congress by the Constitution carries with it the power to select the monetary material upon which to coin or stamp the seal of sovereignty. Money, strictly speaking, is not a material thing. It is a function or quality created by law, and it may be attached to any appropriate material by the sovereign authority. When the monetary quality has been attached to the chosen material that material becomes tangible money. Various valuable commodities have been used as money, but have not been entirely satisfactory, on account of their weight and bulk, and because of their great fluctuations in value and frequent scarcity. A proper monetary material should (1) be cheap and easily procured, so that society may at all times be able to supply itself with money; (2) easily concealed, that its possession and transportation may not be difficult and hazardous; (3) it should be convenient to handle and count in large and small amounts; (4) the tangible money should be well executed and difficult to counterfeit, otherwise the counterfeiters will inflate its value to the point of worthlessness, as in the case of American continental currency, the French assignats, and the currency of Argentina. Most of the great paper-money inflations of history have been by counterfeiters and speculators, and not by the legislation of responsible governments. In order to maintain the monetary value of paper notes, they should be receivable in the revenues of the issuing government, and lawful money in all payments; and the volume must be restricted in reasonable proportion to the annual public revenues. The volume of such paper money does not depend upon the accidents of Nature nor the exigencies of commerce, but it may be definitely controlled by law, in accordance with the public interest and general welfare."

The State Normal School, at Emporia, graduated a class of over 100 at its thirty-third commencement, in June.

The enrollment at the State University in October was 1,000; a class of 150 was graduated in June. The department of electrical engineering has a four years' course.

Kansas has 15 denominational colleges, and the number of students attending them this year averages 200.

The thirtieth commencement of the Agricultural College, at Manhattan, was held June 6, and 55 were

graduated. A dairy school has been organized with the money received from the sale of the college herd.

The Board of Regents of the Agricultural College held a meeting in April, at which they virtually deposed the greater part of the faculty and employees of the institution, of whom there were nearly 50. The two Republican regents opposed the changes; the other five are Populists. In an address to the students one of them said: "The board feels that it is impracticable to conduct the institution with President Fairchild at the head of it and the present faculty as instructors, who differ so radically from the board on fundamental principles. However, they were not dismissed because of inefficiency, nor because they are not good teachers, nor because they have not done their part well, but because they differ with the board." Later, a different statement was published.

Penal Institutions.—By the last report at hand the State Penitentiary had 891 inmates, and the Hutchinson Reformatory 107.

June 4 a fire destroyed the tobacco house of the Penitentiary and the tailoring buildings. The loss is estimated at \$6,500.

The action of the Leavenworth police officials in June in setting woman prisoners at work breaking stone in the jail yard has drawn out criticism and protest from all quarters. The practice was followed by the police commissioners of Kansas City, Kan., who ordered that women in the city prison who were unable to pay their fines should be dressed in overalls and sent out on the streets, or the rock pile, the same as men; but they rescinded the order on account of the opposition made to it.

The National Soldiers' Home.—A special committee of Congress has been investigating alleged abuses at the Soldiers' Home at Leavenworth. The committee's report, given in February, recommended the removal of the governor, A. J. Smith, and a general reorganization of the force. It was held that several charges against the governor had been sustained, namely: Using public funds and property for his private benefit, tyrannical and overbearing conduct, and general unfitness and mismanagement. In regard to the sale of beer on the grounds, the report says: "There seems to be a glaring inconsistency that the sale of beer and the administration of the Keeley cure should both be found running in the same Government institution, and both at a profit and under authority of the Government."

In April the Board of Managers of the National Soldiers' Homes transferred Col. Smith to the Pacific branch home at Santa Monica, Cal., and elected Col. J. G. Rowland, then governor of that branch, commandant of the Leavenworth home.

On June 11 an attempt was made on the lives of the governor and his family by an explosion of dynamite under his residence. A veteran of bad reputation was tried for the crime. Col. Rowland took charge of the institution July 20.

Militia.—The appropriation for the National Guard having been reduced, changes were made in order to make the Guard as efficient as possible; several companies were mustered out, and some independent companies were admitted.

Banks.—There are in the State 100 private and 282 State banks. In October the Bank Commissioner called for statements showing their condition. A summary of the reports showed deposits aggregating \$21,695,718.15. A year ago the deposits were \$15,220,107.39. In June this year the deposits were \$18,050,430. The banks report cash and sight exchange of \$10,952,981.24. In 1896 the cash and sight exchange aggregated \$6,439,656.93. The law requires the banks to have a reserve of 20 per cent.

The August report showed a reserve of 44 per cent. The October figures showed the reserve to be 50½ per cent. A year ago the reserve was 38 per cent. The loans were \$16,945,921.90. This is an increase of \$1,408,796.46 over the loans of a year before.

The Bank of Hutchinson failed in April. The president was arrested, charged with receiving money when he knew the bank to be insolvent. The bookkeeper also was arrested.

Insurance.—The receipts of this department for 1897, to be turned into the State treasury, were: School fund, \$4,900; charter fees, \$285; filing annual statements, \$5,010; taxes (reciprocal), \$17,005.39; local agents' licenses, \$13,817; court and miscellaneous fees, \$204.07; total receipts for the State treasury, \$41,221. For the firemen's fund: Firemen's fund of 1896, \$16,450.12; firemen's fund of 1894, \$5,830.87; appropriation of 1897, \$11,420; total, \$33,700.89; total amount collected and disbursed, \$74,922.45.

The report on insurance companies for 1896, published in 1897, showed that there were in the State 10 mutual fire companies, which insured property of the value of \$4,362,351.78. Their total income was \$83,767.08; they paid losses amounting to \$45,764.06, and had 15,734 members.

One joint-stock fire company insured property worth \$10,112,533.97, received \$167,064.73, and paid losses amounting to \$59,720.60. There were 60 fire insurance companies of other States and countries doing business in Kansas in 1896. There were 15 miscellaneous companies from other States and countries. There was one domestic life insurance company doing business in this State in 1896. The insurance written amounted to \$457,780.82; premiums received, \$151,353.97; and losses paid, \$58,500. Amount of insurance in force Dec. 31, 1896, \$6,285,874.95.

The 27 foreign life companies wrote insurance amounting to \$5,973,563.85; collected in premiums \$1,298,211.22, and their losses paid during the year amounted to \$354,990.17. Amount of insurance in force Dec. 31, 1896, \$39,123,079.78.

The "insurance war" that has been going on in the State this year has attracted much attention. In March the State Superintendent of Insurance wrote to the Mutual Life Insurance Company of New York that it could not have a license to do business in the State for the ensuing year, because, in his opinion, the company had not dealt fairly by Mrs. Hillmon. The Hillmon case is a suit to recover \$10,000 insurance on the life of John W. Hillmon, which has been pending since 1880, and has been tried five times with varying results. The company contest the claim on the ground that the suit was fraudulent and was based on murder; that the dead body was not the body of Mrs. Hillmon's husband, but was the dead body of one Adolph Walters, of Fort Madison, Iowa, who had been killed by said John W. Hillmon for the purpose of defrauding the insurance company.

Other companies have received a similar notice from the Superintendent, and have sued him for damages and have sworn out injunctions to restrain him from interfering with their business.

In regard to the fire insurance companies the Superintendent believed there was evidence of a secret pool to maintain uniform rates, which is contrary to the antitrust law. These rates were published in Harrison Clarkson's rate book; and Superintendent McNall sent letters to the companies, asking whether they subscribed for the book and furnished it to their agents, and instructed them to make charges according to it, and whether any penalty was imposed on an agent who had written at a lower rate or placed property in a different class of risk than that laid down in the book.

Clarkson brought suit against the Superintendent, which was decided in November for the plaintiff.

Railroads.—The total railroad mileage operated in Kansas, according to the reports of the Railroad Commissioners, is 8,942.79; exclusive of trackage rights, 8,774.99; total for 1896, 8,812.90; decrease for the year, 37.91. The following were the earnings and expenses of all the roads: Gross earnings from operation, \$25,331,768.77; total operating expenses, \$19,120,255.68; income from operation, \$6,211,513.09.

The assessors in June increased the assessments of some roads and lowered others, the net increase being \$717,200.

The Railroad Commissioners, claiming the right to regulate rates, asked the companies to make certain reductions which it deemed reasonable, but the companies protested that their earnings in the State would not admit of the reductions.

Later there was a disagreement in reference to the basis of charges for cattle shipments. The Attorney-General asked an injunction to prevent the roads from charging by weight instead of by car load. The injunction was granted.

A charter was granted in July to the Superior, Hutchinson and Little Rock Railroad Company. The capital stock of the company is \$10,000,000, and its principal office is in Hutchinson.

Industries and Products.—An agreement between the executive committee of the miners of the Pittsburg district and the coal operators was made, Aug. 6. It was agreed that the miners could select any grade of powder they desired and it would be furnished them at \$2 a keg. The operators also promised semimonthly payments, which was the strongest demand made by the miners. But on Sept. 1 some of the Pittsburg miners went out in consequence of the failure of the company to provide such screens as had been promised, the miners complaining that the screens were so coarse as to take too great a proportion of their coal. On the same day there was a strike at Weir City because 76 miners were each docked a car of coal for sending up sulphur. The total amount taken was over 72 tons. This strike was ended Sept. 9 on the agreement of the company to dock them for only the actual amount of sulphur loaded that day, amounting to 20 tons.

The product of the lead and zinc district for the year is given as: Zinc, 350,408,364 tons; lead, 59,669,140 tons; value, \$4,627,881.

It was announced in March that an inexhaustible bed of sand such as is used in the manufacture of glass had been found along the river bank near Atchison.

Tables prepared by the Board of Agriculture give the yield and values of farm products for the past ten years and the aggregate value of all except live stock on hand. The total value for the ten years was \$1,362,951,818; and the value for 1897 was somewhat above the average, \$136,335,268. Following are the largest items for 1897: Winter wheat, 50,040,374 bushels, \$33,798,612; corn, 152,140,993 bushels, \$28,555,293; live-stock products, \$46,983,923; prairie grass under fence, \$4,305,688; Kaffir corn, 1,358,379 tons, \$4,076,217; oats, 23,431,273 bushels, \$3,828,192; Irish potatoes, 4,130,021 bushels, \$2,529,082; alfalfa, \$3,048,934; dairy products, \$5,259,752.

The net increase in value of this year's agricultural productions over that of 1896 is \$20,045,246, and of live stock \$20,508,985.

Attention has been drawn this year to the remarkable showing the State has made in the matter of paying up its mortgage indebtedness. The Topeka "Capital" published a table indicating that this indebtedness has been reduced nearly \$106,-

000,000 during the past seven years, a decrease of 45 per cent.

Status of a Receiver.—In the case of the State *vs.* A. D. Hubbard, in whose account as a receiver there was a shortage of more than \$7,000 the Supreme Court in December rendered a decision that a receiver could not be prosecuted under the crimes act, as a receiver is not an agent, and receivers are not mentioned in the statute with executors, guardians, and others vested with functions somewhat similar to those of receivers. The defendant had been sentenced to three years in the Penitentiary.

The Liquor Law.—A citizens' mass meeting was held May 7, in Topeka, to protest against the open violation of the prohibition liquor law and to arraign the city, county, and State authorities for aiding or permitting a return to the saloon system. Vigorous resolutions were adopted and a strong organization was perfected for prosecuting violators of the law and bringing about the removal of derelict officials. The strongest statement was made by G. L. Williams, which seemed to reflect the feelings of the large audience. "If it be conclusively shown," he said, "that there is a failure of execution because the courts and the Governor and other sworn officers of the law refuse to do their duty, then, and so long as such condition exists, government does not exist, and the people are resolved once more into other elements where the law of might and not of right prevails, and if the people of this city overwhelmingly oppose the saloons, which we had reason to believe were forever banished from our midst, and are denied the arm of the law in abating and destroying this crime, then we should meet force with force, and, during the temporary suspension of the law, by our own might utterly destroy the saloons and all other institutions being run in violation of the voted laws of this State."

Legislative Session.—The Legislature met Jan. 12 and adjourned March 13. On joint ballot there were 92 Populists, 59 regular Republicans, 3 silver Republicans, and 11 Democrats. The new State officers were inaugurated Jan. 11. Lieut.-Gov. Harvey presided over the Senate, and M. A. Householder was president *pro tem.* W. D. Street was Speaker of the House, and E. C. Wellep Speaker *pro tem.*

A successor to United States Senator William A. Pepper was to be chosen. Senator Pepper was a candidate for the nomination of his party. Other candidates were William A. Harris, Judge Dennison, John W. Breidenthal, State chairman of the People's party, E. C. Little, L. P. King, and John Madden. Mr. Harris was chosen, and was elected by the following vote: Harris, Populist, 101; J. R. Burton, Republican, 53; J. C. Caldwell, Republican, 2; King, Populist, 1.

The message of Gov. Leedy was read to the Legislature, Jan. 12. One paragraph was as follows:

"With a cheerful audacity that almost challenges admiration, Grub Street scribblers on a venal press, which panders to the most vicious instincts of semicivilized foreign colonies like New York city and Chicago, with semibarbaric splendor at the apex and semibarbaric squalor at the base of their social life, have offered their puny and presumptuous criticism of those whose shoestrings they are not worthy to unloose. The dogs of Egypt have barked at the pyramids unanswered for fifty centuries. When the accused Doge stood before the Venetian Council, he said: 'My defense is your accusation.' Let Grub Street rail on. They well know that Kansas was a pillar of cloud by day and a pillar of fire by night before an oppressed people in the nation's darkest hour."

In all, 1,833 bills were introduced, and fewer than 400 became laws. An antitrust act which became

a law defines trusts, provides heavy penalties, including forfeiture of charter, and makes contracts violating terms of the act null and void.

Another act requires a tax to be assessed on all money judgments rendered in the State courts. It is aimed at deficiency judgments where real estate has been sold under mortgage or deed of trust and fails to bring the face value of the mortgage.

One of the laws that was made requires holders of mortgages to record them in counties where the security is located within six months.

An "antiscrip" law requires miners' wages to be paid in lawful money. The coal operators pay in scrip redeemable in goods at the company stores. It was provided that finer screens than those in use should be furnished to the coal miners.

The State Irrigation Board, created two years ago, was not continued. The Legislature of 1895 appropriated \$30,000 for the work of the board. The irrigation and forestry stations are to be combined under the jurisdiction of the Forestry Commissioner.

Cities of the first, second, and third classes are authorized to acquire waterworks and electric-light plants by a vote of the people upon a petition signed by two fifths of the resident taxpayers, and corporations furnishing such cities light and water must surrender all over 6 per cent. on the investment to the cities as rent for streets and benefits of franchises.

A State grain department was created, and the appointment of a grain inspector was provided for.

A new congressional apportionment makes slight changes in the districts, placing Shawnee County in the first, and Pottawatomie County in the fourth.

A bill for uniform text-books and providing for the appointment of eight text-book commissioners, not more than three to be of the same political party, became a law.

A so-called "anti-Pinkerton" bill was passed at the close of the session. It makes unlawful the bringing into the State of any person or persons or association of persons for the purpose of discharging the duties devolving upon sheriffs, deputy sheriffs, policemen, constables, or peace officers in the protection or preservation of public or private property, and provides as a penalty imprisonment for a period of not less than three months nor more than one year for each violation, or, in case of a corporation, a fine of \$10,000.

The Australian ballot law was so amended as to increase the pay of judges and clerks of elections, fix a maximum rate for the printing of ballots, and increase the number of names necessary on a petition from 500 to 2,500.

Other enactments were:

Authorizing graduates of the university law school to practice without further examination.

Repealing the act for the encouragement of silk culture.

To prevent the blacklisting of employees.

To permit public corporations and *quasi* and private corporations to become members of mutual insurance companies.

To prevent discrimination by corporations or individuals against labor organizations.

To regulate the sale and inspection of oil.

To grant licenses to ex-Union soldiers to sell goods in Kansas.

To provide for the listing and taxation of mineral reserves.

To compel street-railway companies to place vestibules on cars for protection of motormen.

To transfer the State Grand Army of the Republic reunion grounds and buildings to the Women's Relief Corps, for a home and hospital.

To regulate the mining of coal at the State Penitentiary, and abolish the contract system.

Empowering the Board of Education in cities of the first class to levy a tax of 12 mills for the support of common schools.

Making competent the testimony of husband and wife against each other in divorce cases.

Requiring every employer of more than 10 men to pay weekly wages.

To provide for the safety and health of employees of coal mines.

Providing for the assessment of taxes on the property of all telegraph and telephone companies.

The appropriations amounted to about \$3,150,000. For legislative purposes \$77,000 was appropriated. For public institutions, etc., the amounts for the two years 1898-'99 were: State University, \$185,000; Agricultural College, \$14,170; State Normal School, \$60,000; Topeka Insane Asylum (maintenance), \$233,580; Topeka Insane Asylum building, \$60,000; Osawatomie Insane Asylum, \$313,528; School for the Blind, \$40,000; School for the Deaf, \$91,740; Topeka Reform School, \$64,770; Industrial School for Girls, \$49,050; Industrial Reformatory at Hutchinson, \$125,940; State Penitentiary, 308,000; Soldiers' Home, Dodge City, \$91,700; Soldiers' Orphans' Home, \$60,324; Soldiers' Orphans' Home (water supply), \$5,000; Horticultural Society, \$3,950; *per diem* and mileage of State board, \$50,600; conveying prisoners to Penitentiary, \$16,000; maintenance of destitute insane, \$45,000; Board of Agriculture, \$1,800; Kansas Children's Home Society, \$1,400; State printing deficiencies, \$55,000; State printing, \$140,000; compiling statutes of 1897, \$19,000; deficiencies in salary of district judges, \$7,603; forestry and irrigation, \$6,640; executive and judicial departments, \$593,290; Statehouse and grounds, \$16,600; Agricultural College building, \$16,000; bust of ex-Gov. Charles Robinson for the State University, \$1,000; geological survey, \$3,500.

Many salaries were reduced, most of these being of clerks and stenographers; but the chancellor of the university was cut from \$5,000 to \$4,000, and other salaries at the institution above \$1,000 were reduced 12½ per cent.

A bill regulating the fees and salaries of county officers will in some counties increase their compensation, but in the greater part will make a reduction of 10 to 25 per cent.

Some of the bills were passed in different form from that in which they were signed by the Governor.

One bill that was introduced proposed to make the Ten Commandments into a statute, with penalties attached.

Another bill introduced was to prohibit the wearing of hats, bonnets, or other head apparel at public entertainments.

A bill to provide for a constitutional convention failed.

One of the things that the Legislature was bound by party pledges to do was to pass a maximum freight-rate bill. A bill embodying the desired provisions, the Brown bill, was presented, but did not pass. Another bill was passed, but a protest was signed by nearly all the strong supporters of the Brown bill. This bill was vetoed by the Governor.

New Laws in Court.—The Legislature fixed new and lower rates to be charged by the Kansas City stock yards. The company protested in the form of an application by two heavy stockholders for an injunction to prevent the company from putting the law into effect. A restraining order was issued while a hearing was held to decide whether the stock could earn a fair dividend at the rates pro-

posed. This lasted several months, and, in October United States Judge Foster decided against the stock-yards company, denying the application for an injunction and revoking the restraining order.

The "scrip" and "screen" laws were resisted by the coal companies on the ground that they were unconstitutional, because the text was not properly indicated by the title, and because they applied only to mine owners and not to other employers, and were therefore class legislation. Test cases were brought, and the law sustained by a decision in December. An appeal was taken.

The "antidockage" law was in May declared unconstitutional, on the ground that it interfered with the right of private contracts.

The "general repeal" act, which would have taken 300 pages of redundant and inoperative statutes out of the books, was declared unconstitutional.

Political.—Municipal elections were held April 5 and 6. The Republicans elected their ticket in four of the six first-class cities. A large percentage of the vote was polled by women. In the larger cities, where enforcement of the prohibitory laws is under the direction of the metropolitan police officers, they divided on party lines; in some of the second-class cities they made the enforcement of the law a vital issue; but in many of these, where a determined fight was made, the prohibition cause was defeated. In a majority of these cities the Populists and Democrats combined on citizens tickets, and in many they were successful.

Most of the county and district elections in November were carried by the Republicans. The vote was estimated as follows: Republican, 138,470; Fusion, 129,351.

KENTUCKY, a Southern State, admitted to the Union June 1, 1792; area, 40,400 square miles. The population, according to each decennial census since admission, was 220,955 in 1800; 406,511 in 1810; 564,135 in 1820; 687,917 in 1830; 779,828 in 1840; 982,405 in 1850; 1,155,684 in 1860; 1,321,011 in 1870; 1,648,690 in 1880; and 1,858,635 in 1890. Capital, Frankfort.

Government.—The following were the State officers during the year: Governor, William O. Bradley; Lieutenant Governor, W. J. Worthington; Secretary of State, Charles Finley; Treasurer, G. W. Long; Auditor, Samuel H. Stone; Superintendent of Public Instruction, W. J. Davidson; Attorney-General, W. S. Taylor; Commissioner of Agriculture, Lucas Moore—all Republicans; Chief Justice of the Court of Appeals, Joseph H. Lewis, Democrat; Associate Justices, James A. Hazelrigg, Democrat, Thomas H. Paynter, Democrat, J. D. White, Democrat, B. L. D. Guffy, Republican, George Du Relle, Republican, and A. Rollins Burnam, Republican.

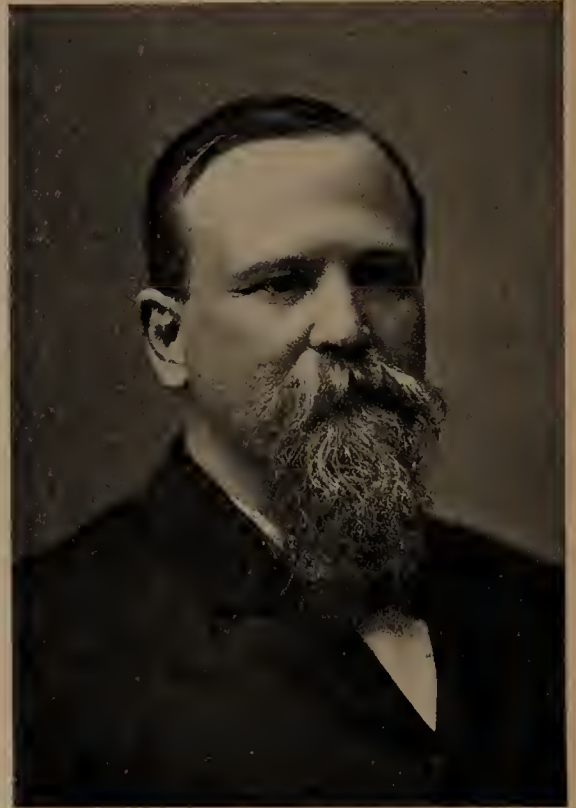
Finances.—The report of the Treasurer for the year ending June 30, 1897, shows the total receipts to have been \$3,828,163.24. The balance on hand at the beginning of that year was \$201,829.02. The total amount paid was \$4,018,030.36, leaving a balance of \$11,961.90.

The Legislature ordered an issue of \$500,000 in bonds, to be applied on the warrant indebtedness. They were sold at a premium of 7.47 per cent. The total bonded indebtedness Nov. 30, 1897, was \$3,483,990.86, and the floating debt past due \$1,562,125.33. The resources of the sinking fund were \$586,612.72, making the total net indebtedness \$4,459,503.47. The educational bonds, amounting to \$2,312,596.86, are not subject to redemption, but constitute a perpetual debt, the interest on which is payable semiannually.

In September a judgment was given in the circuit court in favor of the Commonwealth in the

case against the Louisville Street Railway Company for \$27,408.

Charities.—The total expenses of the three asylums during six months of 1896 were \$23,616.95 less than in the corresponding months of 1895, and the average *per capita* expense was \$11.35 less. They were: Western Asylum, \$43,773.54; Central, \$77,785.52; Eastern, \$53,656.92. Salaries had been reduced at the Eastern, but not at the others.



WILLIAM O. BRADLEY, GOVERNOR OF KENTUCKY.

The management of the Blind Asylum has saved \$17,000, which is being used in the construction of new buildings and remodeling the old. The institution received \$23,275 from the State treasury during the year.

A new building has been erected for the Institute for the Feeble-Minded, to take the place of the one that was burned. The sum of \$22,765 was paid to the institution by the State in 1896-'97.

Prisons.—The Governor's message says of the prisons: "The chair contract at the Frankfort Penitentiary has not realized the money which it was thought it would, and there is now a controversy between the State and Mr. Martin, in which the former claims that the latter owes the additional sum of \$23,000."

"Following closely upon the termination of the contract with the Frankfort Chair Company came the destruction of the workshops at Eddyville by fire. This threw out of employment a large number of convicts. After the completion of the shops at Eddyville, the State will have 1,350 convicts at work, leaving unemployed only those unable to labor."

Pardons.—During the term of the present Governor there have been 1,572 applications for pardons, remissions, and respites, exclusive of those for restoration of the rights of citizenship. Of this number, 302 were granted; 26 were for children under eighteen. Of 329 applications for restoration to citizenship, 159 were refused.

Banks.—The Court of Appeals rendered a decision, March 24, reversing a previous one in regard to

taxation of banks. Hereafter banks will have to pay county and city taxes as individuals do, instead of paying 75 cents on the hundred to the State as heretofore. Under this decision the State will have to refund to the banks more than \$400,000 that has been paid into the State treasury, and the banks in turn will have to pay city and county taxes amounting to more than \$750,000.

In January the failures were reported of the First National Bank of Newport and the German National Bank of Louisville. Arrests were made in connection with the latter.

Loan Associations.—A decision was given June 19 by the Appellate Court which is expected to force out or seriously cripple all the associations in the State. The court held that the remedial law of 1893, which authorized these associations to charge not exceeding 12 per cent. interest, including dues and the legal rate, is unconstitutional. It holds that all interest and dues in excess of 6 per cent. is usurious and can not be charged. It is also held that even the dues are "interest," and that the borrowers who have been paying from 12 to 17 per cent. in dues and interest are entitled to recover or be credited by all in excess of a 6 per cent. interest.

Gold.—Gold has been discovered in Hardin County. An assay of the ore showed \$33.07 pure gold to the ton, and \$1.28 silver. The shaft was sunk about 18 feet deep in the rock, and the quartz taken out continues to increase in richness the deeper it goes in the rock. The vein is about an inch and a quarter in diameter, and is found in white granite. Ten dollars a ton will cover the expenses of extracting the gold. At another point the gold yielded \$58 to the ton.

Local Option.—In a case before the Court of Appeals it was decided, Oct. 15, that the special "local-option" acts under which liquor selling was voted out of certain counties and towns in the State do not stand repealed by the Constitution, and that where no license has been voted the people must reverse their action before license can be granted.

Lawlessness.—The destruction of toll gates was continued this year, accompanied in some instances by violence to the keepers and officers who attempted to protect the property. The State held turnpike stock in the sinking fund amounting to \$400,000, but its value has been reduced by the action of the raiders to \$100,000. The Governor said in his message that he was satisfied "that in numerous instances many of those who pose as good citizens have winked at this outlawry, because they supposed the result would be the depreciation in value of turnpikes, thus enabling the counties to purchase them at nominal prices, and thereby preventing in a large degree the levying of taxes. Advantage has been taken by some of the fiscal courts of this condition of affairs, and counties have become beneficiaries of crime which would not have been committed but for the worthlessness and cowardice of officials and the corruption of citizens who openly countenanced the lawbreakers. Frequently counties have voted for free turnpikes and at the same time voted against the issuance of bonds to pay for them. In other words, they declare they will have free roads without making compensation."

The message says further that the raiders, encouraged by their immunity from punishment, "have undertaken to regulate the quantity of tobacco the farmer should cultivate, destroying his plants if he dared to disobey; have notified the miller that he should charge no more for flour than the price fixed by them; threatened with the shotgun and the torch farmers who had posted their lands if the boards were not taken down and they allowed to hunt without hindrance." A negro was

lynched in Hancock County in open day, and without masks or even pretenses of secrecy on the part of the lynchers.

Legislative Session.—The Legislature having failed to elect a successor to United States Senator Blackburn at its regular session in 1896, the Governor appointed Andrew T. Wood, in March, to fill the place until a Senator should be regularly chosen. He called a special session to begin March 13, one of the purposes named being the election of a Senator. Other objects named were a new apportionment of the legislative, senatorial, and court districts; a law against mob violence; penitentiary reforms; revision of the election laws; and an inspection of trust companies and banks.

The balloting for United States Senator began March 23. The Republicans had a majority, and their caucus nominee was Dr. W. Godfrey Hunter; but six of the party refused to support him, giving their votes to St. John Boyle. This aroused indignation in the party, and the bolters were denounced by conventions held by their constituents and in other districts. Ex-Senator Blackburn was the candidate of the free-silver Democrats, and Henry L. Martin was during a part of the canvass voted for by the gold Democrats. Dr. Hunter at times came within one or two votes of election, and twice had a majority of those present when there was a quorum; but the presiding officer ruled that the ballot should not be announced until after the absentees had been permitted to cast their votes, the so-called absentees being those who, in order to prevent a quorum, would not vote at first. During the canvass, April 10, a charge was made against Dr. Hunter and others that they had tried to secure his election by bribery; and an indictment was found against him and four others by the Franklin County grand jury April 18, charging them with conspiracy to bribe. After a long trial they were acquitted Sept. 21. On the one hundred and twelfth ballot, April 28, William J. Deboe received the support of all the Republicans, Dr. Hunter having withdrawn, and was elected by the following vote: Deboe, 71; Blackburn, 50; Martin, 13; Stone, 1.

A bill concerning fusion, which was introduced by the gold Democrats, was vigorously opposed.

The Legislature passed a bill allowing the State to issue bonds to the extent of \$500,000, to bear interest at the rate of 4 per cent. In June a case was brought to test the validity of the law, and it was declared void, on the ground that the outstanding bonded indebtedness of the State now is more than \$2,000,000; but the case was appealed and the decision reversed. The bonds were issued July 1.

A bill to substitute electrocution for hanging in executions was lost, and one was passed providing that executions shall hereafter take place within the walls of the Penitentiary.

The \$29,000 interest due from the State since 1894 on bonds of the Agricultural and Mechanical College was appropriated to the college, and it was provided that new bonds to the amount of \$165,000 be issued to replace the expired bonds, and that the interest on these bonds be appropriated, 85½ per cent. to the Agricultural and Mechanical College and 14½ per cent. to the Colored Normal School in Frankfort.

A bill to reduce and regulate the salaries of certain officers and appointees of the State fixed the principal salaries as follows: Of the Governor, \$5,000; Auditor, \$3,000; Treasurer, \$3,000; Attorney-General, \$3,500; Commissioner of Labor, Agriculture, and Statistics, \$1,000; Secretary of State, \$2,500; Superintendent of Instruction, \$2,500; Register of the Land Office, \$1,500; Adjutant General, \$1,200; State Inspector and Examiner, \$1,200 and traveling expenses; Insurance Commissioners,

\$3,000; Inspector of Mines, \$1,800 and traveling expenses; Railroad Commissioners, \$1,500 and traveling expenses.

Other acts were: Declaring combinations, confederacies, and conspiracies to intimidate crimes.

Allowing the city of Louisville to buy property sold for taxes, and hold it for one year, to allow owners to redeem it.

Imposing a penalty for interrupting public speakers.

Providing that all cars bringing into the State coal mined by convict labor must be so labeled.

Authorizing the organization of trust companies in counties with less than 100,000 population and permitting them to do both a banking and trust business.

Political.—Elections were held Nov. 2. The only State officer to be chosen was clerk of the Court of Appeals.

The People's party held a convention at Louisville, April 7. The platform favored the initiative and referendum; an income and an inheritance tax; the furnishing of schoolbooks at cost; the operating of "all turnpike and other transfer systems of public utility" by the public; reduction of salaries of public officials; a law to prevent discrimination against any legal-tender money of the country; legislation against trusts and combinations; and the receiving of unpaid warrants upon the State treasury for taxes and other dues to the State. Joseph A. Parker was nominated for clerk of the Court of Appeals.

The Democrats met in convention at Frankfort, June 2. The resolutions, which were adopted with but one dissenting vote, declared in favor of the Chicago platform and urged all true Democrats to stand by it. It condemned the "dishonesty, corruption, and incompetency" of the State administration.

Samuel J. Shackelford was the nominee.

The National Democrats held a convention, July 14, at Louisville. The resolutions reaffirmed the principles of the party as declared by the Indianapolis platform, pledged the party when in power to enact tax laws for revenue only, to pay all debts without bounties, and to reform the currency laws so as to maintain the standard of the world; they denounced the movement for free coinage of silver and all attempts to fix the ratio between the metals arbitrarily by law; condemned lawlessness; and pledged themselves to use every effort to restore the supremacy of law and to punish lawbreakers.

James R. Hindman was made the nominee.

On Aug. 10 the Republican State Convention was held at Louisville. The resolutions, after declaring allegiance to the principles of the party and commending the national and State administrations, continued:

"We are opposed to a system of civil service that builds up an official class, practically a life tenure, in almost all branches of the public service, and we demand that the civil service be so amended as to limit the terms of service to four years, with the privilege of reappointment or promotion subject to such restrictions as will secure competent officials and to every section of the country its proper portion of them.

"We favor the passage of a law that will protect the laborers of Kentucky from the competition of convict labor, and, if necessary to accomplish such results, an amendment to the Constitution permitting such legislation."

James G. Bailey was nominated.

The Prohibitionists nominated O. T. Wallace.

The campaign was very spirited and in some places violent. The question of free coinage was the chief topic of discussion in the State at large.

In some of the local contests the Republicans and National Democrats united.

On election day a bloody encounter took place in Frankfort, resulting in the death of 3 men and the wounding of 2 more. There was also a disturbance at Mount Vernon, and a shooting affray between the rioters and the sheriff and his deputies. Three of the deputies were killed.

The vote stood: Shackelford, Democrat, 187,482; Bailey, Republican, 169,678; Parker, Populist, 7,274; Hindman, National Democrat, 9,562; Wallace, Prohibitionist, 1,734; Democratic plurality, 17,804. The Legislature for 1898 stands on joint ballot: Democrats, 99; Republicans, 38; Populists, 1; National Democrats, 2.

KINETOSCOPIC PICTURES. In 1894 Thomas A. Edison brought out his kinetograph and kinetoscope, and a year later he gave out some description of his kineto-phonograph and phono-kinetoscope. The two first-named mechanisms have to do with the reproduction of moving scenes, and the two last-named with the simultaneous production of moving scenes and accompanying sounds. The kinetograph and kinetoscope had been introduced to the public but a short time, when other inventors brought out the biograph, cinematograph, eidoscope, eidoloscope, mutoscope, vitascope, and numerous other mechanisms similarly named, each adapted for the display of kinetoscopic pictures to be viewed through a peephole, or to be thrown on a screen in enlarged form by a magic lantern, so as to be visible by a large number of people, as in a public hall. These productions have been termed biographic pictures, cinematographs, etc., until in many cases the fact has been lost sight of that they are all kinetoscopic pictures, presented by slightly different mechanism.

The kinematic idea, as devised by Mr. Edison and perfected with the assistance and under the immediate direction of W. K. L. Dickson, was borrowed from two old toys, the phenakistoscope and the zoetrope. In each of these a series of coarse pictures representing continuous phases of motion was presented in rapid routine, in the effort to reproduce to the eye the effects of continuous movement. When instantaneous photography became known through the discoveries of Maddox, and Muybridge, Marey, and others gave to the world continuous pictures of the motion of the horse, the dog, etc., it occurred to Mr. Edison that it would be interesting to produce a better apparatus for properly exhibiting these modern photographs. After six years of patient labor the mechanism was perfected and the manufacture of kinetoscopic films was placed on a commercial basis. In order to deceive the human eye into an impression of continuity, it was found necessary to present to view 46 separate, distinct, and perfect pictures every second, and to keep each of these stationary for nine tenths of that forty-sixth of a second, while the entire set of pictures was advanced in position one degree during the remaining four hundred and sixtieth part of a second; and this intensely rapid alternation of stops and starts had to be carried on with almost perfect absence of vibration. Nor was this all. In order to reproduce the pictures at this speed and in this manner, it was essential that they should be photographed in the same manner, in order that the motions reproduced should be given in the proper time. None of the methods of photography then in use were available. Previous takers of instantaneous photographs had used batteries of at least 24 cameras, but here the conditions permitted the use of but a single camera. Bromide-of-silver haloids were tried, but produced coarse effects at every effort to enlarge the views. Success was at last attained with sensitized celluloid

films made in strips about an inch and a half wide, and bearing a row of holes on each edge, through which the teeth of wheels were projected for moving the strip at the required speed, with requisite stops. All kinetoscopic pictures are now taken on such films, and their manufacture has become a considerable industry. The photographic films sell for about $12\frac{1}{2}$ cents a foot, and are the most expensive portion of an outfit for exhibiting the pictures. From 50,000 to 165,600 pictures are required on a film to supply an hour's exhibition, the latter figure being the number for pictures one inch in width. Although the pictures have to be stopped in transit 46 times a second, yet the speed with which they are moved on the drum is actually 26 miles an hour, exclusive of the stops.

Kinetoscopic pictures were first exhibited in the familiar nickel-in-the-slot kinetoscopes, and kinetoscopic parlors were established in many large cities, where a variety of scenes was kept on exhibition in different machines. At this time no method was provided for exhibiting the pictures in an enlarged form on a screen. The kinetograph served to take the pictures and make the record for exhibition. It is a form of photographic apparatus having a camera capable of taking 46 views a second, and it makes the record or series of pictures on the kinetoscopic films, these being afterward finished like other photographs, and often colored by hand. The kinetograph is not, however, in any sense an exhibiting machine. As a consequence, no sooner were the machines marketed and declared a popular success than a small army of inventors set on work to devise means for exhibiting the pictures in enlarged form on a screen. One of the first to come before the public was the eidoscope, devised by Woodville Latham, and exhibited on Broadway, New York, in 1895. The kinetoscopic pictures were passed through the front of a magic lantern, which projected them on a white screen. The pictures thus obtained were interesting, but so shaky and irregular as to give a continually blurred effect to the views. A little later the eidoloscope came out, and was placed on exhibition in a New York theater. The films for this machine are made continuous, and are wound on two spools, one giving off the film as the other winds it on, provision being made for a regular and even speed of the traveling film. It was regarded as a great success when this machine produced a satisfactory reproduction of a drill of Troop A of the National Guard, in Van Cortland Park, in the summer of 1896.

Another machine that has come prominently before the public for exhibiting enlarged kinetoscopic pictures is the vitascope. This is Edison's machine, the name chosen meaning, literally, the exhibition of life. The cost of perfecting it is stated to have been about \$20,000, and it was reconstructed several times before it assumed its present form. In the first model a shutter was used, as in the kinetoscope; but it was found that the action of the shutter had much to do with producing the blurred effects observed in the enlarged reproductions. The shutter was therefore abandoned, and an arrangement of an arc light and lenses was provided, which operated satisfactorily. The vitascope as perfected has a small camera lens in front for projecting the view on a screen. Just behind the lens is a rectangular frame of the size of the pictures to be reproduced, serving to confine the margins of the picture on the screen to the proper limits. The prepared film is passed directly in front of this frame, mechanism being provided for carrying it along with the required 46 stops a second. Behind is a large lens, and immediately behind this an arc light of about 2,000-candle power. An electric motor is employed to carry the

film with its train of pictures, and as each picture passes the frame, behind the small camera lens, the light from the arc lamp, passing through the large lens, projects the picture through the smaller lens upon the screen with a magnifying power as great as 600 diameters. One of the most serious difficulties overcome in the construction of the vitascope was the protection of the film of pictures from melting under the great heat encountered in the focus of the powerful arc light. The problem was solved by placing an electro-magnet in front of the frame over which the film traveled, so suspended near a small dynamo that the magnet is active whenever the film is stopped, and draws it out of focus; but when the current is turned on to start the film in motion the same movement withdraws the current from the magnet, and the film returns to its place in the focus, where it is not in danger of being melted as long as it is in motion.

The biograph is a machine similar to the vitascope, and has been used in numerous theaters in the United States in giving a variety of short views of moving scenes. An express train running at sixty miles an hour, fire engines on their way to a fire, children in a pillow fight, a pickaninny's bath, and a great variety of similar scenes involving rapid action have been successfully introduced, and have proved very popular. The cinematograph is another similar machine, which achieved considerable notoriety in 1897, as being the medium used to display the kinematic pictures illustrating a prize fight. This was the longest series of pictures ever exhibited continuously, their display occupying an hour and a half, and the results were fairly satisfactory, though it was found necessary to stop the exhibition when about half concluded, in order to afford opportunity to the observers to rest their eyes, which were unpleasantly affected by the vibration of the views on the screen. This vibration is present with all the machines used to exhibit enlarged kinetoscopic pictures. It is the result of the magnifying of the minute vibrations set up in stopping and starting the travel of the films 46 times a second. The vibration is not so serious when the films are new as it becomes after a little time, when the holes in the edges of the films become a little worn through repeated travel over the teeth of the carrying wheels. A very little wear in these holes allows the films to shake in proportion to the amount of play or lost motion in the holes, and this shake is exaggerated on the screen several hundred times.

One of the most singular results producible with kinetoscopic pictures is obtained by exhibiting them in reversed order from that in which they were taken. In other words, the films bearing the pictures are run backward through the vitascope or other exhibiting machine. Take, for instance, a view of a man eating a plate of chicken, with vegetables, gravy, etc. When it is presented backward, the observer sees a man seat himself at a table, wipe his mouth, and pick his teeth. Before him is a plate empty but for a few chicken bones. He begins with a fork to extract portions of meat from his mouth, and with the aid of his knife to build these up on the chicken bones. In the same way the vegetables, etc., are removed from his mouth to the plate, until a well-filled dish stands before him, covered with chicken gravy, which he removes to a special dish by the aid of a large spoon into which the gravy jumps from the plate in the most astonishing manner. A variety of other scenes are rendered equally peculiar and ridiculous by this reversing process, as horses running backward with a fire engine or a reversal of the process of a barber shaving a customer.

The mutoscope is an instrument similar to the

kinetoscope for exhibiting the pictures on a small scale for observation through a peephole. A number of other machines have been devised and employed for exhibiting the views through a peephole or in enlarged form on a screen, but none of them differ essentially from those described; they are practically either kinetoscopes or vitascopes.

Mr. Edison's inventions in the display of his kinetoscopic pictures did not cease with the kinetoscope and the vitascope. With the active aid and co-operation of W. G. L. Dickson, he developed the kinto-phonograph and phono-kinetoscope, crowning triumphs of ingenuity in this field, which have not been generally exhibited. These mechanisms, as the names imply, are designed to reproduce sounds with sights, so as to preserve all the physical impressions received by an individual who observes a scene of life and action. The kinetograph records, and the kinetoscope exhibits to the eye, the movements of living or other active objects; the phono-kinetograph records both the sounds and motions, while the phono-kinetoscope exhibits a duplication of both the sounds and motions originally given. The principle of the phonograph is of course the one applied to and associated with the kinetograph and kinetoscope in accomplishing this result. The chief difficulty to be overcome in bringing them into operation as one machine was the harmonizing or synchronizing of all the mechanism, so that the sights and sounds recorded and reproduced were absolutely sure to be given in unison. The system is peculiarly suited to the reproduction of events occurring on the stage of a theater, and a special kinetographic theater was set up for making the experiments. Here it was found necessary to group the actors close together and expose them to a very strong light. A kinetograph and a phonograph are then placed so as to bear upon the group, and are electrically connected, so that the cylinder of the phonograph and the spools of the kinetoscopic films may travel in exact unison. The continuous action of the players is caught by the kinetograph readily enough, but it is necessary that their utterances be directed toward the phonograph to secure a good record of the sounds.

KITE FLYING. Within half a dozen years kite flying has developed from an amusement suited to boys to a scientific pursuit eagerly followed by researchers in the fields of *aéronautics*, meteorology, and military tactics. The student of *aéronautics* has found the kite even more worthy of study and experiment than the balloon; the United States Weather Bureau has devoted time and money to the development of kite flying in order to obtain observations with meteorographs at high altitudes; the military tactician has been interested in them as furnishing means of signaling and making observations; and the photographer has recognized in them a new field for his efforts. Lawrence Hargrave, of New South Wales, deserves the greater part of the credit for transforming the kite from a toy to an instrument of science. To his investigations the world is indebted for the cellular or box kite, whose lifting power is much greater than that of any flat-plane kite, and which may be made in a great variety of forms. Knowledge of the laws that govern the wind and the action of *aéroplanes* has been much increased by his development of cellular kites. Hargrave, in originating forms of kites, was obliged to proceed almost wholly on the plan of guess and try. At that time the writings of Langley, Chanute, Maxim, and Lilienthal, describing their investigations in the work and action of the wind, were not available, and Hargrave was obliged to jump at conclusions of his own and test them by practice, under all the uncertainties arising from having to do with conditions little known

and in some respects erroneously treated by early authorities. He contrived an almost endless variety of cellular forms, being convinced that two surfaces, slightly separated, increased the lifting power for a given area, while the side surfaces added stability. He obtained the best results with what has become known as the two-celled Hargrave kite, shown in Fig. 1.

The older form of kite—the cross-stick kite of Benjamin Franklin's time, made both in X form and with sticks arranged in the shape of a Latin cross, with a tail of twine and paper—has also a modern development in the Malay kite, especially as improved by W. A. Eddy, of Bayonne, N. J. The Malay kite, as built by him, and shown in Fig. 2, has the cross-stick very near the top and made with an outbow or curve. It is tailless, as are most of the recent forms of kites. A tail simply serves to give balance to a kite, which is better obtained by a more perfect construction. The reason for the extreme shortness of top shown in the Eddy Malay kite is that the wind pressure on the under surface of an inclined kite plane is much greater at the top or forward end, because this first

catches the wind and sustains the effort of turning it in a downward course.

Variant forms of the kite have been devised by Octave Chanute, J. B. Millet, C. F. Lamson, C. W. Marvin, J. Woodbridge Davis, Dr. A. B. Johnson, Alexander McAdie, and other investigators, many

of the designs approaching air ships in their imposing size and construction. The experiments of Chanute, Millet, and Lamson have been with a view toward constructing a successful *aéroplane*

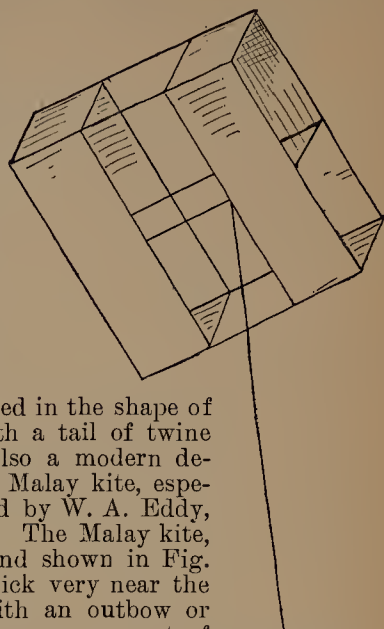


FIG. 1.
TWO-CELLED
HARGRAVE
KITE.

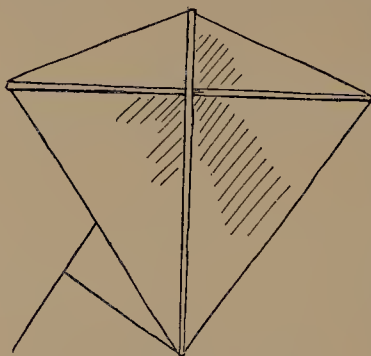


FIG. 2.—EDDY MALAY KITE.

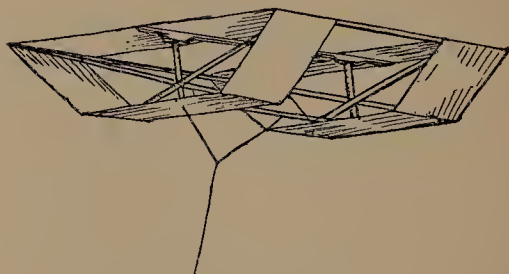


FIG. 3.—TRAPEZOID KITE.

flying machine, while Marvin's experiments were made in his capacity as meteorologist for the Weather Bureau. His trapezoid kite is shown in Fig. 3. All these experimenters make use of cellu-

lar, double-plane, or multiplane forms, which they arrange in a variety of ways. The first cellular kite was probably the Japanese single-cell toy kite shown in Fig. 4, consisting of four sides arranged rectangularly, with the bridle drawing from two corners, so that a V surface was presented to the supporting

air. This form has a modern representative in a two-celled kite made by the Weather Bureau, which was tolerably efficient. But the V

undersurface, while convenient of construction, is not generally regarded with as much

favor as those having flat or slightly curved planes. The

tubular form of cell has been experimented with, and has been proved to be decidedly inferior. The

rectangular two-celled form is most generally approved, though three and four celled designs have shown considerable efficiency. While much variety of detail is found

FIG. 4.
JAPANESE
SINGLE-
CELLED
KITE.

admissible in construction, the later designers appear to keep in mind the necessity of using several planes so separated as to secure lifting effect without interference with each other—that is, without making it possible for one plane to receive the wind useful to another plane, or to turn the wind so as to lessen the lift of another plane.

Experiments with parakites, or kites flown in tandem, several being attached one after another to a single cord or cable, have developed possibilities in high flying, and in lifting heavy bodies, which were previously found impossible, owing to the restraining weight of the cord and the lack of stability in a single kite. G. T. Woglom, a jeweler of New York city, Messrs. S. P. Fergusson and H. H. Clayton, of Blue Hill Observatory, Milton, Mass., and Mr. Eddy are among the most persistent experimenters with parakites, and Woglom has published a book detailing his methods and experiments. He makes use principally of the Malay kite, as does also Eddy. The others named use both Malay and Hargrave kites on the one line. Lieut. H. D. Wise, in a series of experiments near New York in 1896 and 1897, also used both forms, preferring the Hargrave for lifting.

In flying a train of Malay parakites, a leading kite is selected capable of being raised perhaps 700 feet in a moderate breeze. When this is up 200 or 300 feet, a second kite is started, the method of attaching differing with the strength of the wind at the time. If the wind is light, the second kite is elevated separately on a line about 75 feet long, which is then attached to the main line. If the wind is strong, the second kite may be tied by the tail end to the main cable, the first kite furnishing the lifting power. After the second kite has dangled an instant, its surface comes to the wind, and it is thrown up into correct position, and begins to sustain the line. Other kites are attached in the same fashion, stronger cord being used with each additional kite; and in this way as many as a dozen are sent up. Woglom asserts that there is no limit (barring accident) to the number of kites that may be sent up in this way. The kites—or parakites as they are usually called when flown in tandem—exercise the ordinary kite function only in being elevated; when in place in the line, they exercise the

functions of aeroplanes in maintaining themselves in the air. The arrangement of Malay kites as parakites is given in Fig. 5.

Lieut. Wise found the cellular kites of a slightly modified Hargrave pattern best adapted for use as parakites for lifting a considerable weight, as a man. He placed the smaller ones first in his line, gradually increasing the area. He first experimented with a dummy, weighing 30 pounds. This was easily carried up by two large kites, in a 17-mile breeze, the lifting surface of the kites being 112 square feet. The dummy was elevated about 800 feet, but it was shown that the parakite was too unstable for elevating a man, as the dummy was shaken about in a most violent manner, being sometimes swung entirely over the main cable. Three Hargrave kites were used by Wise in his first endeavor to raise himself with a parakite. The surface area of the kites was 202 square feet, and the wind was blowing 22 miles an hour. The cord was wrapped on a windlass, firmly pegged to the ground, and about 300 feet of seven-sixteenths manilla rope, with a breaking strain of 1,250 pounds, was run out on the ground and tied to the largest kite, which was to be the lowest in the series, bearing the direct strain of the weight. Sixty feet of lighter rope, of a breaking strain of 750 pounds, was used to connect the second kite, tying it to the back of the first. The third and smallest kite was then launched in the air as a leader, and tied to the back of the second kite. Wise occupied the seat attached to the large kite, and signaled the men at the two lower kites to present them to the breeze for launching. The initial strain was so great that the lower frame of the large kite was pulled out, and the other two kites broke loose and flew away, but were caught and hauled down, and were broken by contact with buildings. This experiment taught Wise that, while he had plenty of lifting power, he lacked control of his apparatus. On Jan. 22, 1897, he made his first

successful ascension, using four large Hargrave kites with a total lifting area of 312 square feet in a 17-mile breeze. This time the kites were raised in two separate pairs, and were united after being elevated. He readily attained an elevation of 42 feet, and might have gone higher, but deemed it best not to court accident. The total weight lifted from the ground was 229 pounds, 59 pounds being the weight of the kites, 20 pounds of ropes, and the remainder the dead weight of the man and the chair. Half-inch manilla rope was used to retain the kites.

On May 4, 1895, Woglom raised an American flag about 2,000 feet above the Washington Arch, in New York city, with a parakite composed of six large Malay kites. In November, 1894, he raised a parakite to a height of 1,500 feet in a gale blowing 50

FIG. 5.—A PARAKITE OF
MALAYS.

miles an hour. This is about the limit of wind pressure in which it has thus far been found possible to send up a parakite with safety.

Eddy introduced his kites at Blue Hill Observatory in 1894, and many attempts were there made to reach high altitudes for the purpose of securing meteorological records. Previous to this, the best record at Blue Hill was 1,500 feet. In August, 1895, 9 Malay kites were sent up to a height of 1,900 feet which was a very unsatisfactory result to the observers, as the kites had a lifting surface of 220 feet and the wind was strong. When it reached 30 miles an hour many of the kites, which were of paper, were torn to pieces. The strongest pull shown on the line was 112 pounds. A systematic attempt was then made to improve every part of the mechanism and apparatus; and this work was so successful that by 1896 a record of 7,500 feet was recorded, the distance being calculated from the meteorograph to the surface of the ground on the hill. This record was increased to 8,740 feet in October, 1896, with 7 Malay and 2 Hargrave kites, having an area of 170 square feet. On Sept. 19, 1897, the record was again broken, and a height of 9,386 feet above the hill was recorded, the elevation above sea level being 10,016 feet. Seven Hargrave kites were used, and 4 miles of wire run out. The ascent was begun at noon, the highest point being attained at 4.17 P. M. A large part of this success was due to the substitution of steel piano wire for cord as kite string. The wire has two or three times the strength for the same weight as has the cord, and presents but one sixth as much surface to the air, so that the sag is greatly reduced.

Both Hargrave and Lamson made personal kite ascensions before Wise. Hargrave used a tandem of 5 of his 2-celled kites, and Lamson used a multiplane kite of his own peculiar construction. Hargrave ascended only 15 feet, but Lamson ascended 100 feet, June 20, 1896, at Portland, Me. He had previously elevated a 150-pound dummy, on which occasion something broke and the apparatus fell to the ground, but it came down so gently as to give confidence that the danger in a personal ascent was slight. Within the past year or two others have made similar ascents, among them being Lieut. Baden-Powell, of the Scots Guards, Great Britain.

As a means of signaling, Octave Chanute's multiplane kite has been tested by J. E. Maxfield, of the United States Signal Service, and tests for the War Department were made by Lieut. Wise at Governor's Island.

By an arrangement of red, white, and green lanterns, suspended on either end of a bamboo rod, with cords and pulleys for reversing the position of the rod, Wise made signals with the regular army code at a height of 500 feet. In the daytime a similar feat was accomplished with signal flags. For operating the international code, flags tied to a halyard in the proper order were simply run up to a pulley below the kite, one set being displayed, while another was being tied on. For night signaling with the international code, a long bamboo rod was run up, having fixed to it sticks of different colored combustible substances, arranged in a predetermined order. These signals were arranged so that they would burn five minutes after hoisting, and were visible to a distance of fifteen miles. Wise is now experimenting with incandescent electric lights for night signaling, sending the current up on the inside of a cable and down on the outside, and employing a telegraph key to flash the messages, on the principle of a heliograph.

Eddy has given more attention to photography from kites than any any other investigator. He has taken numerous photographs in New York city,

Boston, and Bayonne, and succeeded in overcoming the numerous difficulties incident to operating a camera from a distance of several hundred feet, where it is subject to vibrations and shocks from a variety of causes. By arranging 8 or 10 cameras in a circle, with the backs inside, and suspending them in midair, he has obtained complete views of the horizon. He suggests that such an apparatus would be valuable in naval service, enabling the detection of an enemy below the horizon at a distance of 20 miles. In following out this idea of using the kite as a means of discovering that which is beyond the natural vision, Eddy devised what he terms a vistascope, a form of camera obscura, in which the image is thrown on a screen suspended from the kite, and viewed from below with a spyglass. In this manner he has viewed objects 2 miles distant beyond intervening hills.

Eddy, in association with Dr. William H. Mitchell and Henry L. Allen, in December, 1896, succeeded in sending both telegraphic and telephonic messages over a kite line, without using electric batteries of any sort. Three kites, each from 6 to 7 feet in length, were sent up on one line to a height of about 1,000 feet. The cord was fixed to the ground with iron pins, and about seven in the evening a thin conducting wire and lantern were drawn up by a pulley suspended from the main kite line. The lantern, being used as a weight, was allowed to descend after a time by letting out the wire, and Dr. Mitchell, going to the lantern end and attaching telephonic instruments to the wire, was able to talk to Mr. Eddy over the line, no artificial electricity being supplied, the source being entirely the static electricity encountered in the higher atmosphere.

Since the introduction of steel piano wire for kite lines, by Archibald, of England, in 1884, numerous electric shocks have been experienced by kite flyers. Steel is not a very good conductor, and Eddy, in 1892, tried a copper wire connected with a rectangular affair of tinfoil, which he sent up by his kites as a collector of electricity. He succeeded in producing numerous sparks. At the Blue Hill Observatory, in 1885, large silk-covered kites were tried, surfaced with tinfoil, and when they were sent up 1,500 feet, sparks were obtainable at the ground end at all times, under a cloudless sky. The experiments demonstrated that the electric voltage on the wire rose with the ascension of the kites, and diminished as they descended. During experiments made from the top of the Washington Monument, in Washington, D. C., potentials as high as 4,000 volts were obtained during thunderstorms, at periods just previous to lightning strokes. One operator, who handled the kite wire at the instant that a flash of lightning occurred nearly a mile away, was dangerously shocked. These and other experiments demonstrate that the upper air may be tapped at any time for electricity, which is probably generated by the stronger air currents circulating at the higher levels.

Almost every experimenter with modern kites has found it necessary to manufacture his own kites, and experiment and try until the best proportions were found. Steel is perhaps the best material for the frames of large kites, but wood is so much more convenient that it is ordinarily used. Paper is generally discarded in favor of cambric or silk cloth for the planes. Pine or spruce sticks are commonly preferred, and for making a Hargrave box kite the following dimensions and directions are given: Sticks, $\frac{1}{2}$ inch square and 72 inches long, set 6 feet apart in one direction and 21 inches in the other; the stiffening and bracing are of fine steel wire, piano wire being the best, and the point of attachment for the bracing wires being about 10

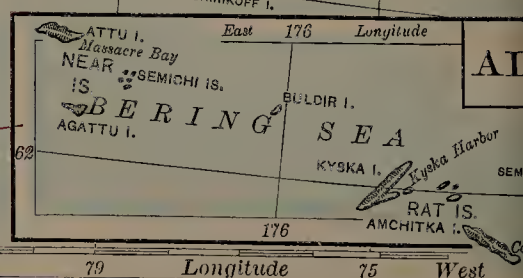
ALASKA

and KLONDIKE REGION

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SCALE OF STATUTE MILES

Routes and St. Michael Reservation line





inches from the ends of the sticks; two pieces of cambric cloth 20½ inches wide and 181 inches long, which is reduced to 20×180 by hemming, can be stretched for the covering. The cloth is fastened to the wood with tacks. In making Malay kites it is essential that the two halves be made to balance perfectly, else the weak side will turn in the wind and the kite will come down. The lower portion requires to be made somewhat loose, so that it bags in the breeze, and this permits the tail to be dispensed with. The amount of slack must be very nicely adjusted, however, to avoid a loss of lifting power. The strings are tied at the crossing of the sticks and at the lower end, so as to determine the angle to be presented by the kite plane to the wind. If the angle is made too near the horizontal the kite is liable to dive, and if it is too near the perpendicular it will not rise advantageously. The proper angle is about 70° to the earth's surface. Mr. Eddy and, later, Messrs. Fergusson and Clayton, have brought this form of kite very near to perfection. The directions given for making are to use cross sticks of the same length, and to cross them at a point 18 to 21 per cent. from the top; the sticks are tied, not nailed; the cross stick is bowed by attaching a cord to its ends, and the bow must be equally bent on each side, which may be accomplished by trimming down and weakening the wood at any point where it bends too little. The proper amount of bow is 1 to 10. Steel wire is used to join the ends of the stick, which are notched to receive it.

Chanute, Millet, and Lamson have given much study to odd forms of kites, having a bearing upon problems connected with aerial navigation. Chanute built a six-celled kite, having the lower surfaces divided centrally at obtuse angles, the whole being connected by a lazy-tongs frame, which admitted of changes of form and position of the cells and planes. Millet built a ladder kite with nine planes, the spaces between the planes being calculated to allow proper clearance for the wind. It is so arranged that the angles of the planes may be adjusted with reference to the force of the wind. Millet has also designed a mammoth observation kite, which is in truth a great air ship, only restrained by its cables. It has four planes, the two

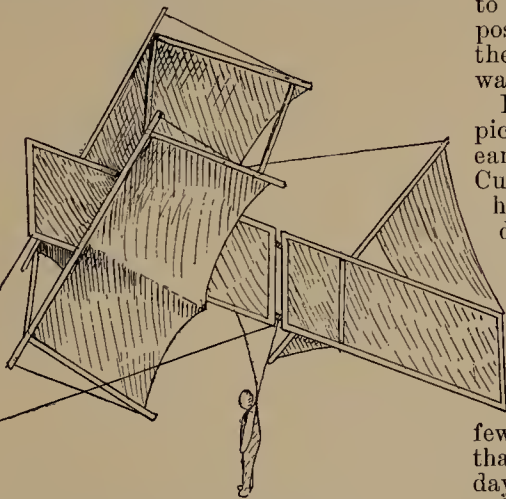


FIG. 6.—LAMSON'S TRIPLE PLANE KITE.

rear ones being of nearly twice the area of the forward ones, in order that they may have the same lifting power, as they receive less wind. The basket for containing the observer is so hung on a pulley that it may be drawn forward, when the kite will descend, or backward, when the kite will rise, as a result of the change of angles of the planes. Lamson has built peculiar forms of large kites with

multiplanes, some of them weighing 100 pounds and being constructed of spruce sticks, Berkeley cambric, and piano wire. The one shown in Fig. 6 he used to elevate a dummy before essaying to go up himself.

Kites may be flown in the rain and snow by using paraffin paper, which resists the moisture. When the snow accumulates on the kite so as to weigh it down it may be partially shaken off by agitating the kite string. Night flying is not at all difficult, and if lanterns are attached to the kites, they can be watched as readily as in the daytime. The kite may be said to be now thoroughly established as an instrument for scientific research, and the number of kite flyers constantly increases.

KLONDIKE, THE, a river in the Northwest Territories, Canada, about which gold has been discovered. This stream is a tributary of Alaska's largest river, the Yukon, and was called by the Indians *Throndink*, which means "river full of fish." It is a small, shallow stream about 40 yards wide at the mouth, with clear blue water, in which salmon is abundant. The Indian name has been corrupted by the miners into Klondike, which is now the accepted name of the river and the region around it. The basin of the Yukon has about 192,000 square miles, or nearly three times the size of the New England States. Discoveries of gold have been made in many parts of the basin of the Yukon, which lies partly in Alaska and partly in Canada, though the richest finds have been on British ground.

The first white people who made their way into the interior of Alaska went there in the interest of the Hudson Bay Company. It is believed that they knew of the existence of gold in that country, though they did not suspect the richness of the deposits, and, because miners would have disturbed the animals from whose furs the Hudson Bay Company received a large revenue, they said nothing about the precious metal. In 1840 Mr. Campbell began exploration of the upper Liard and Pelly rivers, but, being told that farther on he would encounter cannibals, he turned home again.

Fort Yukon, a post of the Hudson Bay Company, was established in 1847 at the head of Poreupine river; but it had to be moved, as it was found to be Russian (now United States) soil. Another post—Fort Selkirk—was established a year later at the confluence of the Pelly and Lewes rivers, but it was demolished by the Indians in 1852.

In 1867 a steamer of the Hudson Bay Company picked up a wounded man who was drifting in a canoe near Stoekade Point. He said his name was Culver, that he had had two partners, one of whom had been killed by the Indians, and that he had discovered gold, and he showed some in proof of his assertion. A party of people at Port Townsend set out in a steamer, the "Louisa Downs," with Culver to guide them to the place of his discovery; but when they reached Taku his wits seemed to have deserted him, and when he was threatened with death he quite lost his reason. Returning to Sitka, he died there a few years later, and before dying said to his friends that there was gold where he had been, and some day it would be found again.

Gold was discovered in British Columbia, in the Cassiar districts, in 1873. The Yukon region was entered by miners in 1882, the entrance being made by the Taiya pass. Several explorers entered central Alaska in the early '80's, and placer mining was carried on with much success on the Stewart, Lewes, Pelly, Hootalinga, and upper Yukon rivers. On the Stewart in 1886 about 40 miners were washing gold, the highest earning of one man being \$6,000. The first real excitement in the Yukon country

took place in 1887, when Forty-mile creek was discovered and coarse gold was first found. News of this was brought out by Tom Williams, a messenger, who brought letters for the post trader, and who lost his life as a consequence of the hardships of the journey. In the spring of 1888 mining on Forty-mile creek began, and now nearly all accessible gold has been got out, but rich bars remain to be worked when there are greater facilities.

Birch creek has, next to the Klondike, the richest placer diggings yet found in that region, and consequently the second richest in the world. These were first worked in 1894; and Mastodon, Greenhorn, Independence, Deadwood, and Eagle creeks, all tributaries of the Birch, promise rich rewards to the explorer. In fact, the whole valley of the Yukon and its affluents is a gold-bestrewed region.

Gen. Duffield, of the United States Coast and Geodetic Survey, says: "The gold has been ground out of the quartz by the pressure of glaciers, which lie and move along the courses of the streams, exerting at all times a tremendous pressure. The force is present to a more appreciable extent in Alaska than elsewhere; and I believe that, as a consequence, more placer gold will be found in that region than in any other part of the world. When gold is precipitated it sinks; it does not float far downstream. It is therefore to be looked for along the small creeks and about the head waters of the larger tributaries of the Yukon. There is no reason why as rich finds may not be made on the American side of the line as in the Klondike region."

It is true that the small streams are the ones found to be rich in gold, which is generally at the bottom of thick gravel deposits. But the ground is not of equal richness, and the gold of this northern region has in combination more of the baser metals—iron, silver, and lead—than the gold of California, Yukon gold being worth \$17 to \$18 to the ounce, while that of California is worth \$1 more.

After Williams's news there was a rush made for Gastinaux channel. Claims were staked out on Gold creek, and a town was established which was named Juneau—after one of the men who first explored the region.

Cook's inlet, 600 miles west of Sitka, was rumored to be a gold region, and in 1895 many persons searched there in vain for wealth. Later, rock and gold placers were reported to be in the same vicinity, and Cook's inlet became again the resort of miners. Few of these work for wages, and some claims yield \$10 to \$40 daily.

The Klondike district consists of the valley of the river of that name, which flows westward into the Yukon, and extends 30 miles south to Indian river, also flowing into the Yukon. Midway between Klondike and Indian rivers is a hill called the Dome, and streams flow into them from the height of land between. Bonanza, 23 miles long, Bear, and Hunker creeks are tributaries of the Klondike, Eldorado of Bonanza, and Gold Bottom of Hunker. Quartz creek, No Name, and Dominion flow into Indian river. More than 500 locations have been made on this river, but it has been found very difficult to take provisions up to it.

The head waters of the Klondike are unknown, though explorers have ascended it 150 miles, and find it there still larger than a brook. The region is mountainous and very rugged, and is covered with a heavy growth of spruce, birch, and poplar.

The earliest reports of the wealth of the Klondike were from Indians, and a white man, George W. Carmack, located the first claim in August, 1896, on Bonanza creek. Here three men washed out \$14,200 in eight days. Later one claim yielded \$65.30 to the pan. On Eldorado \$100, and then

\$280, to the pan was taken. A pan is two shovelfuls, and while miners consider dirt containing 5 cents to the shovelful, if three feet deep, is rich soil, in these creeks \$1 to the pan is thought small. A nugget worth \$583.25 was found on Eldorado.

William Ogilvie, Dominion land surveyor, has been making a topographical survey of the British possessions on the Klondike. A census made by him of the production shows that 23 claims yielded \$826,000. He estimates that \$79,000,000 will be produced by Bonanza, Eldorado, and Hunker creeks in three years.

After Carmack's discovery many left the Forty-mile creek and Circle City diggings for the new fields. Mining was apparently not so good there, for there are few diggings on the Klondike that can be worked by sluicing, as the gold-bearing strata lie from 5 to 20 feet under ground. One of the first miners, dissatisfied with his claim, which appeared to him unprofitable, sold it for \$85. It was again sold for \$31,000, and when worked by the third owner it yielded \$130,000 in six weeks. A claim on the Eldorado was sold for \$45,000, \$5,000 to be paid on the day of sale, \$15,000 a month later, and the remainder to be due six weeks after the second payment. The second payment was made four days early, and the third ten days. One miner, who considered that he had done "pretty well," had drifted a plat 24 by 14 feet, making \$8,000 as the result of two months and a half of labor. Claim No. 9 on Eldorado has immediately above bed rock 3 or 4 inches of almost pure gold. An offer of \$1,000,000 was made for 10 adjoining claims on this creek, but was declined. A claim is 500 feet long, measured in a straight line in the direction of the valley, and is the width of the bottom. Bench claims on Eldorado run 200 to 300 feet up the mountain. One of these paid \$600 a day, with one man taking out material and one rocking. Good prospects have been found 400 and 500 feet above the bar.

The ground here freezes solid, and only two feet of it thaws in summer. The miners build fires over the area where they wish to excavate, and when these have burned about twenty-four hours remove the softened muck, and then light fires again. In this way they sink a shaft to bed rock, and then tunnel by the same process. This method of mining is expensive, and not all claims are rich enough to pay the cost. Where the bed rock is smooth there is no gold, but where it is rough the gold is lodged. Often the shafts do not strike a pay streak. Unless the ground yields \$15 a day to a man it is not profitable to work it, miners' wages being \$1.25 an hour, and the day six or seven hours long. When a shaft yields not more than 10 cents to the pan it is abandoned. About Dawson City the bed rock is a soft shale, and this is often worked to a depth of 2 or 3 feet. The material taken out is left in a heap until spring, when the torrents are flowing, and it is then panned and cradled.

In the summer of 1897 there were only two traveled routes into the gold regions—one by Lynn Canal, Taiya pass, and descending the Yukon; the other by St. Michael, Alaska, and ascending the Yukon. There are now six principal routes by which to reach the Klondike: The second already mentioned; the Dalton trail from Haines's Mission to Fort Selkirk; the Dyea, via Dyea to Lake Lindemann; the Skagway, via Skagway to Lake Lindemann, or Lake Bennett; the Taku river from Juneau to Lake Teslin; and the Stickeen to Lake Teslin, by way of Fort Wrangel. The Dalton is a fair trail for horses and cattle. The Dyea or Chilkoot pass has always been used by the Chilkat Indians, and all the early explorers entered the Northwest Territories by this pass. It is very hard to get



supplies over Chilkoot pass, but after leaving Lake Lindemann, where the prospector builds or buys his boat, the journey is comparatively easy. The Chilkoot Railroad and Transportation Company has nine miles or more of horse tramway from Dyea. The rails used are of wood, topped with strap iron. The intention is ultimately to make the line a railroad. There is an overhead bucket-and-cable system, and this line has a telephone between Dyea and Sheep Camp. Last winter Archie Burns operated a wire cable from the Scales to the summit by means of a windlass, and he has improved his arrangement this year. A detailed account of the route tells of hard passes, lakes where strong winds are encountered, and rapids whose descent is very perilous. When the miner reaches Fort Selkirk he thinks the hardships of the journey are over.

From Dawson City to Stewart river, about 66 miles, the Yukon is half a mile to a mile wide, and is studded with small islands. White Pass, on the Skagway route, is very dangerous. In many places the mire is so deep that pack animals have had to be relieved of their burdens and lifted out, and often the trail skirts a precipice, or is so narrow that large things can not be taken through. Some men and many horses and mules have lost their lives on this pass. Men have worked here as packers for \$6 to \$10 a day, and carried 100-pound loads. Work is begun on a wagon road to connect Skagway with Lake Bennett. The ascent is not steep, and the road, which is to be 16 feet wide, will have a rock bed most of the way, the rest to be corduroyed. By March 1, 1898, a tramway is to be ready for operation between Skagway and Lake Bennett.

Skagway has sprung up since the rush to the Klondike. Before that it was nothing more than a stretch of beach. Now there are 600 frame houses, some of them several stories high, 150 log cabins and many tents, 6 hotels, 15 lodging houses, a newspaper, a sawmill, a hall, a post office, 15 restaurants, 13 general stores, 4 tobacco stores, 4 news stands, 24 saloons, 3 drug stores, 3 tinsmiths, 5 meat markets, 9 laundries, 6 blacksmiths, 4 bath-houses, 6 barber shops, 1 bank, 11 hay, grain, and feed companies, 6 real-estate offices, 1 bowling alley, 10 groceries, 3 furniture stores, 3 employment bureaus, 6 lumber yards, 3 jewelers, and 6 bakeries; also carpenters, shoemakers, contractors, lawyers, physicians, and Government officials.

A survey is being made for a railroad from Pyramid Harbor over Dalton trail to Carmack's post on the Yukon.

The Stickeen river is another way that may prove a good route; but it is only navigable for canoes, and those who have taken this route have met with many accidents, especially that of having their boats overturned in the swift currents of the river. One man has been drowned. The Canadian Pacific Company projects building a railroad between Telegraph creek and Lake Teslin, and intends to operate it in connection with a line of steamers running between Victoria and Fort Wrangel. A Delaware company proposes to construct a railroad from the mouth of the Taku to Lake Teslin. There is canoe navigation of the Taku, and a light-draught steamer could run on Lake Teslin and the Hootalinqua river, which is free from dangerous rapids.

Neither reindeer nor cows, it is said, can travel on ice trails, but horses and dogs can. In January, 1898, 105 dogs—Newfoundlands, St. Bernards, collies, and mastiffs—were shipped from Seattle for the Klondike. They had been collected and trained to draw sleds by Julius L. Beet, an animal trainer.

The Canadian Government is establishing custom-houses on all routes to the Klondike and making efforts to get the trade for Canada. Most of the things that the miners must have are taxed.

Mounted police, under Major J. M. Walsh, have set out for the gold region, and by the spring of 1898 there will be 300 of these and soldiers there. The United States and Canada have made an agreement to exchange mails once a month between Dyea, Alaska, and Dawson City, only letters and postal cards to be carried.

Dawson City was begun in September, 1896, when Joseph Ladue, one of the Klondike pioneers, built a house at the confluence of the Yukon and Klondike rivers and named the place after the explorer, Dr. Dawson. Less than a year later the place had 5,000 population. It occupies about a mile along the river, and is laid out in streets and avenues, which are numbered, all the streets running in one direction, and the avenues across. There are stores of all kinds, sawmills, Presbyterian, Methodist, Baptist, and Catholic churches, and a sisters' hospital. In November, 1897, the opera house and two saloons were burned.

In this desolate northern region the winter lasts nine months, when the sun shines only a few hours every day, the thermometer goes as low as 60 below zero, and the Yukon is closed by ice from November to the last of May. During the coldest weather candles are useless, as the tallow is so hard that only the wick burns. In the short summer the days are very long and it is warm enough to make tent life comfortable. The rainy season occurs in August. Cattle can be kept if well fed and housed in winter, and the hardy vegetables can be raised. Game is very scarce, but berries of many kinds flourish in summer, and fine grass near the rivers, and it is said that roses and many other beautiful wild flowers abound, though even then the ground is frozen six inches below the surface. The ground about Dawson is low and flat and the drinking water is very bad, so that sickness and often typhoid fever is prevalent. The region about Dawson is rich with copper, silver, and coal, which are neglected in the eagerness to get the more precious metal that has been found here in greater quantities than ever elsewhere. To get food over the pass to Dawson costs on an average one dollar a pound.

KOREA, a country of continental Asia, between Russia and China; area, 80,000 square miles. The Tumen river divides it from Russia. The Tumen and Yalu rivers and the Long White mountains separate it from Manchuria and China.

Korea has a rich fauna, including tigers and leopards in great numbers, bears, antelopes, seven species of deer, foxes, beavers, otters, tiger cats, pigs, martens, sables, and striped squirrels. The ornithology is varied, vast numbers of edible and other birds making the peninsula their halting place in the annual migration or living and breeding in it. In the neighborhood of Seoul and the large cities, along the coast, the treaty ports, and the main roads the hills are denuded of timber and give an unfavorable impression of the country; but in the northern and eastern provinces there are vast forests but slightly invaded by the wood cutters. The oak, lime, ash, birch, maple, juniper, mountain ash, hazel, willow, hornbeam, plum, peach, and other trees abound.

The population is estimated by careful travelers to be from 12,000,000 to 15,000,000, little reliance being placed upon the so-called official census taken in 1897, which gives a population of less than 7,000,000. Socially the population is divided into nobles, the *yang ban* (civil and military) class, who pay no taxes or tolls and live or prey upon the public, and the people. Slavery still exists, but is passing away.

Government.—The ruling dynasty was founded in 1392. Succession to the throne is hereditary. The edict of the sovereign constitutes law. In

January, 1895, the King formally renounced the suzerainty of China, which acknowledged the complete independence of Korea in the Shimonoseki treaty. On Oct. 14, 1897, the name of the empire was changed to Dai Han, and the King assumed the title of Emperor. The name Dai Han, or Great Han, is in contradistinction to the San Han, or three ancient kingdoms of the peninsula. The Council of State, created by decree of September, 1896, which declared the absolutism of the King, is composed of a Chancellor, five councilors, six ministers, and a chief secretary. There are nine ministers—the Premier and Minister of the Royal Household, of Finance, Home Affairs, Foreign Affairs, War, Justice, Agriculture, and Education. The empire is divided into 13 provinces, over each of which is a governor, and 360 districts, in each of which there is a magistrate. The Korean army consists of 6,000 men—4,800 men in Seoul drilled by Russians and 1,200 in the provinces—and the navy of two small merchant steamers.

Finance.—The revenue, which, when collected, is sufficient for all legitimate expenses, is derived from the customs duties, now managed by able and honest foreign officers; a land tax of \$6 on every fertile *kyel* (6½ acres) and \$5 on every mountain *kyel*; a household tax of 60 cents to each house, except in Seoul; and a duty of \$16 per *cattie* (1.33 pounds) on red or manufactured ginseng. The modern coinage is in silver (20 cent), nickel (5 cent), copper (5 cash), and brass (1 cash), of good appearance. This new money is steadily displacing the old perforated “cash” (500 to the dollar). The Japanese silver yen circulates everywhere. In July, 1896, J. McLeavy Brown, LL. D., Chief Commissioner of Customs, received by royal decree the absolute control of all payments out of the treasury, and began the regulation of abuses, with the happiest results. The financial year to April, 1897, closed with every account paid and 1,500,000 yen in the treasury, out of which Korea paid 1,000,000 yen of the loan of 3,000,000 owing to Japan. The customs revenue, which is steadily increasing, is collected at a cost of only 10 per cent.

Railways.—Messrs. Collbran and James, who are at the head of the Oriental Construction Company, which is an American firm having its headquarters in Denver and Chattanooga, have charge of the Seoul-Chemulpo Railway. They have contracted with the Government for a completely equipped railroad. It will be of standard gauge, 25 miles long, following closely the public road between seaport and capital. In Seoul the station building will be a handsome frame edifice with brick foundation, outside the city wall, near the little West Gate. In August, 1897, 10 miles of rail and 100 tip cars were in use, and the roadbed was graded, sloped, and ditched from Chemulpo to Pusion. The chief difficulty is at the river Han, which is to be crossed by an 8-span steel-truss bridge built in the United States. It is 1,650 feet long, approached at either end by wooden trestling, which gives the bridge a total length of 2,450 feet. The northern terminus is the King's ferry, about four miles from the capital. The Japanese have surveyed the route for a railway between Seoul and Fusan. The route from Seoul to Wi-ju, on the Yalu river, has also been surveyed. Telegraph lines run from the capital northward overland through China, and southwestwardly by land and submarine cable to Japan. In the Lobonaw-Yamagata treaty of June 9, 1896, the right of building telegraph lines between Seoul and Siberia was reserved to Russia, which lines are to be repurchased by the Korean Government when it is able.

Education.—Until 1894 the royal examinations, which were regarded as stepping stones to official

places, the great object of Korean ambition, were held in Seoul, to which young and old men, whose sole education was in the Chinese classics, came from all parts of the kingdom. Under the old ideas and routine all education was in archaic Chinese. Now, largely through the work of the American missionaries, the *En-mun*, or simple and efficient native alphabet, is used, not only for religious and educational publications, but even for Government proclamations. Besides the vernacular and mission schools, there are Government schools for the study of Korean, Chinese, and foreign languages. In the Royal English School are 100 students in uniform, drilled by a British sergeant of marines. In the Japanese, French, and Russian schools, which are chiefly linguistic, military drill is the rule. Prominent and very useful is the Pai-Chai College (hall for the rearing of useful men), under charge during the past eleven years of the Rev. H. G. Appenzeller. This, besides its own departments, educates 200 students appointed by the Government, and has an industrial section, which includes a trilingual press and a book-binding establishment. In the various Protestant and Catholic schools, as well as in the Christian Japanese schools, the *En-mun* is used. In Seoul there are more than 1,000 students. Under the reformed system of education is the Normal College, placed in May, 1897, under the Rev. H. B. Hulbert, for the training of native teachers for the intermediate and primary schools. The text-books are to be in *En-mun* and the vernacular. Already there are primary schools with more than 1,000 pupils. Besides 77 young men studying in Japan at Government expense, there are others, probably 100, in various countries studying at private expense. In Seoul the sight of newsboys passing through the streets with bundles of newspapers in *En-mun* is no longer rare. Besides the “Independent,” edited by Dr. Jaisohn, a Korean educated in the United States, there are two weeklies, the “Korean Christian Advocate” and the “Christian News.” The “Seoul News,” in mixed Japanese and Korean script is triweekly, and there are newspapers in the Japanese language at Fusan and Chemulpo. The Korean Independence Club publishes a vernacular monthly magazine, giving the politics, science, and foreign news, and the “Korean Repository,” in English, is a monthly of high value. The list of publications by the missionaries in *En-mun* is large, and the Rev. James S. Gale's large Korean-English dictionary, several works of linguistic importance, and the magnificent “Bibliographie Coreene” of Maurice Courant, were completed in 1897.

Events.—The year opened with a conservative Cabinet in office. On Feb. 20, after a sojourn of one year and nine days in the Russian legation, the King took up his residence in the new palace of Kyeng-Wun, built in 1896, in the western part of Seoul, where are gathered the foreign legations and residences, some of them very handsome and substantial.

On Feb. 22 the railway connecting the capital with the seaport was begun in presence of Governor Ye-Cha-Yun, formerly of Washington, and Dr. H. N. Allen, now United States minister; Mr. Carley, the American engineer in charge, and Mr. Townsend, with 50 laborers equipped with American barrows, shovels, and pickaxes, and the Korean officers filling each a spadeful.

The royal ambassador to the European courts, Min-Yong-Whan, took his departure, and after visiting the European capitals settled in St. Petersburg. The treaty between Prince Lobonaw and Marquis Yamagata, signed at Moscow June 9, 1896, was published in February.

The census of Seoul shows a population of 144,626 in 27,257 houses, and in the suburbs 75,189 in 18,093 houses, or a total of 219,815, and of houses 45,350, in which district are 36 Buddhist temples with 442 priests and 204 nuns. The cleansing of the city, once the filthiest in the world, has made of Seoul one of the attractive places in the far East. The original width of 55 feet, as laid out in 1392, has been largely regained for more than seven miles of streets.

Korea sent a delegate to the International Postal Union that met in Washington, and a postal system, with stamps of four kinds, has been established and is in good working order.

Dr. Horace Newton Allen, born in Delaware, Ohio, in 1868, and resident in Korea since the summer of 1884, was appointed United States minister July 15, and on Sept. 13 began his duties.

On July 3, 1897, a royal rescript declared that on Oct. 1, 1898, two new ports should be open to foreign trade. These are Chinampo, on the northern shore of Ping-Yang inlet, and Mokpo, in the southwestern part of Chullado.

On Oct. 12, at 3 A. M., before the altars of the spirits of the land, the King assumed the title of Emperor.

A Russian military commission, consisting of Col. Putiata, 3 officers, and 10 drill instructors, began the work of drilling the Korean army and the instruction, in a two years' course, of 37 young men of good families, with 7 officers, to be future commanders. The city police has been uniformed in modern style and put under foreign discipline.

The Korean Minister of Foreign Affairs and A. de Speyer, the Russian *chargé d'affaires*, signed an agreement, Nov. 5, by which Mr. Kuril Alexieff should be placed in control of Korean finances. But Dr. Brown, the English officer, refused to vacate his place, his contract not having expired. As all the Government deposits were under his control in the Hong-Kong and Shanghai Bank, which has a branch at Chemulpo, he was able to keep his post, especially after the appearance of the large British and Japanese fleet off Chemulpo. By agreement entered into by Russia, Great Britain, and Japan, Mr. Brown is to continue in his office, but one Russian and one Japanese commissioner of customs are to share in the collection of revenue at the ports.

On Nov. 21, with amazing pomp and spectacular display, the funeral of the late Queen, murdered Oct. 8, 1895, was held in Seoul. The funeral cost 700,000 yen. At daybreak the coffin was laid away in the new and expensive mausoleum.

The Independence Club, which meets in the pavilion standing near the old stone gateway, at which the King of Korea formerly acknowledged vassalage to China, has built Independence Arch. This is of stone, 42 feet high, 33 feet wide, and 21 feet deep, with winding staircases inside leading to the top of the arch, and is one of the finest pieces of masonry in the kingdom.

A debate was held in the pavilion in November on the subject "Resolved, that slavery is a crime, morally and politically, and should not be tolerated." Many facts concerning slavery in Korea and the influence of the American proclamation of emancipation were developed, and a native gentleman who had just manumitted 31 slaves took part.

Foreign Trade.—Little or no incentive to exertion, industry, or traffic beyond what was necessary to bare subsistence has hitherto existed. Poverty has been a protection, since the *yang-ban* or civil and military classes have preyed upon the people, compelling forced loans, with no prospect of payment. Now even the farmers of remote districts are stimulated to greater activity through the de-

mands for their products. In 1886 the foreign trade amounted to \$2,978,410, and in 1896 to \$11,260,104, of which \$6,531,224 were imports and \$4,728,700 were exports. The Japanese have a monopoly of the carrying trade. In 1896, the tonnage of 1,720 ships in Korean ports reached a total of 499,160, of which 424,984 were Japanese, 25,759 Korean, 22,817 Russian, 14,651 British, 1,082 Norwegian, and 158 American. On Jan. 1, 1897, in the three open ports, the number of Japanese residents was about 10,000; Chinese, 500; British, 27; and American, 22. Korean exports consist mainly of beans, dried fish (for manure), cowhides, ginseng, paper, rice, and seaweed, the largest items being, in order, rice, ginseng, and beans. Considerable trade is carried on at the Chinese and Russian frontier. The Japanese, by a close attention to Korean tastes, habits, and needs, have pushed the sale of their cotton goods in the peninsula. The net duties and dues collected at the three ports in 1896 was \$691,784. In 1896 the value of Japanese cotton goods imported was \$1,156,199, and of British and other foreign cotton goods \$2,172,346; a total of \$3,338,545.

LITERATURE, AMERICAN, IN 1897. Fewer books were published in this year than in 1895 or 1896, the total number recorded being 4,928, a falling off of 775 books. Of these, 4,171 were new books and 757 new editions, as compared with 5,189 new books and 514 new editions the year previous; 3,318 were by American authors; 495 were by English and other foreign authors, but were manufactured in this country, and 1,115 were by English authors, imported bound or in sheets. As regards the production of new books, the most marked falling off was in the department of literary history and miscellany, in fiction, in poetry, and in books of sports and amusements, while the only increase was in works on theology and religion, in juvenile books, in books of mental and moral as well as physical and mathematical science, and in biography. By far the greater part of the work of the publishing houses was done in the latter half of the year, and many of the books announced failed to make their appearance and will doubtless swell the record of next year. More books of permanent value were produced than in many previous years, and especially to be commended was the interest shown in the Revolutionary period of our history.

Biography.—Quite at the close of the year appeared "Audubon and his Journals," the first accurate biography of the great ornithologist, which has the advantage also of being chiefly in his own words. It is edited by his granddaughter, Maria R. Audubon, and the two volumes contain a long-lost portion of his Missouri River Journal and three hitherto unpublished bird drawings, and are supplied with zoological and other notes by Elliott Coues. Vols. VII and VIII of the "Writings of Thomas Jefferson," edited by Paul Leicester Ford, appeared, as did Vol. IV of "The Life and Correspondence of Rufus King," edited by his grandson, completing the work. "Beside Old Hearthstones," by Abram English Brown, supplements his former work, "Beneath Old Rooftrees," bringing the early patriot fathers before us in narratives traditional with their descendants, a theme which is also followed in "Some Colonial Homesteads and their Stories," by Marion Harland. "The Founders of the Massachusetts Bay Colony," a careful research of the earliest records of many of the foremost settlers of the New England colony, was compiled by Sarah Saunders Smith, while "Samuel Sewall and the world he lived in," were presented by the Rev. N. H. Chamberlain, largely in excerpts from Sewall's diaries. "Southern Statesmen of the Old Régime" were dealt with in six lectures upon Washington, Jefferson, Randolph, Calhoun, Ste-

phens, Toombs, and Jefferson Davis, by William Peterfield Trent, collected in a volume of "Crowell's Library of Economics and Politics," and Marshall de Lancey Haywood gave an account of the official administrations of "Governor George Burrington," twice Governor of the colony of North Carolina. In the series of "Women of Colonial and Revolutionary Times" we have "Martha Washington," by Anne Hollingsworth Wharton, and "Catherine Schuyler," by Mary Gay Humphreys, the last an historic daughter of New York. "True Stories of New England Captives carried to Canada during the Old French and Indian Wars" were told by Charlotte Alice Baker, and Henry Johnson (Muirhead Robertson) recounted "The Exploits of Miles Standish." "The Life and Adventures of Nat Foster, Trapper and Hunter of the Adirondacks," by A. C. Byron Curtiss, introduce us to the original of Natty Bumppo, while still to the early period of our history belongs "John Eliot's First Indian Teacher and Interpreter, Cockenoe-de-Long Island," by William Wallace Tooker, in an edition limited to 215 copies. No less than six volumes were given to Gen. Grant: "Ulysses S. Grant and the Period of National Preservation and Reconstruction" was written by William Conant Church for the "Heroes of the Nations Series," a companion volume in which series was "Robert E. Lee and the Southern Confederacy, 1807-1870," by Henry Alexander White, D. D.; "Gen. Grant's Letters to a Friend, 1861-1880" were supplied with an introduction and notes by James Grant Wilson, who also contributed "General Grant" to the "Great Commanders Series"; "Conversations and Unpublished Letters" of Ulysses S. Grant were published by M. J. Cramer; Gen. Horace Porter described "Campaigning with Grant"; and "The True Story of U. S. Grant, the American Soldier," was told for boys and girls by Elbridge Streeter Brooks in the series of "Children's Lives of Great Men." "Forty-six Years in the Army," by Gen. John M. Schofield, was a military autobiography of unusual interest, which came out near the end of the year; Richard Meade Bache contributed a "Life of General George Gordon Meade," and "Personal Recollections of General Nelson A. Miles" were illustrated by Frederic Remington and other artists. "Commodore Bainbridge" was followed by James Barnes from the gunroom to the quarter-deck, and Molly Elliot Seawell's "Twelve Naval Captains" commemorated certain Americans who made themselves immortal. "1861 to 1865, by an Old Johnnie," contained the personal recollections and experiences of James Dinkins in the Confederate army, and J. Harvey Mathes gave the title of "The Old Guard in Gray" to lives of men who were in the Confederate service. "The Life of Nelson, the Embodiment of the Sea Power of Great Britain," in two volumes, was from the able pen of Capt. Alfred Thayer Mahan; Vols. II and III appeared of William Milligan Sloane's "Life of Napoleon Bonaparte"; "Bertrand du Guesclin, Constable of France," was the subject of a study by Enoch Vine Stoddart, M. D.; Mrs. Mary Hartwell Catherwood revived "The Days of Jeanne D'Arc"; and Anna L. Bicknell, the author of "Life in the Tuileries under the Second Empire," retold "The Story of Marie Antoinette." The "Life of Philip Melancthon," by Rev. Joseph Stump, had an introduction by G. T. Spieker, D. D., and was prepared in view of the approaching anniversary of the birth of the great reformer. "The Sacrifice of a Throne," being an account of the life of Amadeus, Duke of Aosta, sometime King of Spain, was by H. Remsen Whitehouse. "Heroic Stature" was the title given to five addresses of Nathan Sheppard upon the lives and times of eminent theologians and reformers.

"A Chat about Celebrities: or, the Story of a Book," was by Curtis Guild; "An Epistle to Posterity," by Mrs. Mary Elizabeth Sherwood; and "A Society Woman on Two Continents," by Mrs. James Mackin. "A Correspondence between John Sterling and Ralph Waldo Emerson" was published by Edward Waldo Emerson, with a sketch of Sterling's life; Mrs. Rose Hawthorne Lathrop gave to the world delightful "Memories of Hawthorne"; and "Hawthorne's First Diary" saw the light through the instrumentality of Samuel T. Pickard. The "Life and Letters of Harriet Beecher Stowe" were fortunate in their editor, Mrs. Annie Fields, and from Mary E. Phillips we have "Reminiscences of William Wetmore Story." "Calamus," by R. Maurice Bucke, M. D., gives letters of Walt Whitman. The "Life of Abby Hopper Gibbons" was edited by Sarah Hopper Emerson and "Reminiscences and Letters of Caroline C. Briggs," by George S. Merriam. "Oberlin Thursday Lectures" were by James Monroe. "On Two Continents," by Hezekiah Brake, describes pioneer and war times in Kansas, while from Dr. Louis Albert Banks we have the story of "An Oregon Boyhood." "Journals of John Lincklaen," the records of travels in the years 1791 and 1792 in Pennsylvania, New York, and Vermont, were published with a biographical sketch and notes by Helen Lincklaen Fairchild. "Thirty Years a Slave," was by Louis Hughes. To educational biography belong the "Life and Letters of William Barton Rogers," edited by his wife, and "Memorials of William Cranch Bond and George Phillips Bond," by Edward Singleton Holden. Vol. II of "Biographical Sketches of the Graduates of Yale College," by Franklin Bowditch Dexter, covered the period from 1745 to 1763. "The Life of Philip Schaff" was written by his son, Dr. David S. Schaff, and from Dr. Charles Force Deems we have an "Autobiography," with memoir by his sons. "Life Reminiscences of an Old Lutheran Minister" were by Dr. John G. Morris, and "The Life Story of Dr. Franklin Wilson, as written by himself in his Journals," appeared in small compass. The "Life and Times of Edward Bass, First Bishop of Massachusetts (1726-1803)," came from Daniel Dulaney Addison. "From Different Points of View" was the title of a study of Benjamin Fiske Barrett, by the author of "The Republic," John Robert Ireland; "Brother Azarias" was written by Rev. John Talbot Smith, and "A Life for Africa: Rev. Adolphus Clemens Good" was commemorated by Ellen C. Parsons. "In Journeyings Oft" was a sketch of the life and travels of Mary C. Nind, by Georgiana Baucus, and "A Group of French Critics," by Mrs. Mary Fisher, and "Hours with Famous Parisians," by Stuart Henry. "Marchesi and Music" was by Mathilde Marchesi. Christopher W. Knauff devoted a volume to "Doctor Tucker, Priest-Musician," about the rise and progress of church music in America. Lippincott's "Pronouncing Dictionary of Biography and Mythology" went through a new revised and enlarged edition, and Vol. II appeared of "America's Successful Men of Affairs," an encyclopædia of contemporaneous biography, edited by Henry Hall.

Criticism and General Literature.—"The Literary History of the American Revolution, 1763-1783," by Rev. Moses Coit Tyler, in two volumes, exhibits the condition of mind alike of Whig and Tory during that trying period, and is a companion work to the same author's "History of American Literature during the Colonial Time." "Varia," by Agnes Repplier, and "Patrins," by Louise Imogen Guiney, represent some of the work of the female essayists who have come so markedly to the front of late years, while from Arlo Bates we had "Talks on the Study of Literature," and from Thomas

Wentworth Higginson "Book and Heart: Essays on Literature and Life" and "The Procession of the Flowers and Kindred Papers," with an index of plants and animals mentioned. Donald Grant Mitchell (Ik Marvel) was equally at home with "English Lands, Letters, and Kings," the volume for the year covering the period of "The Later Georges to Queen Victoria," and with "American Lands and Letters," treating in the latter, with his usual pleasing style, of "The Mayflower to Rip Van Winkle." James Freeman propounded "Nineteenth Century Questions" on various themes; Theodore Roosevelt examined "American Ideals"; William Norman Guthrie published "Modern Poet Prophets" and a study of "Walt Whitman (the Camden Sage) as Religious and Moral Teacher"; Henry Cabot Lodge presented new theories as to "Certain Accepted Heroes," with other essays in literature and politics; and Elbert Hubbard collected into the compass of a book his series of "Little Journeys to the Homes of Famous Women." J. D. Buck, M. D., wrote on "Browning's Paræstus and Other Essays" and a volume was issued of "Papers" selected to represent the work of the Boston Browning Society from 1886 to 1897. Charles Dudley Warner was delightful as ever in his portrayal of "The People for whom Shakespeare Wrote," while "The Genesis of Shakespeare's Art" was the title of a study of his sonnets and poems by Edwin James Dunning. "Gleanings in Buddha Fields," by Lafcadio Hearn, consisted of studies of hand and soul in the far East. From Denton Jaques Snider we had a commentary on "Homer's Iliad," with a preliminary survey of the four literary Bibles, and "National Epics" were examined by Kate Milner Rabb. "Modern English Prose Writers" were examined by Frank Preston Stearns. "How to tell a Story, and Other Essays," by Mark Twain (Samuel Langhorne Clemens), appeared in the series of "Harper's Contemporary Essayists," and Charles M. Skinner was interesting in his rambling dissertations upon "Nature in a City Yard" and in his suggestive essays entitled "With Feet to Earth." "The Colonial Tavern," by Edward Field, gave a glimpse of New England town life in the seventeenth and eighteenth centuries. Sydney George Fisher devoted two volumes to "Men, Women, and Manners in Colonial Times," which were illustrated with photogravures and with decorations by Edward Stratton Holloway, and Thomas Nelson Page was an authority upon "Social Life in Old Virginia before the War." "Curiosities of Popular Customs, and of Rites, Ceremonies, Observances, and Miscellaneous Antiquities" were the theme of William Shepard Walsh, the author of "The Handbook of Literary Curiosities." Louis Lombard was responsible for "Observations of a Bæbeler"; "Ars Reete Vivendi" was the title given to essays contributed to "The Easy Chair" by George W. Curtis; Bishop John Laneaster Spalding embodied in a volume six papers containing "Thoughts and Theories of Life and Education"; and Orison Swett Marden set forth ideals, helps, and examples for all desiring "Success." Bishop Henry Codman Potter published "The Scholar and the State, and Other Orations and Addresses," and Charles W. Eliot "American Contributions to Civilization, and Other Essays and Addresses." Henry Thurston Peek made a study of "The Personal Equation"; Charles B. Newcomb asserted "All's Right with the World"; Charles F. Goss proclaimed himself "The Optimist" in 68 "secular sermons"; "The Chate-laine," by G. E. X., touched happily on numerous subjects; Julia H. Johnston wove "Bright Threads" together; and Lillian Bell explained how things look "From a Girl's Point of View." Mrs. Margaret E. M. Sangster's familiar talks on the conduct

of "Life on High Levels" will prove helpful to many of the rising generation. "The Smart Set" of America had its correspondence and conversations reported by Clyde Fitch," and "Men in Epigram," compiled by Frederiek W. Morton, gave views of maids, wives, widows, and other amateurs and professionals, and was designed as a companion to his "Woman in Epigram." "The Story of Language" was told by Charles Woodward Hutson. George Herbert Palmer wrote briefly on "Self-cultivation in English," and Ralph Olmstead Williams placed before the public "Some Questions of Good English examined in Controversies with Dr. Fitzedward Hall" during the past five years. The "Elements and Science of English Versification" were thoroughly treated by William C. Jones, and Lorenzo Sears considered "The Occasional Address: Its Composition and Literature." The first of three volumes of "Specimens of Pre-Shakespearean Drama," with an introduction, notes, and a glossary by John Matthews Manly, appeared in the "Athenæum Press Series," and Charles Langley Crow edited "Maldon and Brunanburgh: Two Old English Songs of Battle." "A Dictionary of American Authors," by Osear Fay Adams, is an outgrowth of his "Handbook of American Authors," first published in 1884; Truman J. Baekus traced "The Outlines of Literature, English and American, based upon Shaw's 'Manual of English Literature';" and Edward L. Pattee suggested "Reading Courses in American Literature" in a small booklet. Vols. I and II appeared of "A Library of the World's Best Literature, Ancient and Modern," edited by Charles Dudley Warner, as did Vol. II of George Haven Putnam's exhaustive work upon "Books and their Makers during the Middle Ages," covering the period 1500-1700, and a seventh edition, rewritten, with additional material, of "Authors and Publishers," by the same author and John Bishop Putnam. "English Synonyms and Antonyms," by Rev. James C. Fernald, contained also notes on the correct use of prepositions, and was designed as a companion for the study and as a text-book for the use of schools, appearing in the "Standard Educational Series"; "A Manual of Esopic Fable Literature," by George C. Keidel, is intended as "a first book of reference for the period ending A. D. 1500: first fascicle"; "American Authors, 1795-1895," a bibliography of first and notable additions chronologically arranged with notes, by P. K. Foley, had an introduction by Walter Leon Sawyer; A. Groswoll traced the beginnings and history of "American Book Clubs," giving also a bibliography of their publications, in an edition limited to 300 copies; and Frederic Lawrence Knowles was the author of "Practical Hints for Young Writers, Readers, and Book Buyers."

Education.—"The American College in American Life" was ably discussed by Dr. Charles Franklin Thwing, and Kate Holladay Claghorne dwelt upon "College Training for Women." In the "International Education Series" "Froebel's Educational Laws for All Teachers" were set forth by James L. Hughes, Joseph Baldwin wrote on "School Management and School Methods," and a "Bibliography of Education" was prepared by Will S. Munroe. In the "Columbia University Studies" William Clarence Webster treated of "Recent Centralizing Tendencies in State Educational Administration"; Maximilian P. E. Groszmann, late superintendent of the schools of ethical culture in New York, wrote briefly of "The Common School and the New Education," and also proposed "A Working System of Child Study for Schools"; "Coeducation of the Sexes" was considered by Mabel Hawtrey; and Isabel Maddison compiled the supplement for 1897 to the "Handbook of the

Courses open to Women in British, Continental, and Canadian Universities." Jessie A. Fowler proffered "Childhood: Its Character and Culture." Harriet M. Scott, assisted by Gertrude Buck, prepared a manual of "Organic Education." A second edition appeared of Dr. William T. Harris's essay upon "Art Education the True Industrial Education"; William W. Murray was the author of a "Handbook for Teachers"; and William H. Mace, of "Method in History for Teachers and Students." Mrs. Irene M. Mead treated of "The English Language and its Grammar," and Lucy Tappan prepared "Topical Notes on American Authors." Henry Carr Pearson discoursed of "Greek Prose Composition," and Thomas L. Stedman, M. D., in "Modern Greek Mastery" offered a short road to ancient Greek. "Latin Manuscripts," by Harold W. Johnston, was an elementary introduction to the use of critical editions for high schools and college classes. From Charles F. Kroeh we had a "Three-Year Preparatory Course in French"; from Francis Wayland Parker and Nellie Lathrop Helm, Vol. II of "Uncle Robert's Geography"; from Henry W. Keigwin, "The Elements of Geometry"; and from J. F. Smith, a "School Geometry," inductive in plan. Emerson E. White published a "Key to 'School Algebra,'" in "White's Series of Mathematics"; Emily E. Benton suggested "The Happy Methods in Numbers for Little People"; "School Gymnastics; Free Hand: A System of Physical Exercises for Schools" emanated from Jessie H. Bancroft; the first of "Nature Study Readers," in "Appletons' Home Reading Books," was "Harold's First Discoveries," by J. W. Troeger. James Baldwin arranged "School Reading by Grades" for the seventh and eighth years; H. A. Guerber contributed "The Story of the Chosen People" to the "Eclectic School Readings"; Russell B. Smith, M. D., and Everett C. Willard were the joint authors of a "Standard School Physiology, Hygiene, Anatomy"; and Albert F. Blaisdell, M. D., sent out "A Practical Physiology," intended as a text-book for higher schools. "Physiocal Experiments," by Alfred P. Gage, was a manual and note book adapted to accompany any text-book of physics. "Asia," by Frank G. Carpenter, came out in "Carpenter's Geographic Readers." To Lois Bates we were indebted for a "Kindergarten Guide." An American view of "Schoolboy Life in England" was given by John Corbin; and "On a Western Campus" was a collection of stories and sketches typical of life in a coeducational college in the West, written by undergraduates, and with drawings by Frank Wing.

Fiction.—Only 869 novels were recorded as printed or imported into this country during 1897, a falling off of 245 from the 1,114 of 1896. Of this number 358 were by American authors, while the English and Continental works of fiction manufactured in the United States numbered but 352 against 690 the year previous, showing a growing preference for native talent in this department of literature. Of the total number of novels issued from publishing houses during the year, 713 were new books, as compared with 1,012 in 1896, while new editions showed an increase, there being 156 as against 102. The most marked feature in the character of the novels was the return in many to Revolutionary days and scenes. Perhaps the most successful novel of the year was "The Choir Invisible," by James Lane Allen, the author of "A Kentucky Cardinal," the scene of which is also laid in Kentucky in 1795. From F. Marion Crawford we had two novels, "Corleone: A Tale of Sicily," in two volumes, and "A Rose of Yesterday," the characters in which last are American, although the scene is laid in Lucerne. "His Grace of Osmonde,"

by Mrs. Frances Hodgson Burnett, embraced the portions of that nobleman's life omitted from "A Lady of Quality," and from Rudyard Kipling, now, we suppose, to be classed among American novelists, we had "Captain Courageous," a story of the Grand Banks. William Dean Howells was represented by "The Landlord at Lion's Head" and "An Opened-Eyed Conspiracy," and he also wrote "A Previous Engagement: Comedy." Henry James told "What Maisie knew," and also of "The Spoils of Poynton"; Francis Brete Harte described "Three Partners; or, The Big Strike on Heavy Tree Hill"; and from Richard Harding Davis we had "Soldiers of Fortune." "The Story of an Untold Love" and "The Great K. and A. Robbery," the latter considerably lighter in theme, came from Paul Leicester Ford, whose "Hon. Peter Stirling" has grown constantly and deservedly in popularity since it was published in 1894, and entitles its author to a place in the front rank of American novelists. Full of the feeling and fire of the olden time was "Hugh Wynne, Free Quaker, Sometime Brevet Lieutenant Colonel on the Staff of His Excellency General Washington," in two volumes, by Dr. Silas Weir Mitchell, and to the same period belong "A Colonial Free-Lance," by Chauncey C. Hotchkiss; "A Daughter of Two Nations," by Ellen Gale McClelland; "The Sun of Saratoga," by Joseph A. Altsheler, who wrote "A Soldier of Manhattan"; "King Washington," by Adelaide Skeel and William H. Brearley; "An Unwilling Maid," by Mrs. Jennie Gould Lincoln; and "A Son of the Old Dominion," by Mrs. Burton Harrison. "Free to Serve," by E. Rayner, and Mrs. Watson's "Beyond the City Gates" are colonial. "Vivian of Virginia," by Hurlbert Fuller, a story of Bacon's Rebellion of 1676. "Captain Shays, a Populist of 1786," was by George R. R. Rivers, the author of "The Governor's Garden." "The Latimers" was by Henry Christopher McCook, D. D.; "A Loyal Traitor," came from James Barnes; and "Chalmette" from Clinton Ross (R.), who published also "Zuleka." Other historical novels were "The Forge in the Forest," by Charles G. D. Roberts, which relates to the period anticipating the expulsion of the Acadians from Nova Scotia; "Pontiac, Chief of the Ottawas," by H. R. Gordon; "A Colonial Witch," by Frank S. Child; "The Romance of a Jesuit Mission," by M. Bouchier Sanford; "Sweet Revenge," by F. A. Mitchell; "A Hero in Homespun," a tale of the loyal South, by William E. Barton; and "Brokenburne: A Southern Auntie's War Tale," by Virginia Frazer Boyle. "An Enemy to the King," by R. N. Stephens dealt with France in the time of Henry III; and "The Falcon of Langéae," by Isabel Whiteley, with the early part of the reign of Francis I. "On the Red Staircase" and "An Imperial Lover" were tales of Russia by M. Imlay Taylor, while "Prisoners of the Sea," by Florence Morse Kingsley, centered around the Man in the Iron Mask. Two novels which aroused considerable comment were "The Gadfly," a strong but bitter story of Italy in the first half of the present century, by Mrs. E. L. Voynich, who was for some time believed to be a man, and "The Descendant," written to demonstrate the impossibility of living contrary to existing social laws, published anonymously, by Ellen Glasgow. "In the Crucible" was by Grace Denio Litchfield, and Anna Katharine Green gave full particulars of "That Affair Next Door." "Jerome, a Poor Man," was one of Mary E. Wilkins's stories of New England life. "The Third Violet" figured in a romance by Stephen Crane, and "The General's Double," a story of the Army of the Potomac, was by Capt. Charles King, who published also "Warrior Gap," a story of the Sioux outbreak of '68. "The Missionary Sheriff" was by Alice French

(Octave Thanet), and from Molly Elliot Seawell we had "The History of the Lady Betty Stair." Charles Egbert Craddock (Mary Noailles Murfree) sent out "The Juggler" and a volume of short stories entitled "The Young Mountaineers"; Mrs. Amelia E. Barr wrote "The King's Highway" and "Prisoners of Conscience," the last a strong story of the Shetland Islands; Frank R. Stockton's sole contribution was "The Great Stone of Sardinia"; while from John Kendrick Bangs there came "The Pursuit of the House-Boat" and "Paste Jewels." "Eat not thy heart" was by Julien Gordon (Mrs. Julia Storrow Cruger) and "A Damsel Errant," by Amélie Rives (now Princess Troubetzkoy). Two stories of Illinois at different periods, by Mary Hartwell Catherwood, which were included in one volume, were "The Spirit of an Illinois Town" and "Little Renault." Harriet Prescott Spofford traced the evils of "An Inheritance"; Herbert Ward told of "The Burglar who Moved Paradise"; and "Susan's Escort, and Others," by Edward Everett Hale, were collected into a volume from various periodicals and illustrated by W. T. Smedley. Dr. Charles C. Abbott had two novels, "The Hermit of Nottingham" and "When the Century was New"; outdoor life is portrayed in "Uncle Lisha's Outing," by Rowland E. Robinson; "A Question of Damages" was settled by J. T. Trowbridge; Elizabeth Phipps Train wrote "A Queen of Hearts" and "A Marital Liability"; Mrs. Ruth McEnery Stuart, "In Simpkinsville," a series of character tales; Alice Brown, the author of "Meadow-Grass," "The Days of his Youth"; Mrs. Eva Wilder Brodhead (formerly Eva Wilder McGlasson), "Bound in Shallows"; and Mrs. Ellen Olney Kirk (Henry Hayes), "The Revolt of a Daughter." "An Old-Field School-Girl," by Marion Harland (Mrs. M. V. H. Terhune), pleased young and old readers, and two other familiar authors were represented, Amanda M. Douglas by "Her Place in the World," and Christian Reid (Mrs. Frances C. F. Tiernan) by "The Man of the Family." "Miss Archer Archer" was a novel by Mrs. Clara Louise Root Burnham, and "Boss and Other Dogs" was a collection of stories by Maria Louise Pool. Stories of a distinctly local flavor were "The Old Gentleman of the Black Stock," by Thomas Nelson Page; Opie P. Read's "Bolanyo," "Old Folks," and "An Arkansas Planter"; "Old Times in Middle Georgia," by Richard Malcolm Johnston (Philemon Perch); "Sketches from Old Virginia," by A. G. Bradley; "The Kentuckians" and "Hell for Sartain, and and Other Stories," by John Fox, Jr.; "Chronicles of a Kentucky Settlement," by William Courtney Watts; "Down our Way," stories of Southern and Western character, by Mary Jameson Judah; "Jasper Fairfax," by Margaret Holmes; "The Regeneration," by Herbert Baird Stimpson; "Middleway," tales of a New England village, by Kate Whiting Patch; "The Secret of the Black Butte"; by William Shattuck; and "The King of the Broncos" and "The Enchanted Burro," by Charles Fletcher Lummis. "Lin McLean," was by Owen Wister. "From the Land of the Snow Pearls" was the title of tales from Puget Sound by Mrs. Ella Higginson. Charles Fleming Embree wrote "For the Love of Tonita, and Other Tales of the Mesas," and Frederick Thickstun Clark (Frederick Thickstun) "The Mistress of the Ranch." Ellen Hodges Cooley described "The Boom of a Western City," and Annette Lucile Noble "The Professor's Dilemma." "Yellow Pine Basin" was the story of a prospector, told by Henry G. Catlin; "Wolfville," by Alfred H. Lewis ("Dan Quin") was illustrated by Frederick Remington. Oregon was the scene of "Leonora of the Yawmish," by Francis Dana, and Nebraska of "Like a Gallant Lady," by Kate M. Cleary. "The Golden Croco-

dile" was a mining story by F. Mortimer Trimmer, and "The Big Horn Treasure" a tale of Rocky mountain adventure by John F. Cargill. "The Voyage of the Rattletrap," by Hayden Carruth, traces the path of a prairie schooner across Dakota twenty years ago; lynch law is the theme of "Smoking Flax," by Hallie Erminie Rives, a sister of Amélie Rives and "Mr. Peters," by Riccardo Stephens. Countess Cora Slocomb di Brazza-Savorgnan was responsible for "An American Idyll," the scene of which is laid among the Pima Indians of northern Mexico. "My Spanish Sweetheart" was the title of a short international romance by Frederick Albion Ober, who told at greater length of what transpired "Under the Cuban Flag," and from Lillian Hinman Shuey we had another romance of the West Indies, entitled "Don Luis' Wife." "Lorraine," by Robert W. Chambers, belonged to the days of the Franco-Prussian War; "Arnaud's Masterpiece" was a mediæval romance of the Pyrenees, by Walter Cranston Larned; and "A Modern Corsair," a story of the Levant, by Richard Henry Savage, who also published "For her Life," a story of St. Petersburg. "An Emperor's Doom; or, The Patriots of Mexico" was by Herbert Hayens, and the same country is the scene of "Tales of the Sun-Land," by Verner Z. Reed. The trilogy of Katharine Pearson Woods, begun with "John: A Tale of the Messiah," was continued with "The Son of Ingar," which carries on the study of the social message of Christianity in the first century. "The First Christmas Tree" was the theme of Henry Jackson Van Dyke, Jr., and to religious fiction belong "The Lowly Nazarene," a story of Christ, by J. Leroy Nixon, and "Lazarus," a tale of the world's great miracle, by Lueas Cleeve, while "Fabius the Roman" came from Enoch Fitch Burr, D. D. "Two Noble Women" were described by Susan Parkman, and Annie E. Wilson told the "True Story of a Jewish Maiden." "His First Charge" was by Mrs. Isabella H. Foster (Faye Huntington), and from Marie E. Richard came suggestions under the title of "The Country Charge." "The Daughters of the Parsonage" was by Belle V. Chisholm, and "The King's Daughter, and the King's Son; A Fairy Tale of To-day," by Agatha Archer. "Dead Selves" was Julia Magruder's latest novel, and from Clara Sherwood Rollins, the author of "A Burne-Jones Head, and Other Sketches," we had "Threads of Life"; Helen Davies confided "The Reveries of a Spinster" to print, and Max Pemberton gave us two books, "Christine of the Hills" and "Queen of the Jesters." In the "Hearthstone Series" we had the story of a French family "Exiled from Two Lands," told by Everett T. Tomlinson, and that of "The Champion Diamonds," by Rebecca Sophia Clarke (Sophie May). "The Pride of the Mereers," with all its consequences, was portrayed by Thomas Cooper De Leon, the author of a clever travesty of "The Quick and the Dead" entitled "The Rock and the Rye," and Charles Peale Didier, the author of "Twixt Cupid and Cæsus," illustrated his own novelette, "R. S. V. P." Fashionable New York life is the theme of "A Fiancé on Trial," by Francis Tillou Buck, and Washington life of "The Vice of Fools," by Hobart C. Chatfield Taylor. "A Transatlantic Chatelaine" was chronicled by Mrs. Helen Choate Prince; "Up the Matterhorn in a Boat" was a humorous extravaganza by Mrs. Marion Manville Pope; Louis Tracy in "An American Emperor" told the story of the fourth empire of France; while "Perfection City" was amusingly described by Mrs. Adela E. Orpen. "On Lone-man's Island" was from the pen of Mary Hubbard Howell; "Bubbles" and "A Son's Victory," from that of Fanny E. Newberry; "Rich Enough," by

Leigh Webster; "Peg Bunson," by John W. Spear; "Not in It," by Mrs. Anna Olcott Commelin; "The Man who was Good," by Leonard Merrick; "Lost Lineage," by Carrie Goldsmith Childs; "John Leighton, Jr.," by Katrina Trask; "Paul Ralston," by Mrs. Mary J. Holmes; "The Evolution of Dodd's Sister," by Charlotte Whitney Eastman; "Horace Everett," by Marquise Clara Lanza; and "The Copy-maker," by William Farquhar Payson found interested readers, as did "A Romance in Transit," by Francis Lynde, and "The Right Side of the Car," by J. Uri Lloyd, the author of "Etidorpha," but in no wise following the lines of that work. "Stephen Hardee" was by Katharine Neely Festetics, and "On Many Seas" by Herbert E. Hamblen (Frederick Benton Williams). "The Federal Judge," by Charles K. Lush, broaches the question of the influence of corporations, and "Henry Cadavere," by Henry Wentworth Bell-smith, was a study of life and work from the standpoint of co-operation. "The New Man" declares in favor of existing social conditions. "The Daughter of a Hundred Millions" was by Virginia Miles Leeds, and "The Stand-by," by Edmund P. Dole. "Evangelica," by Katherine Russell (Apollo Belvedere), opposes the theory of the inheritance of vice. "In Plain Air" was by Mrs. Elizabeth Lyman Cabot; "Scarlet, or White?" by Willis Mills, M. D.; and "The Tragedy of Ages," by Mrs. Isabella M. Witherspoon. "The Philosopher of Driftwood" is by Mrs. Anna Jenness Miller. Mrs. Maud Wilder Goodwin left colonial themes to tell of "Flint: His Faults, his Friends, and his Fortunes"; "A Capital Courtship" was by Alexander Black; Florence Converse laid the scene of her novel "Diana Victrix" in New Orleans among Creoles of the French quarter; "Gloria Victis" was by John A. Mitchell; and "The Man of Last Resort," by Melville Davidson Post. "Bob Covington" was from Archibald Clavering Gunter. From Mrs. Gertrude Franklin Atherton (Frank Lin) we had "His Fortunate Grace" and "Patience Sparhawk and Her Times." "His Foster-Sister," by Linn Boyd Porter, appeared in the "Albatross Novels," and "Montresor" was an English-American love story, 1854-'94, by "Loota." "The Eye of the Sun" was by Edward S. Ellis; "Koheloth" was by Louis Austin Storrs; Arthur H. Veysey wrote "A Cheque for Three Thousand"; Robert Herrick, "The Man who Wins"; Fannie E. Ostrander, "When Hearts are True"; and James Knapp Reeve, "The Three Richard Whalens," a story of adventure. "The Invisible Man" was a grotesque romance by Henry G. Wells, and B. West Clinedinst illustrated "The Last Three Soldiers," by William Henry Shelton. "Spanish Castles by the Rhine" was by David Skaats Foster. To the realm of the improbable belong also "The Fourth Napoleon," by Charles Benham; "The Day of Resis," by Lillian Francis Mentor; "Yermah the Dorado," by Frona Eunice Wait; "At the Queen's Mercy," by Mabel Fuller Blodgett; "Kings in Adversity," by Edward S. Van Zile; "Loma: A Citizen of Venus," by William Windsor; "A Journey to Venus," by Gustavus W. Pope, M. D., the author of "A Journey to Mars"; "Keef: A Life Story in Nine Phases," by Timothy W. Coakley; and "John Harvey," a tale of the twentieth century, by "Anon Moore." "Through the Invisible" was a theosophical love story by Paul Tyner, and "The Touch of a Vanished Hand," by Annie Russell Dyer, suggests spiritualism. "The Story of Ab," by Stanley Waterloo, was a scientific novel of the time of the cave men, and "Nirvana," a story of Buddhist philosophy by Paul Carus. "Tim and Mrs. Tim," a story for the club and society man and the new woman was by Richard T. Lancefield;

"The Lady of the Violets," by Frank West Rollins; "The End of the Journey," by Marie Florence Giles; "A Questionable Marriage," by Mrs. A. Shackelford Sullivan; "Then, and not till then," by Clara Nevada McLeod; "The Invasion of New York; or, How Hawaii was Annexed," by J. H. Palmer; "True Detective Stories," culled from the archives of the Pinkertons by Cleveland Moffett; and "When Desire cometh," by G. Embe. A new edition was printed, from new plates, with the original plates of "Georgia Scenes," by "A Native Georgian," originally published in 1840, and the "Autobiography of a Pocket-handkerchief," by James Fenimore Cooper, which has been out of print since 1843, and which, though published in that year in serial form, was never included in a collected edition of his works, was issued in book form. The memorial edition of "Uncle Tom's Cabin" contained a sketch of the life of Mrs. Stowe and was profusely and handsomely illustrated from original drawings by celebrated artists, and the Tacoma edition of Washington Irving's "Astoria," in two superb, illustrated volumes deserves mention.

Among collections of short stories not included above are to be recorded "Outlines in Local Color," by Brander Matthews; "Seven on the Highway," by Blanche Willis Howard; "Harvard Episodes," by Charles Macomb Flandrau, histories of college life, which possess unusual merit; "Mrs. Knollys, and Other Stories," by F. J. Stimson; "A Willing Transgressor, and Other Stories," by A. G. Plympton; "The Mystery of Choice," by Robert W. Chambers; "A Browning Courtship, and Other Stories," by Eliza Orne White; "Literary Love-Letters, and Other Stories," by Robert Herrick; "Near a Whole City-Full," by Edward W. Townsend; "'Bobbo,' and Other Fancies," some of which are in verse, by Thomas Wharton, which had an introduction by Owen Wister; "Camp and Lamp," rambles in realms of sport, story, and song, by Samuel Mathewson Baylis; "Pippins and Cheese," by Mrs. Elia W. Peattie; "A Book of True Lovers," collected short stories of Octave Thanet (Alice French); "Chimes from a Jester's Bells," by Robert Jones Burdette; "Wayside Courtships," by Hamlin Garland; "Tales of the Real Gypsy," by Paul Kester; "Jimty and Others," by Margaret Sutton Briseoe; "The Merry Maid of Arcady, His Lordship, and Other Stories," by Mrs. Burton Harrison; "Reminiscences of an Old Westchester Homestead," by Charles Pryer; "Pine Valley," by Louis B. France (Bourgeois), descriptive of life in Colorado; "Ocean Sketches," tales of transatlantic travel, by Frederick W. Wendt; "A Night in Acadie," by Kate Chopin, being stories of Creole life in Louisiana; "The Wisdom of Fools," by Mrs. Margaret Wade Campbell Deland; "One Man who was Content; Mary; The Lustigs; Corinna's Fiammetta," four short stories in one volume, by Mrs. Marianna Griswold Van Rensselaer (Mrs. Schuyler Van Rensselaer); "The Ape, the Idiot, and Other People," by W. C. Morrow; "An Itinerant House, and Other Stories," by Emma Frances Dawson; "The Express Messenger, and Other Tales of the Rail," by Cyrus Warman. "Lo-To-Kah" was the title of six stories of Indian folklore, chiefly of the Ute and Navajo Indians, by Verner S. Reed; "In Indian Tents," stories told by Penobscot, Passamaquoddy, and Micmac Indians to Abby Langdon Alger, are not to be forgotten; and in conclusion we have "The Comprehensive Subject Index to Universal Prose Fiction," compiled and arranged by Zella Allen Dixon.

Fine Art.—Among the books that are creations of art are to be numbered "A History of Dancing from the Earliest Age to our own Times," by Gaston Vuillier, superbly illustrated, with 25 full-page photogravure plates and over 400 illustrations in the

text, reproducing the most famous pictures, statues, drawings, etc., by the foremost artists. Although the author is not a native of the United States, but of France, the work is essentially American, in the form of its presentation, and is one of the most striking contributions of the year to the department of the fine arts. "Tuscan Songs," collected, translated, and illustrated by Francesca Alexander, made another sumptuous volume, and from Anne Hollingsworth Wharton we had "Heirlooms in Miniature," embracing more than 125 reproductions of these charming "portraits in little" of colonial, Revolutionary, and modern date. Charles Dana Gibson gave us six plates of "People of Dickens," and a fine collection was made of his magazine articles upon "London as seen by C. D. Gibson," elaborately illustrated. "Drawings" of Frederic Remington were published illustrating wild life in America, while "All Hands!" is the title given to pictures by Rufus H. Zogbaum illustrating life aboard a war ship of the United States navy which stir the heart. "The Madonna in Art," by Estelle M. Hurl, was intended as a companion volume to "Child-life in Art," and contained 31 full-page reproductions from celebrated paintings. William Wallace Martin was the author of a "Manual of Ecclesiastical Architecture"; James Mason Hoppin, D. D., made a study of "Greek Art on Greek Soil"; while "The Mycenaean Age," a study of the monuments and culture of pre-Homeric Greece, was written by Prof. J. Irving Manatt upon the basis of a work by Chrestos Tsountas, bringing the Mycenaean discoveries up to date and popularizing them by means of copious illustrations. "The Beginnings of Art" were traced by Ernest Grosse in "Appletons' Anthropological Series," and Dr. Washington Gladden discussed briefly "The Relations of Art and Morality." Charles M. Stuart told "The Story of the Masterpieces," and Bernhard Berenson discoursed of "The Central Italian Painters of the Renaissance." His "Venetian Painters of the Renaissance" also went through a new illustrated holiday edition. "The Decoration of Houses" was the theme of Edith Wharton and Ogden Codman, Jr., and Anson K. Cross wrote on "Light and Shade" for the series of "National Drawing Books." "Some Masters of Lithography," by Atherton Curtis, was illustrated with 22 photogravure plates after representative lithographs, and contained appendices giving technical explanations and a bibliography, the edition being limited to 750 copies. "Ex Libris," by Charles Dexter Allen, was the title given to essays of a collector, accompanied with 21 copper-plate prints. Parts VII to XXV appeared of "The Music of the Modern World," explained and illustrated for American readers, edited by Anton Seidl, assisted by Fanny Morris Smith, Henry E. Krehbiel, and others; William B. Chamberlain laid down "Principles of Vocal Expression"; and Edmund J. Meyer discoursed of "Position and Action in Singing." Russell Sturgis and Henry E. Krehbiel were the joint editors for the American Library Association of an "Annotated Bibliography of Fine Art," which had a preface by George Hes. Among illustrated volumes are to be noted "In Memoriam," the drawings for which were by Harry Fenn, and which had a preface by H. Van Dyke; "A Book of Old English Love-Songs," with an introduction by Hamilton Wright Mabie, and an accompaniment of decorative drawings by George Wharton Edwards; and "Evangeline," in a new holiday edition, illustrated by Violet Oakley and Jessie Wilcox Smith. Two series of "Life's Comedy" were also issued.

History.—Several important contributions were made to historical literature. "The Evolution of the Constitution of the United States" was traced by Sydney George Fisher, showing that it is a de-

velopment of progressive history and not an isolated document struck off at a given time or an imitation of English or Dutch forms of government. James Schouler also published "Constitutional Studies, State and Federal." "The Middle Period," treated by Prof. John W. Burgess in the "American History Series," lay between 1817 and 1858, and from Edward Payson Powell we had "Nullification and Secession in the United States," a history of the six attempts during the first century of the republic. George Barnett Smith opened a new series with "The Romance of Colonization: The United States from the Earliest Times to the Landing of the Pilgrim Fathers." Vol. I of "American History told by Contemporaries," edited by Albert Bushnell Hart, was devoted to the "Era of Colonization, 1493-1689," and will be followed by three more volumes. Edward Arber edited from the original texts "The Story of the Pilgrim Fathers, 1602-1624 A. D., as told by themselves, their Friends, and their Enemies"; "The Voyage of the Mayflower" was penned and pictured by Blanche McManus for the series of "Colonial Monographs," of which it was the first; "The Story of the Palatines" was told by Sanford H. Cobb; "Old Virginia and her Neighbors" was by John Fiske, in two volumes; and "The Border Wars of New England, commonly called King William's and Queen Anne's Wars," by Samuel Adams Drake. Vols. II to IX, inclusive, were issued of the 60 which are to contain "The Jesuit Relations and Allied Documents," edited by Reuben Gold Thwaites, covering the travels and explorations of the Jesuit missionaries in New France, 1610-1791, in an edition limited to 750 sets; "Cabot's Discovery of North America" was discussed by G. E. Weare; Justin Winsor completed with "The Westward Movement, the Colonies and the Republic West of the Alleghanies, 1763-1798," his work of illustrating American history in its geographical relations from the time of Columbus to the beginning of the present century, undertaken in "Cartier to Frontenac" (1534-1700) and continued in "The Mississippi Basin" (1697-1763); "New Governments West of the Alleghanies before 1780" was the theme of a thesis by George H. Alden; and "New Light on the Early History of the Greater Northwest" was thrown by the manuscript journals of Alexander Henry, fur trader of the Northwest Company, and of David Thompson, official surveyor and explorer of the same company 1799-1814, edited with copious critical commentary by Elliott Coues, M. D., in three volumes. "A History of the United States of America, its People and its Institutions" was written by Charles Morris; "A School History of the United States," by John Bach McMaster; "A Grammar School History of the United States," by L. A. Field; and "The Student's American History," by David H. Montgomery, the last for the "Leading Facts of History Series." Charles G. D. Roberts wrote "A History of Canada," and W. A. Calnek a "History of the County of Annapolis," which was edited and completed by A. W. Savary. "Louisbourg in 1745" was the title given to the anonymous *lettre d'un Habitant de Louisbourg* (Cape Breton), containing a narrative, by an eyewitness, of the siege in 1745, edited with an English translation by George M. Wrong. "The Battle of Harlem Heights, September 16, 1776," reviewed by Henry P. Johnston in the "Columbia University Press Series"; Elbridge Streeter Brooks drew up "The Century Book of the American Revolution," to which Chauncey M. Depew contributed an introduction; "Soul Liberty—Rhode Island's Gift to the Nation," and "The Forgeries connected with the Original Deed given to Roger Williams by the Sachems," were both from the pen of Sidney S. Rider; "The History of South Carolina under the Proprietary Government,

1670-1719" was written by Edward McCrady; "Pennsylvania Colony and Commonwealth," by Sydney George Fisher, continued the work begun in his previous volume, "The Making of Pennsylvania"; Vol. III of the four which are to contain a "History of California," by Theodore H. Hittell, was published; and "Stories of Ohio" were written by William Dean Howells, as were "Stories of Missouri," by John R. Musiek. Albert J. Pickett's "History of Alabama" was reprinted, and a series of "American Colonial Tracts," issued monthly, was begun. In the series of "Harvard Historical Studies" appeared "Nominations for Elective Office in the United States," by Frederic W. Dallinger; in the "Columbia University Studies in History" "The Struggle between President Johnson and Congress over Reconstruction," by Charles Ernest Chadsey, and "The Abolition of Privateering and the Declaration of Paris," by Francis R. Stark; in the "Columbia College Studies," "The Commercial Policy of England toward the American Colonies," by G. L. Beers; and in the "Johns Hopkins University Studies" a "History of the Tobacco Industry in Virginia from 1860 to 1894," by Benjamin W. Arnold, Jr. "The Army of the United States," a collection of historical sketches of staff and line, edited by Theophilus Rodenbough and William L. Haskin, contained 17 portraits of famous American generals. "The Battle of Franklin, Tennessee, Nov. 30, 1864," was the subject of a monograph by Jacob Dolson Cox; Augustus Choate Hamlin wrote on the "Battle of Chancellorsville—Jackson's Attack, May 2, 1863"; "Shelby and his Men; or, The War in the West" came from John N. Edwards and a "History of the Fourth Regiment, South Carolina Vols.," a narrative of four years' service in the Confederate Army, from J. W. Reid. "The Home Squadron under Commodore Conner in the War with Mexico" was chronicled by Philip Syng Physick Conner. Among historical works not relating to our own country are to be mentioned "National Movement in the Reign of Henry III, and its Culmination in the Barons' War," by Oliver H. Richardson, "A Short History of Mediæval Europe," by Oliver J. Thatcher; "The Growth of the French Nation," by George Burton Adams; "France under Louis XV," by James Breck Perkins, in two volumes; "Spain in the Nineteenth Century," by Mrs. Mary Elizabeth Wormeley Latimer; "Annals of Switzerland," by Julia M. Cotton; "The War of Greek Independence, 1821-1833," by W. Alison Phillips; "Imperial Germany," a critical study of fact and character, by Charles Sydney Whitman; "The Campaign of Marengo," by Herbert H. Sargent; "Historic Bubbles," by Frederiek Leake; "Germany," by Kate Freiligrath Kroeker, and "England," by Frances E. Cooke, both in the series of "Appletons' History for Young Readers"; and a "History of Ancient Peoples," by Willis Broughton. To Sophia V. Bonpiani we are indebted for "A Short History of the Italian Waldenses," and "The Covenanters, the Cavalier, and the Puritan" were the subject of a study by Oliver Perry Temple. Charles Foster Kent was the author of "A History of the Hebrew People from the Division of the Kingdom to the Fall of Jerusalem in 586 B. C."; and Alexander Wheelock Thayer, of "The Hebrews in Egypt and their Exodus." "The Story of Japan" was written for children by R. Van Bergen. To local history belong "Brookline: The History of a Favored Town," by C. Knowles Bolton; "A History of the Town of East Hampton, N. Y.," by Henry P. Hedges; "A History of Monmouth and Ocean Counties, New Jersey," by Edwin Salter; a "History of Trenton, N. J.," by F. B. Lee; "Ould Newbury," by John J. Currier; "Historical Sketches of New Haven," by Ellen Strong Bartlett; "Somer-

ville, Past and Present," by Edward A. Samuels and Henry H. Kimball; "Historic New York," the first series of the "Half-Moon Papers"; "Colonial Mobile," by Peter J. Hamilton; and last, but not least, by any means, in point of interest, "Chronicles of Tarrytown and Sleepy Hollow," by Edgar Mayhew Bacon. Vol. IV completed the new revised edition of "American Orations," edited by Alexander Johnston as studies in American political history. An interesting reprint in photo-facsimile was that of "Public Acts of the State of Tennessee passed at the First Session of the Thirty-fourth General Assembly for the Years 1861-'62," of which only three or four copies in the original are known to exist, the session having been hurriedly adjourned from Nashville to Memphis upon the fall of Fort Donelson, Feb. 16, 1862.

Jurisprudence.—Books in this department were numerous during the year. The "Encyclopædia of Pleading and Practice under the Codes and Practice Acts," edited by William M. McKinney, was continued, Vols. VII, VIII, and IX bringing the work down to "Habeas Corpus"; and two volumes also appeared of a new "Encyclopædia of Forms and Precedents for Pleading and Practice," edited by W. H. Michael and William Mack, under the supervision of James D. Cockcroft. The history and principles of "Common Law Pleading" were set forth by R. Ross Perry, and "The Historical Development of Code Pleading in America and England" was traced by Charles M. Hepburn. "Munson's Manual of Elementary Practice," by C. La Rue Munson, contained practical suggestions on the beginnings of legal practice; Edward P. Buffet prepared "A Digest of Elementary Law and that of Personal Property"; Vol. I was issued of the third revised and enlarged edition of John Prentiss Poe's "Pleading and Practice in Courts of Common Law," was given to "Pleading"; Louis Hochheimer set forth "The Law of Crimes and Criminal Procedure," including forms and precedents; and Part I appeared of James Paige's "Illustrative Cases in Criminal Law," with analysis and citations in the "Pattee Series"; John H. Gillett wrote "A Treatise on the Law of Indirect and Collateral Evidence"; a third edition was published of "The Theory of the Law of Evidence," by William Reynolds; Benjamin J. Shipman prepared "A Handbook of the Law of Equity Pleading"; Vol. III was issued of "A Selection of Cases on Equity Jurisdiction," by William A. Keener; and Vols. II and III of the annual (first series) of "American and English Decisions in Equity," annotated by Ardenus Stewart. Two volumes contained "Commentaries on the Law of Trusts and Trustees," as administered in England and the United States, by Charles F. Beach; Stewart Chaplin wrote "A Treatise on Express Trusts and Powers, under the New York Revised Statutes and the Real Property Law of 1896"; the fourth volume of "The Annual on the Law of Real Property," edited by Tilghman E. and Emerson E. Ballard, for 1895, appeared; as did "Selected Cases on Real Property," selected and arranged for use in connection with the author's treatise on real property, by Christopher G. Tiedeman; a "Treatise on the Modern Law of Property, as expounded by our Courts of Last Resort," by Frank S. Rice; and "Selected Cases on Real Property," by William C. Sprague. John W. Smith gave his attention to "The Law of Receiverships"; Philip T. Van Zile supplied "Illustrative Cases in Sales"; and Francis M. Burdick, "The Law of Sales of Personal Property." "A Treatise on the Law and Practice of Foreclosing Mortgages on Real Property and of Remedies Collateral thereto, with Forms," by Charles Hastings Wiltsie, in two volumes, had a

supplement bringing the work down to March, 1897, and additional chapters on mortgage redemptions, by James M. Kerr. "Chattel Mortgage" was the title of a treatise on the use of personal property as security in the State of Michigan, by William A. Bahlke; in the "Hornbook Series" appeared a "Handbook on the Law of Executors and Administrators," by Simon Greenleaf Crosswell; "The Law of Decedents' Estates" in Pennsylvania was set forth by William Hardeastle Brown; J. G. Wocner was the author of "A Treatise on the American Law of Guardianship of Minors and Persons of Unsound Mind"; and "Probate Reports annotated," by Frank S. Rice, contained recent cases of general value decided in the courts of the several States, or points of the probate law, with notes and references. Another issue of the "Hornbook Series" was a "Handbook on the Law of Private Corporations," by William L. Clark, Jr., and Jeremiah Smith contributed "A Selection of Cases on Private Corporations," in two volumes. Reuben A. Reese expounded "The True Doctrine of *Ultra Vires* in the Law of Corporations"; "A Treatise on the Law in Relation to Promoters and the Promotion of Corporations" came from Arthur M. Alger; Malcolm Lloyd set forth "The Principles of the Law relating to Corporate Liability for Acts of Promoters," in the Sharswood prize thesis in the law department of the University of Pennsylvania for the year 1897; a third edition was issued of "White, on Corporations," by Frank White; Charles L. Borgmeyer edited Vol. V (1897) of the "American Corporation Legal Manual"; and Vols. I to VI, inclusive, of "American and English Corporation Cases" (new series) close this subdivision; while on contracts we had "A Synopsis of the Law of Contract," prepared for the St. Louis Law School by Amos M. Thayer, and "Selected Cases on Contracts," by William C. Sprague. John M. Gardner edited Vol. I of "American Negligence Reports," and T. F. Hamilton Vols. V and VI of "American Negligence Cases," while William W. Morrill performed a similar service for Vol. VI (1895-'97) of "American Electrical Cases." Two volumes contained "A Treatise on the Law of Carriers," by Norman Fetter; Vol. IV of "A Treatise on the Law of Railroads," by Byron K. and William F. Elliott, was sent out; as were Vol. VI of "A Digest of Railway Decisions," by Stewart Rapalje and William Maek, and Vols. IV, V, and VI of the new series of "American and English Railroad Cases." "The Law of Railway Accidents in Massachusetts" was set forth by Gustavus Hay, Jr. "The Law of Railway Bonds and Mortgages in the United States," by Edward Lyman Short, contained illustrative cases from English and colonial courts. Edwin F. Glenn's "Handbook of International Law" appeared in the "Hornbook Series"; "The Federal Courts: Their Organization, Jurisdiction, and Procedure" were the theme of lectures delivered before the Richmond law school, Richmond College, Virginia, by Charles H. Simonton; and "Elements of Law as Introductory to the Study of the Constitutional and Military Law of the United States" were the theme of G. B. Davis. W. W. Phelps compiled a "Chronology of American Case Law," covering all reported cases, State and Federal, from the earliest period to 1897. "A Treatise on the American Law of Elections," by George W. McCrary, went through a fourth edition, edited by Henry L. McCune, and "The Revised Village Charter," by John N. Drake, was a digest of village law, Part I of which covered "The Village Law," and Part II "All Other Statutes applicable to Villages." William E. Bullock was the author of "A Treatise on the Law of Husband and Wife in the State of New York," including chapters on divorce and dower;

Edwin H. Woodruff, of "A Selection of Cases on Domestic Relations and the Law of Persons"; and William C. Sprague was heard from yet again in "Illustrative Cases on the Law of Domestic Relations." "Principles of the Law of Attorney and Client" emanated from W. B. Hale; W. F. Bailey devoted two volumes to "The Law of Personal Injuries relating to Master and Servant"; while four contained "A Treatise on Marine, Fire, Life, Accident, and all Other Insurances," by Joseph A. Joyce. A second edition, revised and enlarged, was issued of "A Treatise on the Law of Fire Insurance," by D. Ostrander, with a philosophical and analytical discussion of leading cases. "Patent Office Practice," by William A. Luby, was an abridgment of the law of patents together with the rules, forms, and precedents for preparing and prosecuting applications for patents, trade-marks, prints, labels, and copyrights; and from J. T. Newton we had also "Newton's Digest of Patent Office Trade-Mark Decisions." Two volumes contain "A Treatise on the American Law relating to Mines and Mineral Lands," by Curtis H. Lindley. Daniel Moreau Barringer and John Stokes Adams were the joint authors of "The Law of Mines and Mining in the United States," and Horace F. Clark, Charles C. Heltman, and Charles F. Consaul of a "Mineral Law Digest." "A Manual of Legal Medicine," for the use of practitioners and students of medicine and law, was the work of Justin Herold, M. D.; and "The Powers, Duties, and Liabilities of Coroners and Constables," as set forth by Borden D. Smith, were revised by Charles H. Mills; while John H. Simpson drew up a "Notary Public's Guide." Edgar B. Kinkead vouchsafed "Forms of Instruction to Juries and Judgment Entries," covering civil and criminal cases in all courts of record in Ohio, and Samuel D. Aulls was the author of "Aulls's Quizzer on the New York Code of Civil Procedure." "Celebrated Trials," by Henry Laurens Clinton, supplements admirably his previous volume of "Extraordinary Cases," and to Moses Field we owe a collection of "Famous Legal Arguments," "Law Latin," by E. Hilton Jackson, was a treatise in Latin, with legal maxims and phrases, as a basis of instruction. Vol. I of "A Complete Digest of all Reported American Cases from the Earliest Times to 1896" covered "Abandonment-Advocate," and inaugurated the "Century Edition of the American Digest"; Vol. I of the "General Digest of the Decisions of the Principal Courts of the United States, England, and Canada" (new series) appeared at the beginning of the year. James H. Monroe edited "Monroe's Digest of Standard Decisions of the Courts of Last Resort of the United States, Canada, England, Scotland, and Ireland upon Questions in Law and Equity relating to Banks, Banking and Commerce, Trade and Manufacturing"; Vols. III, IV, and V of the second edition of the "American and English Encyclopædia of Law," edited by David S. Garland and Lucius P. McGehee, under the supervision of James Cockerott, were sent out, as were Vols. LI, LII, LIII, LIV, LV, and LVI of "American State Reports," selected, reported, and annotated by A. C. Freeman, a brief digest, covering Vols. XLIX to LIV, of which was made by E. D. Smith; and there yet remain for mention also Vols. XX-XXV of "United States Circuit Courts of Appeal Reports," with a "Digest of Decisions" reported in the same, covering Vols. XI to XX; several volumes of "United States Courts of Appeal Reports" and a "Digest" comprising the "Supreme Court Reports," Vols. CXLII to CLXIII, inclusive, from October, 1891, to October, 1895, and the "Circuit Court of Appeals Reports," Vols. I to XXIII, inclusive, Vol. XXVII and advance parts to June 15,

1896, by William Draper Lewis; Vols. XXVIII, XXIX, and XXX of "United States Federal Cases"; Vols. I, II, and III of "United States Federal and State Criminal Reporter"; and Vols. LXXV to LXXXI of the "United States Federal Reporter." A "United States Digest of Decisions and Opinions relating to Pensions and Bounty Land" was prepared under the direction and supervision of John M. Reynolds by William M. Chitty and John W. Bixler, and a "United States Supreme Court Index Digest to the Decisions in Patent Cases" was also sent out, including those adjudged during October term, 1896. The "Reports" and "Reporters" of the several States it is impossible to enumerate. "Affirmed and Reversed Cases, from the Earliest State Report down to January, 1896," by William H. Silvernail, was a complete table of affirmed and reversed cases of the State of New York, with duplicate references to all current reports; and from the same author we had an "Index to the Session Laws of the State from 1775 down to 1897." "The Greater New York Charter" as enacted in 1897 contained notes indicating the derivatory statutes, etc., by Mark Ash, and another volume, "The Greater New York Charter: Being an Act to unite into One Municipality, under the Corporate Name of the City of New York, the Various Communities lying in and about New York Harbor, including the City and County of New York, the City of Brooklyn, the County of Kings, the County of Richmond, and part of the County of Queens, and to provide for the Government thereof," contained a report of the committee which drafted the same by Clarence F. Birdseye.

Juveniles.—Still do the numbers increase of books written for young people. "Midshipman Jack," by Charles Ledyard Norton, belonged to the "Fighting for the Flag Series," and yet another sea story was "The Roek of the Lion," by Molly Elliot Seawell. William Osborn Stoddard contributed "The Red Patriot," "The Lost Gold of the Montezumas," and "Walled in," a true story of Randall's Island. Kirk Munroe gave "With Crockett and Bowie," and "The Painted Desert" was a story of northern Arizona. He also wrote "The Ready Rangers," "Trif and Trixy" was by the ever-delightful John Habberton; James Otis Kaler gave four books, "The Boys at Fort Schuyler," "The Signal Boys of '75," "At the Siege of Quebec," and "The Wreck of the Circus"; "In the Days of the Pioneers" was a sequel to "The Phantom of the River," by Edward S. Ellis, who also wrote "True to his Trust" and "A Strange Craft, and its Wonderful Voyage"; "The Resolute Mr. Pansy" was an electrical story for boys by John T. Trowbridge; "The Great Island; or, Cast away in in Papua" was Willis Boyd Allen's contribution to the "Camp and Tramp Series"; while the "Frank and Fearless Series" was enriched with "Frank and Fearless; or, The Fortunes of Jasper Kent," by Horatio Alger, Jr. The "All-over-the-World-Library" (third series) contained "Pacific Shores; or, Adventures in Eastern Seas," by the late lamented William Taylor Adams (Oliver Optie), and his "At the Front" appeared in the "Blue and the Gray Series—on Land." "Guarding the Border," by Everett T. Tomlinson, belonged to the "War of 1812 Series," and his "Washington's Young Aids" to the "War of the Revolution Series." "True to his Home," by Hezekiah Butterworth, was a tale of the boyhood of Franklin, and from the same pen we had "Over the Andes," in the "Travel and Adventure Series." "A Little House in Pimlico," by Marguerite Bouvet, "Three Margarets" and "Hildegard's Harvest," by Mrs. Laura E. Richards, and "Wanolasset, the Little-One-Who-Laugh," by A. G. Plympton, recalled three favorite authors for

children, and from Mrs. Elizabeth W. Champney came "Witch Winnie in Venice and the Alchemist's Story" and "Pierre and his Poodle." "Aaron in the Wilderness," by Joel Chandler Harris (Uncle Remus), carried on the "Thimblefinger Series"; the "Brain and Brawn Series" contained "The Beach Patrol," a story of the life-saving service, by William Drysdale; "Three Boys in the Northland: Summer," came from Egerton Ryerson Young; and "The Last Cruise of the 'Mohawk,'" a boy's adventures in the navy in the war of the rebellion, from William J. Henderson. Contributions to the "Bound to Win Series" were "Shorthand Tom; or, The Exploits of a Young Reporter," "Young Auctioneers," and "Bound to be an Electrician," by Edward Stratemeyer; "The Missing Tin Box," by Arthur M. Winfield; and "Gun and Sled," by Ralph Bonehill. "Camp and Trail" came from Isabel Hornibrook, and "A Bunker-Hill Failure," from Anna F. Burnham. Lucy Cecil White Lillie described "A Girl's Ordeal." Amanda M. Douglas published "The Children at Sherburne House" and "Hannah Ann," a sequel to "A Little Girl in Old New York," while Ellen Douglas Deland was represented by "In the Old Herriek House, and Other Stories," "A Successful Venture," and "Alan Ransford." Linnie S. Harris told the story of "The Young Capitalist," and Frank M. Bicknell that of "The Apprentice Boy." "Paul Travers's Adventures" were detailed by Sam T. Clover, and Sophie Swett narrated the experiences and perplexities of "Tom Pieking of Scutney." "Stoney Cardington's Ideal" was by Mrs. Mary Anderson Hawkins; "Kent Fielding's Ventures" and "A Genuine Lady," by Mrs. I. T. Thurston; "Dorothy Draycott's To-morrows," a sequel to "Dorothy Draycott's To-days; or, Sirs, only Seventeen," by Virginia Frances Townsend; "Toinette, and Other Stories," by Lydia F. Krause (Barbara Yechton); "The First Temptation," by Mary Lee Stark; "The Story of Mollie," by Marian Bower; "Links of Gold," by Mrs. Harriet A. Cheever; "The Young Puritans of Old Hadley," by Mary Prudence Wells Smith; "The King of the Park," by Marshall Saunders; and "The Angel of the Tenement," by George Madden Martin. "Phronsie Pepper, the Last of the 'Five Little Peppers,'" by Margaret Sidney (Mrs. Harriet Mulford Lothrop), was illustrated by Jessie McDermott; "Little Homespun," by Ruth Ogden (Mrs. Charles W. Ide), was a continuation of her former story of "Courage"; "Nan in the City," by Mrs. Myra Sawyer Hamlin, was a sequel to "Nan at Camp Chicopee"; "The Happy Six" was by Penn Shirley (Sarah Clarke); and "A Thoughtless Seven" was written by the author of "Probable Sons." "Miss Belladonna" was by Caroline Ticknor, and "Miss Wildfire" by Julie M. Lippmann; and among other books which found interested readers may be mentioned "Castle Daffodil," by Martha Barr Banks; "Ten Little Comedies," tales of the troubles of ten little girls whose tears were turned into smiles, by Gertrude Smith; "The Outstretched Hand," by Annie Maria Barnes (Cousin Annie), and "Ciely's Little Minute," by Harvey Gobel. "Sue Oreutt" was a sequel to "The Oreutt Girls," by Charlotte M. Vaile; and other books for girls were "Miss Nina Barrow," by Frances Courtenay Baylor; "A Candid Critic, and Other Stories for Girls," by Maude Rittenhouse Mayne; "The Taming of Polly," by Ella Loraine Dorsey; "Three Brave Girls," by Mrs. Jeannette R. H. Walworth; "Three Pretty Maids," by Amy Ella Blanchard; and "Three Girls and especially One," by Marion Ames Taggart, who wrote also "The Blyssvania Post Office." For very little people there were various dainty volumes, "Little Grown-Ups," by Maud

Humphrey and Elizabeth S. Tucker; "A Mince-Pie Dream," a book of children's verse, by Emily Elton, D. E.; "A Book of Nursery Rhymes," illustrated by Francis D. Bedford; "The Dear Old Nursery Rhymes," by Constance Haslewood; "Mother Goose in Prose," by L. Frank Baum; and "Childhood's Songs of Long Ago," by Dr. Isaac Watts, with picturings by Blanche McManus. "The Muses up to Date" was the title of a series of plays for children from eight to eighteen, by Henrietta D. and Roswell M. Field. "Uncle Sam's Secrets," by Oscar Phelps Austin, was a story of national affairs for youth. Anna Alice Chapin told "The Story of the Rhinegold" for young people, and Samuel Adams Drake recalled the landing of the Pilgrim Fathers "On Plymouth Rock."

Medicine and Surgery.—The first of four volumes to contain an "American System of Practical Medicine," in contributions by representative Americans, edited by Alfred Lebbeus Loomis, M. D., and W. Gilman Thompson, M. D., appeared during the year, as did the fourth and last volume of "A System of Practical Therapeutics, by American and Foreign Authors," edited by Hobart Amory Hare, M. D., who published also a work of his own upon "Practical Diagnosis." Vol. III of "A System of Medicine by Many Writers," edited by Thomas Clifford Allbut, M. D., was devoted to "Diseases of Obscure Causation, Alimentation, and Secretion," and Vol. IV to "Diseases of Ductless Glands—Respiratory and Circulatory Systems." James Tyson, M. D., was the author of "The Practice of Medicine," a text-book for practitioners and students, with special reference to diagnosis and treatment, and Horatio C. Wood, M. D., collaborated with Reginald H. Fitz, M. D., on "The Practice of Medicine." Roswell Park, M. D., gave "An Epitome of the History of Medicine," based upon a course of lectures delivered in the University of Buffalo, and edited a "Treatise on Surgery by American Authors," in two volumes. A fourth edition, revised and enlarged, was issued of "A Manual of the Practice of Medicine prepared especially for Students" by A. A. Stevens, M. D.; and Vols. VII to XI, inclusive, were published of "Twentieth Century Practice," edited by Thomas L. Stedman, M. D. A new second revised edition of "A Practical Treatise on Medical Diagnosis," by John H. Musser, M. D., was made for the use of students and practitioners; "Pathological Technique" was a practical manual for the pathological laboratory, by Frank Burr Mallory, M. D., and James Homer Wright, M. D.; "Practical Pathology for Students and Physicians" was a manual of laboratory and *post-mortem* technic, designed especially for the use of junior and senior students in pathology at the University of Michigan, by Alfred Scott Warthin, M. D.; Charles E. Simon, M. D., prepared "A Manual of Clinical Diagnosis by Microscopical and Chemical Methods"; while Robert Hutchinson, M. D., and Harry Rainy gave their attention entirely to "Chemical Methods." Arthur V. Meigs, M. D., inquired into "The Origin of Disease," especially of disease resulting from intrinsic, as opposed to extrinsic causes; "Hysteria and Certain Allied Conditions" were the theme of George J. Preston, M. D.; while H. Illoway was an authority upon "Constipation in Adults and Children," with special reference to habitual constipation and its most successful treatment by the mechanical methods. G. H. Ellwanger wrote upon "Gout"; A. W. Mayo Robson upon "Diseases of the Gall, Bladder, and Bile Ducts"; and W. Soltan Fenwick, M. D., upon "Disorders of Digestion in Infancy and Childhood"; while "Syringomyelia" was the title of the Aboarenga Prize Essay of the College of Physicians of Philadelphia for 1895, by Guy Hinsdale,

M. D. "Lectures on Angina Pectoris and Allied States," by William Osler, M. D., were reprinted from the "New York Medical Journal" for 1896; Richard C. Cabot, M. D., offered "A Guide to the Clinical Examination of the Blood for Diagnostic Purposes"; while Nestor I. C. Tirard, M. D., was heard from on "Diphtheria and Antitoxin." "Principles or Guides for a Better Selection or Classification of Consumptives Amenable to High Altitude Treatment" were suggested by A. Edgar Tussey, M. D. Charles Phelps, M. D., wrote on "Traumatic Injuries of the Brain and its Membranes," with a special study of pistol-shot wounds of the head in their medico-legal and surgical relations; Silas Weir Mitchell, M. D., gave "Clinical Lessons on Nervous Diseases"; and Thomas Smith Clouston's "Clinical Lectures on Mental Disorders" went through a fourth revised edition. "Wounds in War," by W. F. Stevenson, covered the mechanism of their production and their treatment; George H. Quay, M. D., was the author of a "Monograph of Diseases of the Nose and Throat"; and Seth Scott Bishop, M. D., supplied a condensed text-book of "Diseases of the Ear, Nose, and Throat, and their Accessory Cavities." The first of four volumes, which will contain a "System of Diseases of the Eye by American, British, Dutch, French, German, and Spanish Authors," edited by William F. and Oliver C. A. Norris, was devoted to "Embryology, Anatomy, and Physiology of the Eye"; "A Handbook of the Refraction of the Eye, its Anomalies and their Correction" came from Charles D'A. Wright, M. D.; "Retinoscopy, or Shadow Test, in the Determination of Refraction at One Metre Distance, with the Plane Mirror" was by James Thorington, M. D.; and "Eye Strain in Health and Disease," by Ambrose L. Ranney, M. D. Alexander Duane proposed "A New Classification of the Motor Anomalies of the Eye," based on physiological principles, with the symptoms, diagnosis, and treatment. George G. Van Mater, M. D., was the author of "A Text-book of Veterinary Ophthalmology," and Clarence A. Veasey, M. D., of "A Manual of Ophthalmic Operations as practiced on Animals' Eyes." A fourth edition was sent out of "A Practical Treatise on Diseases of the Skin," by James Nevins Hyde, M. D., and Frank H. Montgomery, and a new edition of "The Ready Reference Handbook of Diseases of the Skin," by George T. Jackson, M. D. In Saunders's "New Aid Series" appeared a handbook of "The Diseases of Women," by John Bland Sutton, M. D., and Arthur E. Giles, M. D. Oscar Schaeffer supplied a "Hand Atlas and Essentials of Gynæcology"; Charles B. Penrose, a "Text-book of Diseases of Women"; J. Compton Burnett, M. D., a work on "Organic Diseases of Women, notably Enlargements and Displacements of the Uterus and Sterility, considered as Curable by Medicine"; a second revised edition of "A Text-book of the Diseases of Women," by Henry Jacques Garrigues, M. D., was published; Andrew F. Currier, M. D., made a special study of "The Menopause"; Charles Jewett, M. D., supplied "The Essentials of Obstetrics"; W. R. Dakin, M. D., "A Handbook of Midwifery"; and Edward P. Davis, M. D., "A Treatise on Obstetrics for Students and Practitioners." "Functional Disorders of the Nervous System in Women" were studied by T. J. McGillicuddy, M. D.; "A Practical Treatise on Sexual Disorders of the Male and Female," came from Robert Taylor, M. D.; and "A Practical Working Handbook in the Diagnosis and Treatment of Diseases of the Genito-Urinary System and Syphilis," from F. E. Doughty, M. D. Dr. Nicholas Senn wrote on "Tuberculosis of the Genito-Urinary Organs, Male and Female." "The History and Technique of the Vaginal Radical Operation" were set

forth by Leopold Landau, M. D., and Theodor Landau, M. D.; A. C. Butler Smythe published "A First Series of Fifty-four Consecutive Ovariectomies, with Fifty-three Recoveries"; Franklin H. Martin, M. D., "Lectures on the Treatment of Fibroid Tumors of the Uterus: Medical, Electrical, and Surgical"; to W. J. Stewart McKay we were indebted for "Lawson Tait's Perineal Operations, and An Essay on Curettage of the Uterus." J. W. White, M. D., and Edward Martin, M. D., were the joint authors of "A Text-book of Genito-Urinary Surgery." "A Treatise on the Surgery of the Alimentary Canal" was written by A. Ernest Maylard, and "A Clinical Text-book of Surgical Diagnosis and Treatment," by J. W. Macdonald, M. D. A seventh edition was made of "Elementary Bandaging and Surgical Dressing," by Walter Pyc, M. D., revised and in part rewritten by G. Bellingham Smith. The first two out of three volumes of "Outlines of Veterinary Anatomy," by O. Charnock Bradley, were devoted respectively to "The Limbs" and "The Trunk." "A Manual of Static Electricity in X-Ray and Therapeutic Uses" was contributed by S. H. Monnell, M. D.; a third edition, revised and enlarged, appeared of "Ptomaines, Leucomaines, Toxins, and Antitoxins," by Victor C. Vaughan, M. D., and F. G. Novy, M. D.; as did a fourth enlarged and revised edition of "Principles of Bacteriology," by A. C. Abbott, M. D. William Tebb and Edward Perry Vollu, M. D., discussed "Premature Burial and how it may be prevented," with special reference to trance, catalepsy, and other forms of suspended animation; "Anomalies and Curiosities of Medicine," being an encyclopædic collection of rare and extraordinary cases, by George Mead Gould, M. D., and Walter L. Pyle, M. D., was a work of rare interest; A. D. Waller, M. D., delivered the first series of "Lectures on Physiology" upon "Animal Electricity"; and from G. N. Stewart, M. D., we had "A Manual of Physiology with Practical Exercises." "Fads of an Old Physician," by George S. Keith, M. D., was intended as a sequel to "A Plea for a Simpler Life"; J. R. Hayes, M. D., told "How to Live Longer and why we do not Live Longer"; "A Physician in the House for Family and Individual Consultation" was supplied by J. H. Greer, M. D.; and "Practical Domestic Hygiene" was suggested by J. Lane Motter, M. D., and R. H. Firth. "Accidents and Emergencies," by Charles Winslow Dulles, M. D., a manual for the treatment of surgical and medical emergencies in the absence of a physician, went through a fifth revised and enlarged edition; S. Edwin Solly, M. D., published "Solly's Medical Climatology"; the "Year Book of Treatment for 1897" was issued; Rev. Charles Coppens declared "Moral Principles and Medical Practice" the basis of medical jurisprudence; William C. Alpeus described "The Pharmacist at Work"; and W. D. Woodburn wrote "On Extraction" of the teeth, with notes on their anatomy and physiology. "The Development of the Frog's Egg," by Thomas Hunt Morgan, was an introduction to experimental embryology; Charles Sedgwick Minot wrote on "Human Embryology"; and Martin L. Holbrook, M. D., on "Stirpiculture." "Infancy and Childhood" were the theme of Frances F. Wood in a practical manual for mothers; "The Human Flower," by Ellis Ethelmer, was a simple statement of the physiology of birth and the relation of the sexes; "What a Young Boy ought to know" was written for the "Self and Sex Series" by Sylvanus Stall, D. D.; and similar information for young girls was conveyed briefly in "Almost a Woman," by Mary Wood Allen, M. D. Vol. II of the second series of the "Index Catalogue of the Library of the Surgeon-General's Office, U. S. A.," covered B-Bywater.

Poetry.—No book of poems of commanding merit was sent out during 1897. From Harriet Prescott Spofford we had "In Titian's Garden, and Other Poems"; and from John B. Tabb, "Lyrics"; from Henry Jackson Van Dyke, Jr., "The Builders and Other Poems"; and from Bliss Carman, "Ballads of Lost Haven: A Book of the Sea." "Out of the Silence," was by John Vance Cheney; "The Rubáiyát of Doe Sifers," by James Whitecomb Riley, was illustrated by C. M. Relyea; and Robert Underwood Johnson published "Songs of Liberty and Other Poems." "In which Hearts lead" was a book of rhymes by John Leonard Merrill, Jr.; "Songs Ysame" were sung by Annie Fellows Johnson and Albion Fellows Bacon; O. C. Auringer published "The Book of the Hills"; and James Buckham, "The Heart of Life." Poems by Margaret E. Sangster were entitled "Easter Bells," and from M. Elizabeth Crouse we had "Vigiliæ." M. A. De Wolfe Howe contributed "Shadows"; W. Clayton Hopkins, "Rose Leaves"; and Ednah Proctor Clarke, "An Opal." "Once upon a Time, and Other Child Verses" were written by Mary E. Wilkins. "Poems now First Collected" of Edmund Clarence Stedman received a welcome, and Lew Wallace's two poems, "The Wooing of Malkatoon" and "Commodus," bound in one volume and illustrated by Du Mond and Weguelin, made one of the handsome holiday books. "The Island Lily" was an idyl of the Isles of Shoals, by Lillian Blanche Fearing; "The Dreamers, and Other Poems" came from Edward S. Van Zile; "Folly's Bells," a German legend, was put in verse by Anne Gardner Hale; "Way Songs and Wanderings," by Claiborne Addison Young, were illustrated by Ethelred B. Barry; and "The Old House, and Other Poems and Sketches" were written by Grace Duffie Boylan. "Echoes," by Josephine Curtis Woodbury, were decorated by Eric Pape; Clarence Army gathered "A Vintage of Verse"; Maximus A. Lesser caught "Echoes of Halcyon Days"; and Samuel Walter Foss related "Dreams in Homespun." Poems by Edward A. Jenks were entitled "The Spinning Wheel at Rest"; Robert W. Chambers published a book of ballads entitled "With the Band"; "The Death of Falstaff, and Other Poems" were by L. Bruce Moore; "Bells at Evening, and Other Verses" of Mrs. Frances Jane Crosby Van Alstyne were accompanied by a biographical sketch by Robert Lowry; "'Lady' Vere, and Other Narratives" and "Om: Mammon: A Spirit Song" were poetic contributions by L. M. Elshemus; "Chilhowee: A Legend of the Great Smoky Mountains," by Henry V. Maxwell, was illustrated from original drawings by Clara T. Gresham; while from William H. Drummond, M. D., we had "The Habitant, and Other French Canadian Poems," with an introduction by Louis Frechette, and from Charles G. D. Roberts "The Book of the Native"; and Richard Watson Gilder's "For the Country."

Political, Social, and Moral Science.—"This Country of Ours," by ex-President Benjamin Harrison, presents a view of the machinery of our National Government in motion. "Equality," by Edward Bellamy, was perhaps one of the most talked of books of the year, and its theories were met and answered in "Inequality and Progress," by George Harris; "Industrial Freedom," by David Macgregor Means, had an introduction by David A. Wells; and from Freeman Otis Willey we had a study of the vexed question of "The Laborer and the Capitalist." "The Workers: An Experiment in Reality—The East" was the record of the experiences of Prof. Walter A. Wyckoff in an attempt to support himself for two years as an unskilled workingman. "State Control of Trade and

Commerce by National or State Authority" was discussed by Albert Stickney: "The Study of City Government," by Delos F. Wilcox, was an outline of the problems of municipal functions, control, and organization; Frank Johnson Goodnow suggested "Municipal Problems"; and "A Bibliography of Municipal Administration and City Conditions" came from Robert C. Brooks. "A Political Primer of New York State and City (the City under the Greater New York Charter)" was written by Adèle M. Fielde. A commentary by Jesse Maey on the nature and growth of "The English Constitution" was the result of study and residence in London, and in the "Columbia University Studies" "English Local Government of To-day" was discussed by Milo Roy Maltbie. The "History of Economics" was written by Henry Dunning Macleod; "Outlines of Elementary Economics" were offered by Herbert J. Davenport; "Value and an Invariable Unit of Value" purported to be an important discovery in economics by William A. Whittiek; William C. Cornwell published "Sound Money Monographs"; and the history of the "Great Sound Money Parade in New York" was written and designed as a permanent record. Henry Crosby Emery wrote on "Speculation on the Stock and Produce Exchanges of the United States" for the "Columbia University Studies in History, Economics, and Public Law"; Thomas L. Greene discussed "Corporation Finance"; Vols. III and IV completed "A History of Banking in All Leading Nations," compiled by thirteen authors and edited by William Dodsworth; William Matthews Handy gave an impartial statement of "Banking Systems of the World"; and "Financial New York" was by William Ten Eyck Hardenbrook. "Double Taxation in the United States," by Francis Walker, was another of the "Columbia University Studies in History, Economics, and Public Law"; and "State Tax Commissions in the United States" were chronicled by James W. Chapman, Jr., in the "Johns Hopkins University Studies," another issue of which was "Daniel Raymond: An Early Chapter in the History of Economic Theory in the United States," by Charles Patrick Neill. "Economics and Jurisprudence" was by Henry Carter Adams; John J. Merrill was the author of "Merrill's Manual of the Taxation of Corporations by the State of New York for State Purposes"; "Prisons and Convicts," by Michael J. Cassidy, contained the observation and experience gained during thirty-seven years of continuous service in the administration of the Eastern State Penitentiary of Pennsylvania; William Dwight Porter Bliss edited "The Encyclopædia of Social Reform," including political economy, political science, sociology, and statistics, covering anarchism, charities, civil service, currency, land and legislation, reform, penology, socialism, social purity, trades unions, woman's suffrage, etc. Franklin H. Giddings was the author of "The Theory of Socialization," a syllabus of sociological principles for the use of college and university classes, while C. R. Henderson, D. D., discussed "The Social Spirit in America" for the "Chautauqua Reading Circle Literature." "Our Rival the Rascal," by Benjamin P. Aldridge and William B. Watts, claimed to be a faithful portrayal of the conflict between the criminals of this age and the defenders of society, the police, and "Crime and Criminals," by John Sanderson Christison, M. D., described various types of degenerates. "Woman and the Republic," by Mrs. Helen Kendrick Johnson, was an admirable presentation of the arguments against woman suffrage. Charles Fletcher Dole prophesied of "The Coming People" with inspiring optimism; Frederic Howard Wines and John Koren made an investigation of "The

Liquor Problem in its Legislative Aspects" under the direction of Charles W. Elliot, Seth Low, and James C. Carter; while "The Saloon Question in Chicago" was the theme of John E. George in "Economic Studies." "Girls who answer 'Personals'" was the title given to a second enlarged edition of Dr. Arthur MacDonald's sociologic and scientific study of young women entitled "Abnormal Woman" in its first imprint. "Anarchism," by E. V. Zenker, was at once a criticism and history of the anarchist theory; and from J. Wilson we had "Self-Control; or, Life Without a Master." "Revolutionary Tendencies of the Age" were reviewed anonymously as to their cause and ultimate aim. "The Hawaiian Incident," by J. A. Gillis, assumed to be an examination of Mr. Cleveland's attitude toward the revolution of 1893; Richard Harding Davis stated the case of "Dr. Jameson's Raiders vs. The Johannesburg Reformers"; and Mrs. John Hays Hammond wrote "A Woman's Part in a Revolution." Frederick Palmer described the "Going to War in Greece"; and Stephen Bonsal, Jr., set forth from observation "The Real Condition of Cuba To-day." The "Handbook of the American Economic Association, 1897" was issued, and among the publications of the American Academy of Political and Social Science must be mentioned "A Comparative Study of the State Constitutions of the American Revolution," by William Clarence Webster; "The Formation of the Greater New York Charter," by James W. Pryor; "The Philosophical Basis of Economics," a word to the sociologists, by Sidney Sherwood; "Silver in China and its Relation to Chinese Copper Coinage," by Talcott Williams; "Over-Nutrition and its Social Consequences," by Simon Nelson Patten; "The Shiftless and Floating City Population," by Dr. Edward T. Devine; "Political and Municipal Legislation in 1896," by Edward Dana Durand; "Crime and the Census," by Roland P. Falkner; "The George Junior Republic," by William I. Hall; "Concentration of Industry and Machinery in the United States," by E. Levasseur; "Problems of Political Science," by L. S. Rowe; "The Immigration Question," by Joseph H. Senner; "Administrative Centralization and Decentralization in England," by James T. Young; "Utility and Cost as Determinants of Value," by Charles Stroeve; "Values Positive and Relative," by W. G. L. Taylor; "Silver Free Coinage and the Legal Tender Decisions," by C. G. Tiedeman; "The First Apportionment of Federal Representatives in the United States," by Edmund James James; "Current Transportation Topics," and No. 2 of the same, embracing recent Supreme Court decisions, by Emory R. Johnson; "The Administration of Prussian Railroads," by B. H. Meyer; "Rousseau and the French Revolution," by Charles H. Lincoln; "The Political Philosophy of Aristotle," by Isaac Loos; "The Quantity Theory," by Prof. William Amasa Scott; "The High School System," by L. R. Harley; "New Academic Degrees at Paris," by C. W. Veditz; and "Genius, Fame, and the Comparison of Races," by Charles H. Cooley. Nos. 1 and 2 of "Occasional Papers of the American Negro Academy" were "A Review of Hoffman's 'Race Traits and Tendencies of the American Negro,'" by Kelly Miller, and "The Conservation of Races," by W. E. Burghardt Du Bois.

Science.—The popularizing of science goes on at a rapid rate, and many books of interest to the general reader were published during the year. "Volcanoes of North America" and "Glaciers of North America," by Israel Cook Russell, were intended as reading lessons for students of geography and geology; "A Handbook of Rocks for Use without the Microscope," by James Furman Kemp, contained a glossary of the names of rocks and of other

lithological terms; and Albert Huntington Chester prepared a "Catalogue of Minerals alphabetically arranged." "The History of Mount Mica and its Matchless Colored Tourmalines" was written by Augustus Choate Hamlin; "The Missouri River and its Utmost Source," by J. V. Brower, was a eurtailed narration of geologic, primitive, and geographic distinctions descriptive of the evolution and discovery of the river and its head waters; and a second, revised edition was issued of Gates P. Thurston's work upon "The Antiquities of Tennessee and the Adjacent States," which had new chapters and illustrations. "The Story of the Earth's Atmosphere" was written for the "Library of Useful Stories" by Douglas Archibald. Herbert A. Howe followed his "Study of the Sky" of last year with "Elements of Descriptive Astronomy," and we owe a "Star Atlas" to Winslow Upton. Vols. IX and X of Charles Sprague Sargent's work upon "The Silva of North America" appeared; "Familiar Features of the Roadside," by Ferdinand Schuyler Mathews, described the flowers, shrubs, birds, and insects so encountered, and contained 160 drawings by the author, as well as many of the songs of our common birds and insects; Caroline A. Creevey's "Flowers of Field, Hill, and Swamp" were illustrated by Benjamin Lander; William Whitman Bailey wrote on "New England Wild Flowers and their Seasons"; and Vol. II was published of "An Illustrated Flora of the Northern United States, Canada, and the British Possessions," by Nathaniel Lord Britton and Addison Brown, covering "Portulaca to Gentian." Charles Steadman Newhall illustrated fully "The Vines of North-eastern America" from original sketches. Frank Vineent compiled and edited "The Plant World: Its Romances and Realities" as a reading book of botany; Sadie F. Price prepared "The Fern Collector's Handbook and Herbarium," as an aid in the study and preservation of the ferns of Northern United States, including the district east of the Mississippi and north of North Carolina and Tennessee; Charles Reid Barnes's "Analytic Keys to the Genera and Species of North American Mosses," revised and extended by Frederic De Forest Heald, appeared in the "Bulletins of the University of Wisconsin, Science Series"; and from Margaret Warner Morley we had elementary lessons on "Flowers and their Friends" and "A Few Familiar Flowers." "Chapters on the Natural History of the United States" were written by R. W. Shufeldt, M. D.; John Sterling Kingsley was the author of "Elements of Comparative Zoölogy," while an "Elementary Zoölogy and Laboratory Guide" was the work of Henry E. Chapin, assisted by Louis J. Rettger. Parts XV and XVI of Vol. II of H. Nehrling's "North American Birds" appeared, also a second, revised edition of Robert Ridgway's "Manual of North American Birds." H. E. Parkhurst, the author of the "Birds' Calendar," gave us "Song Birds and Waterfowl"; Daniel Giraud Elliot devoted a sumptuous volume to "The Gallinaceous Game Birds of North America," including the partridges, grouse, ptarmigan, and wild turkeys; Charles B. Cory told us "How to know the Shore Birds (Limicolæ) of North America (South of Greenland and Alaska)," all the species being grouped according to size and color, and "How to know the Ducks, Geese, and Swans." "The Story of the Birds" was written by James Newton Baskett for "Appletons' Home Reading Books," edited by Hon. W. T. Harris, other issues of which were "Curious Homes and their Tenants," by James Carter Beard, and "The Halls of Shells," by Mrs. A. S. Hardy. John Burroughs contributed an introduction to "Bird Neighbors," by Neltjé Blanehan, which makes us acquainted with 150 birds commonly found in the gardens, meadows,

and woods about our homes; "Upon the Tree Tops," by Olive Thorn Miller (Mrs. Harriet Mann Miller), was illustrated by J. Carter Beard; "Bird-Craft," by Mabel Osgood Wright, went through a new cheaper edition; "Bird Life," by Frank M. Chapman, was intended as a guide to the study of our common birds; it contained 75 full-page plates and numerous text drawings by Ernest Seton Thompson, and appeared also in an edition in colors; "Citizen Bird" was the title given to scenes from bird life in plain English for beginners, by Mabel Osgood Wright and Elliott Coues; Charles Dixon wrote at length on "Curiosities of Bird Life"; and among the many delightful volumes which bring us near to Nature and her mysteries are especially to be noted "The Freedom of the Fields," by Dr. Charles Conrad Abbott, whose "Travels in a Tree Top" went through a new edition, the two forming "Abbott's Fireside and Forest Library"; "My Studio Neighbors" and "Eye Spy," by William Hamilton Gibson, both illustrated by the author; Ernest Ingersoll's "Wild Neighbors"; Cora Dillingham Pierson's "Among the Meadow People"; William Sloane Kennedy's "In Portia's Garden"; Clara Kern Bayless's "In Brook and Bayou; or, Life in the Still Waters"; and Clarence Moores Weed's "Stories of Insect Life" and "Life Histories of American Insects." "Insect Life," by John Henry Comstock, was intended as an introduction to Nature study and a guide for teachers, students, and others interested in out-of-door life, and Edward Knobel wrote of "Mosquitoes, Gnats, Crane Flies, Midges, and Flies of the Northern States" for the series of "Illustrated Guides in Natural History." Part XVII completed the third series of W. H. Edwards's work on "The Butterflies of North America." Samuel Hubbard Scudder prepared a "Guide to the Genera and Classification of the North American Orthoptera found North of Mexico." "Matka and Kotik: A Tale of the Mist Islands," by Dr. David Starr Jordan, made an eloquent plea for the fur seal; "The Story of Germ Life" was written by Herbert W. Conn for "Appletons' Library of Useful Stories"; Harriet Randolph offered "Laboratory Directions in General Biology"; and Robert Payne Bigelow prepared a "Syllabus of Lectures in Theoretical Biology" for the use of students in the Massachusetts Institute of Technology. "Life and Immortality; or, Soul in Plants and Animals" was discussed by Thomas G. Gentry, and "The Place of Death in Evolution," by Rev. Newman Smyth. The "Religions of Primitive Peoples" were the theme of Dr. Daniel Garrison Brinton in the series of "American Lectures on the History of Religions," and Clifford Howard made a study of "Sex Worship" in the same connection. "Totem Tales: Indian Stories Indian told" gathered in the great Northwest were compiled by W. S. Phillips, and Washington Matthews, M. D., collected and translated "Navaho Legends," accompanying them with an introduction, notes, illustrations, texts, interlinear translations, and melodies. "Some Unrecognized Laws of Nature," by Ignatius Singer and Lewis H. Berens, made an inquiry into the causes of physical phenomena with special reference to gravitation, and "Modes of Motion" were considered by Amos Emerson Dolbear, who also published "First Principles of Natural Philosophy." "The Argentaarium Papers, No. 1," by Stephen H. Emmens, contained some remarks concerning gravitation addressed to the Smithsonian Institution, the Académie des Sciences, the Royal Society, and all other learned bodies. "Telepathy and the Subliminal," by R. Osgood Mason, was an account of recent investigations regarding hypnotism, dreams, phantasms, and related phenomena, an explanation of which is

found by Dr. Louis Waldstein in "The Sub-Conscious Self." Alexander Melville Bell was an authority on "The Science of Speech." "The Theory of Electricity and Magnetism" was set forth in lectures on mathematical physics by Arthur Gordon Webster; Ludwig Boltzmann supplied a preface to Charles Emerson Curry's "Theory of Electricity and Magnetism"; Eric Gerard wrote also on "Electricity and Magnetism"; Charles A. Perkins drew up "Outlines of Electricity and Magnetism"; and Frederic W. Sanderson, "Electricity and Magnetism for Beginners." Charles Proteus Steinmetz and Ernest J. Berg were joint authors of "Theory and Calculation of Alternating Current Phenomena," and from Louis Bell we had "Electric Power Transmission," a practical treatise for practical men. Joseph S. Ames presented a "Theory of Physics"; Cargill G. Knott's "Physics" was an elementary text-book for university classes, more especially in medicine; and "Physics," by Le Roy C. Cooley, proved a student's manual for the study room and laboratory. William Abbott Stone wrote on "Experimental Physics," and Vol. III appeared of "The Elements of Physics," a college text-book, by Edward L. Nichols and William S. Franklin, being devoted to "Light and Sound." The former of the two authors also published "The Outlines of Physics." "Physical Problems and their Solution" were supplied by A. Bourgougnon. William A. Noyes wrote an "Organic Chemistry for the Laboratory"; Peter T. Austen made "Notes for Chemical Students"; a third edition was issued of Arthur A. Noyes's work on "Qualitative Chemical Analysis"; and C. J. T. Haussen discussed the "Reform of Chemical and Physical Calculations." In mathematics we had "Differential Calculus," by E. W. Bass, and "Plane and Solid Analytic Geometry," by Frederic H. Bailey and Frederic S. Woods.

To intellectual philosophy belong Prof. George Trumbull Ladd's "Philosophy of Knowledge," an inquiry into the nature, limits, and validity of human cognitive faculty; Prof. Borden Parker Bowne's "Theory of Thought and Knowledge"; "Psychology and the Psychosis: Intellect," by Denton Jaques Snider; and "Memory and its Cultivation," by F. W. Edridge Green, M. D., the last in the "International Scientific Series."

Sports and Pastimes.—To this department belong "Men I have Fished with," sketches of character and incident with rod and gun, by Fred Mathew (Kego-e-kay) and "Diomed: The Life, Travels, and Observations of a Dog," by John Sergeant Wise, who makes his English setter detail many sporting adventures. "Canoe Cruising and Camping," by Perry D. Frazer, appeared in the "Forest and Stream Library," while to the "Outing Library of Sport" belonged "Practical Training for Athletics, Health, and Pleasure," by Randolph Fairies, M. D., and "Athletic Sports" were discussed by D. A. Sargent, M. D., H. J. Whigman, Robert D. Wrenn, and others, in the "Out-of-Door Library." "The American Cricket Annual for 1897" completed the eighth year of this publication, and was compiled and edited by Jerome Flannery. "Sphinx Lore" was a collection of literary ingenuities and historical recreations, interspersed with charades, anagrams, and diagram and jingle puzzles, by Charlotte Brewster Jordan. "Evening Entertainments for Young People" were also contributed anonymously.

Theology.—It is a notable fact that two important books of the year falling under this department were written by women, "The Story of Jesus Christ: An Interpretation," by Elizabeth Stuart Phelps, and "The Open Mystery: A Reading of the Mosaic Story," by Mrs. A. D. T. Whitney. "Bases of Religious Belief, Historic and Ideal," an

outline of religious study, came from Charles Melven Tyler, D. D., and a philosophical discussion concerning the nature of the divine idea as a demonstrable reality, by Josiah Royce, Joseph Le Conte, M. D., G. H. Howison, and others, entitled "The Conception of God," appeared in the "Publications of the Philosophical Union of the University of California." Prof. George F. Wright set forth "Scientific Aspects of Christian Evidences," and "The New Apologetic" was the title given to five lectures on true and false methods of meeting modern philosophical and critical attacks upon the Christian religion, by Milton Spencer Terry, D. D. Prof. R. M. Wenley wrote on "Contemporary Theology and Theism"; George H. Trever, D. D., delivered six lectures entitled "Studies in Comparative Theology" before the students of Lawrence University, Appleton, Wisconsin, which were collected into a volume; "Immortality and the New Theodicy" was the theme of G. A. Gordon, D. D., in the Ingersoll Lectures before Harvard University, recently given; and Rev. J. W. Reynolds contributed an introduction to "The Supernatural," a rational view of the divine word and of the dual nature of man, by Katholikos. "The Claims of the Old Testament" were the theme of lectures delivered by Stanley Leathes, D. D., in connection with the sesquicentennial celebration of Princeton University, and Andrew Seth also delivered "Two Lectures on Theism" on the same occasion. John H. Barrows, D. D., delivered lectures on "Christianity the World-Religion" in India and Japan during 1896-'97, and John Bascom discussed "Evolution and Religion; or, Faith as a Part of a Complete Cosmic System." "The Will to Believe, and Other Essays in Popular Philosophy," came from William James. Lyman Abbott, D. D., published "The Theology of an Evolutionist," a companion volume to his "Christianity and Social Problems" and "The Evolution of Christianity"; George S. Merriam defined "The Chief End of Man" from the standpoint of an evolutionist; and Minot J. Savage, D. D., prescribed "Religion for To-day," in a series of collected sermons. "Reasons for the Higher Criticism of the Hexateuch" were given by Rev. Isaac Gibson; "The Old Testament under Fire" was upheld by Adolphus J. F. Behrends, D. D.; "Seven Puzzling Bible Books," by Dr. Washington Gladden, was a supplement to his former work, "Who wrote the Bible?" and from the same author we have a study of "Social Facts and Forces" and "The Christian Way: Whither it goeth, and how to go on." "Genesis and Modern Science" were shown to be nowise at variance by Warren R. Perce; "Primeval Revelation: Studies in Genesis I-VIII," were the theme of the Davies Lectures for 1896, by J. Cynddylan Jones; "The Divine Library," by Rev. John Paterson Smyth, gave suggestions how to read the Bible; while "Hints on Bible Study" were offered by Henry Clay Trumbull, Austin Phelps, Robert Ellis Thompson, and others. "The Prophetical Books of the Old Testament" were considered by John B. Gough Page, D. D., in the series of "Bible Handbooks for Young People"; Luther Tracy Townsend, D. D., examined "The Story of Jonah in the Light of Higher Criticism"; "Isaiah: A Study of Chapters I-XII" came from Rev. Hinckley Gilbert Mitchell; Dr. Edwin Wilbur Rice's "Commentary on the Gospel according to Matthew," in a new, enlarged edition, formed No. 4 of the "Green Fund Books"; and Marvin R. Vincent, D. D., contributed "A Critical and Exegetical Commentary on the Epistles to the Philippians and to Philemon" to the "International Critical Commentary Series," another issue of which was "A Critical and Exegetical Commentary on the Epistles to the Ephesians and Colossians," by Rev.

Thomas Kingsmill Abbott. "In Search of a Soul" was a series of essays in interpretation of the higher nature of man by Horatio W. Dresser; Eliza Burt Gamble wrote on "The God Idea of the Ancients; or, Sex in Religion." Goldwin Smith published "Guesses at the Riddle of Existence and Other Essays on Kindred Subjects," and Amos Kidder Fiske examined "The Myths of Israel." In this connection may be mentioned also "The Lord's Day—or Man's?" a public discussion between Byron Sunderland, D. D., and W. A. Croffut, Ph. D., at Washington, D. C., reprinted from the columns of the Washington "Post." "The Christ of God: The Rationale of the Deity of Jesus Christ" was the subject of seven sermons by Charles H. Mann; "The Facts and the Faith" was a study in the rationalism of the Apostles' Creed, by Beverley Ellison Warner, D. D.; and "Forty Dollars and the Boots; or, Shall we not abolish our Apostles' Creed" was the somewhat striking title of a work on the same subject by Charles A. Piddock. "An Introduction to the Life of Jesus," by Alfred Williams Anthony, made an investigation of the historical sources. "Christ's Temptation and Ours" was the subject of the Baldwin Lectures for 1896, by Bishop Arthur C. A. Hall; "Coehem's Life of Christ," written two hundred years ago, was adapted by the Rev. Bonaventure Hammer; "Christianity an Idealism," by Rev. John Watson, examined the Christian ideal of life in its relations to the Greek and Jewish ideals and to modern philosophy, and formed one of the "Publications of the Philosophical Union of the University of California," going, however, through a second, enlarged edition before the close of the year. From Dr. Louis Albert Banks we had a volume on "The Christ Brotherhood"; from Dr. Theodore Thornton Munger, "Character through Inspiration, and Other Papers"; from Bishop William E. McLaren, "The Practice of the Interior Life"; and from Ralph Waldo Trine, "In Tune with the Infinite; or, Fullness of Peace, Power, and Plenty." "Personal Friendships of Jesus" were the theme of James Russell Miller, D. D.; James Morris Whiton offered "Reconsiderations and Re-enforcements"; Lenten readings were selected chiefly from unpublished manuscripts of Phillips Brooks, by William M. L. Jay, and entitled "The More Abundant Life"; Bishop Hugh Miller Thompson sent out "More Copy," a second series of essays from an editor's drawer on religion, literature, and life; Milton Valentine, D. D., propounded "Theoretical Ethics"; "Faith and Fellowship" was the title of a volume of sermons by John Cuckson; and from William Carlos Martyn we had a manual of "Christian Citizenship." A second series of "Herald Sermons" was received from Rev. George Hughes Hepworth; "The Golden Passional and Other Sermons" were by Dr. James Burrell; "In this Present World" was yet another volume by Dr. George Hodges; "Great Moments in the Life of Paul" were the theme of a series of lecture-sermons by Edgar Whittaker Work; and William H. Sallmon edited "The Culture of Christian Manhood: Sunday Mornings in Battell Chapel, Yale University." Ten lectures on "Christian Worship" were delivered in the Union Theological Seminary, New York, in the autumn of 1896, by Charles Cuthbert Hall, D. D., Alexander Viets Griswold Allen, D. D., Egbert Coffin Smith, D. D., and others, and "Common-Sense Christianity" consisted of many of "The Congregationalist articles of Alonzo Hall Quint, D. D., selected and arranged by Wilder D. Quint. Dr. Ezra Hoyt Byington, the author of "The Puritan in England and New England," published 19 sermons upon "The Christ of Yesterday, To-day, and Forever" and other texts;

from Edward W. Worthington we had "Ember Days and Other Papers"; and Archibald Campbell Knowles made an argument for the observance of "A Layman's Lent." "Mischievous Goodness and Other Papers" were by Dr. Charles A. Berry. Vol. III of "Miscellanies of Rev. Thomas E. Peck, D. D., contained "Notes on the Acts of the Apostles, and Briefs and Sermons," selected and arranged by T. C. Johnson, D. D., with a biographical sketch of Dr. Peck, by C. R. Vaughan, D. D. Vol. I of "A History of the Christian Church," by George H. Dryer, D. D., covered the period "Founding of the New World, 1-600 A. D.," and Vol. II, "The Preparation for Modern Times, 600-1517"; a "History of the Christian Church," in two volumes, was written by John Fletcher Hurst for the "Library of Biblical and Theological Literature"; "A History of Christianity in the Apostolic Age," by Arthur Cushman McGiffert, appeared in the "International Theological Library," another issue of which was "Christian Institutions," by Dr. A. V. G. Allen. "The Age of the Renaissance," by Paul Van Dyke, and "The Anglican Reformation," by William Clark, belonged to the "Ten Epochs of Church History Series," while in the "American Church History Series" we had "A History of American Christianity," by Leonard Woolsey Bacon. "Two Studies in the History of Doctrine," by Benjamin B. Warfield, D. D., were respectively devoted to Augustine and the Pelagian controversy, and the development of the doctrine of infant salvation; and Dr. Albert H. Hall wrote "A History of Antipædobaptism from the Rise of Pædobaptism to A. D. 1609." "Leo XIII at the Bar of History," by Dr. Randolph Harrison McKim, was a discussion of the papal plan for Christian unity; "Leo XIII and Anglican Orders" were the theme of Dr. Thomas Riehey; and John Bleeker Miller discoursed of "Leo XIII and Modern Civilization." "Papers, Addresses, and Discussions at the Seventeenth Church Congress (Protestant Episcopal Church) in the United States," held in Norfolk, Va., in November, 1896, were collected into a volume; and a "Memorial Volume of the Westminster Assembly, 1647-1897" was also issued. "A History of Methodism in the United States" was written by James Munroe Buekley in two volumes, and a "Larger Catechism of the Doctrines, History, and Polity of the Methodist Protestant Church" was framed by John Scott, D. D. A new issue was made of "Congregationalists in America," by Dr. Albert E. Dunning, first published in 1894; "The Roman Catholic Church in the United States," by T. O'Gorman, D. D., appeared in the "American Church History Series"; Justin A. Smith, D. D., wrote "A History of the Baptists in the Western States East of the Mississippi"; and Daniel Berger, a "History of the Church of the United Brethren in Christ." Frederick W. Conrad, D. D., prepared a "Lutheran Manual and Guide," containing a historical sketch of the Evangelical Lutheran Church. A "Sequel to 'Our Liberal Movement'" came from the Unitarian divine Joseph H. Allen. "The Message and the Messengers" was the title of lessons from the history of preaching by Fleming James, D. D.; "The Ministry to the Congregation" of lectures on homilies, by John A. Kern, D. D.; "Cardinal James Gibbons gave an eloquent pen portrait of "The Ambassador of Christ"; "In Pulpit and Parish" consisted of the Yale lectures on preaching by Nathaniel J. Burton, D. D.; Nehemiah Boynton, D. D., delivered three addresses on "Real Preaching" to the students of Oberlin; Rev. James Mann presented twenty different "Clerical Types"; and William Stang, D. D., outlined "Pastoral Theology." An "Illustrated Explanation of the Prayers and Ceremonies of the Mass," by D. I. Lan-

slots, had a preface by F. Janssens, D. D.; "The Story of the Prayer-Book" was written by William A. Leonard; "Prayers Ancient and Modern" were selected and arranged for daily reading by Mrs. Mary Wilder Tileston, the editor of "Daily Strength for Daily Needs"; J. Aspinwall Hodge, D. D., described "The Ruling Elder at Work"; and "Modern Methods in Church Work" were reviewed by Rev. George Whitfield Mead. Richard T. Ely wrote on "The Social Law of Service" for the "Epworth League Reading Course"; Archbishop John Ireland delivered lectures and addresses on "The Church and Modern Society"; and William Bayard Hale made a plea for social submission to Christ, entitled "The New Obedience." Edwin Munsell Bliss, D. D., vouchsafed "A Concise History of Missions"; Vol. I was issued of two which will contain a sociological study of foreign "Christian Missions," by James Shepard Dennis, D. D.; and "After Fifty Years" was an historical sketch of the Guntur mission of the Evangelical Lutheran Church, by Rev. L. B. Wolf. "New England's Struggles for Religious Liberty" were gone over by David Barnes Ford, and Henry Melville King attempted to refute the argument of Dr. William H. Whittitt concerning "The Baptism of Roger Williams." Mary E. Mixer edited a "History of Trinity Church (Buffalo)," and Vol. II appeared of "Annals of King's Chapel, from the Puritan Age of New England to the Present Time," by Henry Wilder Foote. "The Bible and Islam; or, The Influence of the Old and New Testaments on the Religion of Mahomet" were the theme of the Ely Lectures for 1897, by Dr. Henry Preserved Smith; and in the little "What is Worth While Series" we had "The Soul's Quest after God," by Dr. Lyman Abbott; "The Christ-Filled Life," by Dr. Charles Cuthbert Hall; "Ships and Havens," by Dr. Henry Jackson Van Dyke; "By the Still Waters," a meditation on the Twenty-third Psalm, by Dr. James Russell Miller; "Heavenly Recognition," by Rev. Thomas De Witt Talmage; and "Giving what we Have," by Anna Robertson Brown Lindsay. "The Great Poets and their Theology" were examined by Augustus Hopkins Strong, D. D., and "The Conservative Principle in our Literature," an address delivered and printed fifty years ago by William R. Williams, D. D., was reissued as bearing on present-day conditions. "Thoughts from the Mount of Blessing" were published by Mrs. Ellen G. White (formerly Ellen Harmon); Ida C. Craddock dwelt upon "The Heaven of the Bible"; Rev. William P. Patterson spoke "A Heartening Word for Mr. Fearing"; Rev. Davis Waggatt Clark compiled 309 tributes to the Bible "From a Cloud of Witnesses"; Silas Framer marshaled "Champions of Christendom"; "Voices of Doubt and Trust" were selected by Volney Streamer; and Rose Porter compiled "The Pilgrim's Staff; or, Daily Steps Heavenward by the Pathway of Faith," a yearbook. "The House of Dreams" was an anonymous allegory; "John and I and the Church" was, of course, by Elizabeth Grinnell; "Sermon Stories for Boys and Girls," by Dr. Louis Albert Banks, had initial illustrations by Freeland A. Carter; Richard Green Moulton edited Vols. XI to XVI, inclusive, of "The Modern Reader's Bible"; "Torch Bearers of Christendom" were chronicled in the "Epworth League Reading Course," by Dr. Robert R. Doherty; and "Select Notes," a commentary on the International Sunday School Lessons for 1898, being the twenty-fourth volume, came from F. N. Peloubet, D. D., and M. A. Peloubet. Elizabeth Louisa Foote prepared a brief manual for "The Librarian of the Sunday School." The "Proceedings of the First National Council of Jewish Women," held Nov. 15-19, 1896, were also given to the world.

Unclassified.—"The History of our Navy," from its origin to the present day (1775-1897), by John R. Spears, filled four profusely illustrated volumes. Eight papers by Alfred Thayer Mahan, on "The Interest of America in Sea Power, Present and Future," were collected from the magazines in which they originally appeared. "The Steam Navy of the United States," a history of the growth of steam vessels of war in the United States navy and of the Naval Engineer Corps, came from Frank M. Bennett. Edmund L. Bates was the author of a "Manual of Physical Drill United States Army," and William D. Beach of "Military Map Reading, Field, Outpost, and Road Sketching" for noncommissioned officers. The official history of "The Cotton States and International Exposition and South" was written by Walter G. Cooper and indorsed by the president and director general of the Exposition. "Getting Gold" was a practical treatise for prospectors, miners, and students, by J. C. F. Johnson, which appeared opportunely; Edward Hull examined "Our Coal Resources at the Close of the Nineteenth Century"; John A. Allen supplied "Tables for Iron Analysis"; Herbert Lang devoted a volume to "Matte Smelting"; and N. W. Lord another to "Notes on Metallurgical Analysis." "Elements of Mechanics," including kinematics, kinetics, and statics, by Thomas Wallace Wright, contained applications also; Stillman Williams Robinson set forth "Principles of Mechanism"; William Barnet Le Van treated of "The Practical Management of Engines and Boilers"; Cecil Hobart Peabody and Edward F. Miller were the joint authors of a work on "Steam Boilers"; "Slide Valves" occupied the attention of C. W. MacCord, Jr.; Bryan C. Bartley was the author of the "Marine Engineer's Record Book—Engines"; and a second revised and enlarged edition was issued of Bryan Donkin's "Gas, Oil, and Air Engines." "Shop and Road Testing of Dynamos and Motors" came from John C. Shedd and Eugene C. Parham. William E. Langdon treated of "The Application of Electricity to Railway Working"; Philip Dawson, of "Electric Railways and Tramways"; and E. Tremlett Carter of "Motive Power and Gearing for Electrical Machinery"; W. J. Johnson's "Electrical and Street Railway Directory for 1897" contained lists of electric-light central stations, isolated plants, street railways (electric, horse, and cable), telegraph companies, etc.; E. E. Russell Tratman published "Railway Track and Track Work"; a fifth revised and enlarged edition appeared of William Jasper Nicholls's book "The Railway Builder"; James Glover drew up "Formulas for Railway Crossings and Switches"; and William L. Derr offered a practical manual of "Block Signal Operation." In the "Bulletins of the University of Wisconsin, Engineering Series," we had "Topographical Surveys: Their Methods and Value," by J. L. Van Ornum, and "Comparative tests of Steam Injectors," by George H. Trautmann. "The Materials of Construction" was a treatise for engineers on the strength of engineering materials, by John B. Johnson; Harry Huse Campbell wrote on "The Manufacture and Properties of Structural Steel"; Charles W. Wright and Charles B. Wing prepared "A Manual of Bridge Drafting"; and Charles H. Wright was heard from on "The Designing of Draw Spans." "Hydraulic Cement" had its properties, testing, and use examined by Frederic P. Spalding; "Specifications," a practical system for writing specifications for buildings, by William F. Bower, was excellent in conception and execution; and I. P. Hicks supplied a comprehensive treatise on "Architectural Drawing for Mechanics." Mansfield Merriman wrote a text-book on "The Strength of Materials"

for manual-training schools; Francis C. Moore told "How to Build a Home: The House Practical"; the first of five parts which will contain "The Universal Carpenter and Joiner and Wood Worker's Assistant," compiled and edited by Frederick T. Hodgson was issued; "One Hundred and Fifteen Experiments on the Carrying Capacity of Large Riveted Metal Conduits up to Six Feet per Second of Velocity of Flow" were recorded by Clemens Herschel; and Freeman C. Coffin offered "The Graphical Solution of Hydraulic Problems treating of the Flow of Water through Pipes, in Channels and Sewers, over Weirs, etc." The principles and practice of "Sanitary House Drainage" came from T. E. Coleman, and "Sewer Flushing Diagrams" from S. H. Adams. "Water and Public Health," by James H. Fuertes, examined the relative purity of waters from different sources; D. B. Dixon compiled "The Mechanical Arts simplified," a work of reference; Thomas B. Stillman wrote on "Engineering Chemistry"; and Guilford L. Spencer was the author of "A Handbook for Chemists of Beet-Sugar Houses and Seed-Culture Farms." Three volumes of "Principles and Practice of Agricultural Chemical Analysis," by Harvey W. Wiley, were devoted respectively to "Soils," "Fertilizers," and "Agricultural Products"; a seventh revised and enlarged edition was issued of Francis Humphreys Storer's "Agriculture in Some of its Relations with Chemistry"; Isaac Phillips Roberts wrote on "The Fertility of the Land"; and Liberty Hyde Bailey on "The Principles of Fruit Growing" for the "Rural Science Series"; and the latter author also contributed "The Forcing Book," a manual of the cultivation of vegetables in glass houses to the "Garden Craft Series." The twentieth edition of "The American Fruit Culturist," by John J. Thomas, was revised and enlarged by William H. S. Wood, and illustrated with nearly 800 accurate figures; "Tobacco Leaf: Its Culture and Cure, Marketing and Manufacture" was a practical handbook by J. B. Killebrew and Herbert Myrick; and John B. Smith sent out an "Economic Entomology." Mrs. Lizzie Page Hillhouse told of "House Plants and how to Succeed with them"; William Tricker gave directions for "The Water Garden"; and N. Jönsson Rose illustrated his own work on "Lawns and Gardens." Herbert Myrick edited "Turkeys and how to Grow them." Harry Snyder investigated "The Chemistry of Dairying," while "Testing Milk and its Products" was a manual for dairy students, creamery and cheese-factory operators, and dairy farmers, by Edward H. Farrington and Frederic W. Woll. George Perkins Merrill published "Rocks, Rock Gathering, and Soils," and a second edition was sent out of his "Stones for Building and Decoration." "The Chemistry of Pottery" was a useful contribution by K. Langenbeck. "The Story of the Cowboy," by E. Hough, continued the "Story of the West Series," and was illustrated by W. L. Wells and C. M. Russell; and "The Squirrel Hunters of Ohio; or, Glimpses of Pioneer Life" came from N. E. Jones, M. D. Z. W. Pease told of the rescue of the Irish Fenian prisoners by means of "The Catalpa Expedition," and "An American Transport in the Crimean War," by John Codman, had an introduction by John C. Ropes. William Starling gave a brief account of "The Floods of the Mississippi River," their causes and effects, and also of the levee system and other means proposed and tried for the control of the river, with a particular account of the great flood of 1897; "Notes on the Nicaragua Canal" were made by Henry L. Sheldon; and "Fighting a Fire," the spirited description of the technique of the fire department, by Charles T. Hill, was illustrated from drawings made by the author. "A Century of Lotteries in

Rhode Island, 1744-1844," with 41 facsimile illustrations of tickets and sundry documents, by John H. Stiness, formed No. 3 of the second series of "Historical Tracts" of that State. "Crucifixion," by John H. Osborne, gave an historical account of that method of punishment by the Romans, with special reference to that of Christ. Books of practical use include: "Punctuation," by F. Horace Teall; "Why we Punctuate; or, Reason *vs.* Rule in the Use of Marks," by an anonymous journalist; "Modern Bookkeeping: Single and Double Entry," by James L. Montgomery; "The Self-Proving Accounting System," by A. O. Kittredge and J. F. Brown; and "An Elementary Treatise on the Metric System of Weights and Measures," by James Hamlin Smith. Vol. II of "Cotton Spinning," by William Scott Taggart, was issued; C. F. Seymour Rothwell was an authority on "The Printing of Textile Fabrics"; and "Bleaching and Calico Printing" were handled by George D. Duerr and William Turnbull. "The Polarizing Photochronograph" was an account of experiments at the United States Artillery School, Fort Monroe, Va., in developing this instrument, by Albert Cushing Crehore and George Owen Squier; and W. I. Lincoln Adams edited "Sunlight and Shadow," a book for photographers, amateur and professional. "Incompatibilities in Prescriptions" were exposed by E. A. Ruddiman, and A. Emil Hiss was the author of the "Standard Manual of Soda and Other Beverages," a treatise especially adapted to the requirements of druggists and confectioners. For housekeepers there was a course of lectures on "Household Economics," given before the School of Economics of the University of Wisconsin, by Mrs. Helen Campbell; "Instruction in Cooking," with selected receipts, by Mrs. John W. Cringan; and a special edition of "The Century Cook Book and Home Physician," by Jennie N. Hensley and N. T. Oliver, M. D. "The Cook Book of 'Oscar' of the Waldorf" was an expensive volume. "Beauty and Hygiene" were the subject of an anonymous volume; Dorothy Quigley explained "The Way to keep Young," and told "What Dress makes of us"; and Jessica Ortner gave hints on "Practical Millinery." "The Army Mule and Other War Sketches," by Henry A. Castle, contained also James Whitcomb Riley's stories of the humorist Bill Nye, as reported in an interview by Russell M. Seeds; "The Teacup Club," by Eliza Armstrong, satirized the overrapid progress of woman; and among the minor types of wit are to be mentioned "Mr. and Mrs. Hannibal Hawkins," by Belle C. Greene, and "Betsey Jane on the New Woman," by Herbert E. Brown. "Street Types of Great American Cities" consisted of reproductions of 46 photographs, with descriptions by well-known authors, for which we are indebted to Sigmund Krausz. "The Art of Conversing" came from the author of "Manners and Rules of Good Society," and Mrs. Humphry (Madge) suggested "Manners for Men." Frank Podmore made "Studies in Psychical Research"; Anna W. Mills published "Practical Metaphysics for Healing and Self-Culture"; and Harriet B. Bradbury set forth "The Philosophy of Health," a study of the science of spiritual healing and the philosophy of life. H. Martyn Hart, D. D., in "A Way that seemeth Right" made an examination of Christian Science; Horace Fletcher contributed to the "Menticulture Series" "Happiness as found in Forethought Minus Fearthought"; and Ursula N. Gestefeld told "How we Master our Fate." "Hours with the Ghosts; or, Nineteenth Century Witchcraft" consisted of illustrated investigations into the phenomena of spiritualism and theosophy, by Henry Ridgely Evans. "A Catechism of Palmistry" came from Ida Ellis; "Human Magnetism," by James Coates, told how to hypnotize; and Albert

A. Hopkins compiled and edited "Magic Stage Illusions and Scientific Diversions." Lulu Hurst, the Georgia wonder, now Mrs. Paul Atkinson, wrote her "Autobiography," and for the first time explained and demonstrated the great secret of her marvelous powers. Vol. II appeared of "The Commercial Yearbook," edited by Walter A. Dodsworth; "Commercial Precedents," selected from the columns of replies and decisions of the New York "Journal of Commerce," with selected decisions from other sources, were the work of Charles Putzel and H. A. Bähr; and "Fowler's Publicity" was an encyclopædia of advertising and printing and all that pertains to the public-seeing side of business, by Nathaniel C. Fowler, Jr. The "Handbook of the New Library of Congress" was compiled by Herbert Small, and contained essays on the architecture, sculpture, and painting, by Charles Coffin, and on the function of a national library, by Ainsworth R. Spofford. Works of reference published during the year included Part V of the "American Catalogue, 1890-'95," completing that work, originally founded by Frederick Leyboldt, and compiled under the editorial direction of R. R. Bowker; "The Annual Literary Index, 1896," by William I. Fletcher and R. R. Bowker; the third supplement to "Poole's Index to Periodical Literature," compiled by William I. Fletcher and Franklin O. Poole, covering from Jan. 1, 1892, to Dec. 31, 1896; "American Book Prices Current for 1897," compiled by Luther S. Livingston, a record of books, manuscripts, and autographs sold at auction in New York, Boston, Philadelphia, Chicago, Cincinnati, and other cities in a limited edition; the "New American Supplement to the Latest Edition of the 'Encyclopædia Britannica,'" in 5 volumes, edited by Day Otis Kellogg; and Vol. XX of "Appletons' Annual Cyclopædia, 1895."

Voyages and Travels.—Several Americans who traveled in Europe during 1897 made a pleasing record of their experience. F. Hopkinson Smith described "Gondola Days," passed in Venice, of course, which he also illustrated; William Agnew Paton spent three months in "Picturesque Sicily," while John A. Logan, Jr., saw things in a promising light "In Joyful Russia." Laura D. Nichols spent "A Norway Summer"; William Bement Lent took a journey "Across the Country of the Little King"; and Mary F. Nixon also spent an entertaining time "With a Pessimist in Spain." Fanny B. and William H. Workman took "Sketches Awheel in Modern Iberia," and Adelaide S. Hall and Mrs. L. P. Miller were "Two Women Abroad with Notebook and Camera." Tighe Hopkins explored "The Dungeons of Old Paris." "Hired Furnished: Being Certain Economical Housekeeping Adventures in England," by Margaret B. Wright, was suggestive to those wishing to see much on a limited amount for expenditure, somewhat in line with which was "Going Abroad? Some Advice," by Robert Luce. From D. O. Russell we had "Beauties and Antiquities of Ireland," a tourist's guide. "The Ruins and Excavations of Ancient Rome" was an indispensable companion book for students and travelers, and was from the pen of Rodolfo Amédée Lanciani, while from Laurence Hutton we had "Literary Landmarks of Rome" as well as "Literary Landmarks of Florence." Paul Eve Stevenson chronicled "A Deep-Water Voyage" from New York around the Cape of Good Hope to Calcutta. "An Artist's Letters from Japan," by John La Farge, gave charming pictures of that attractive land, and from R. B. Peery we had "The Gist of Japan." Lucia A. Palmer described "Oriental Days," and Mrs. Margaret Pennington supplied "A Key to the Orient." Two volumes contained "Nippur; or, Explorations and Adventures

CLASSIFICATION.	1896.		1897.	
	New books.	New editions.	New books.	New editions.
Fiction	1,012	102	713	156
Law	507	46	474	35
Theology and religion	425	35	447	45
Literary history and miscellany ..	667	15	261	154
Education and language	431	38	395	36
Juvenile	293	26	319	50
Poetry	284	9	180	67
History	241	37	189	49
Biography, memoirs	180	29	193	12
Political and social science	270	14	175	21
Physical and mathematical science	136	26	166	22
Description, travel	154	36	149	20
Medical science, hygiene	119	48	129	24
Fine arts and illustrated books ..	166	11	108	31
Useful arts	112	27	96	14
Mental and moral philosophy	45	4	70	6
Domestic and rural	58	3	52	5
Sports and amusements	65	7	38	5
Humor and satire	24	1	17	5
Totals	5,189	514	4,171	757
		5,189		4,171
		5,703		4,928

on the Euphrates," by John Punnett Peters, D. D., the narrative of the University of Pennsylvania expedition to Babylon in the years 1888-'90, divided into two campaigns. "The City of the Caliphs," a popular study of Cairo and its environments and the Nile and its antiquities, by Eustace A. Reynolds Ball, was illustrated from photographs, and fiction combined pleasantly with description in "A Dog of Constantinople," by Mrs. Izora C. Chandler. From William Edgar Geil we had a volume upon "The Isle that is called Patmos." Eliza Ruhamah Scidmore visited "Java, the Garden of the East"; Maxwell Sommerville, "Siam on the Meinam"; and Poultney Bigelow, "White Man's Africa," which R. Caton Woodville illustrated with the aid of photographs. John R. Musick anticipated the treaty of annexation with "Hawaii: Our New Possessions," an expensive volume, and Michael Myers Shoemaker described "Islands of the Southern Seas: Hawaii, Samoa, New Zealand, Tasmania, Australia, and Java." Mary Eleanor Barrows edited "A World Pilgrimage," made in 1896-'97 by John H. Barrows, D. D. In quite another vein Mark Twain (Samuel Langhorne Clemens) told of his adventures in "Following the Equator; A Journey around the World." "The Romance of Discovery," by William Elliot Griffis, D. D., recording a thousand years of exploration and the unveiling of continents, was illustrated by Frank T. Merrill. "The Land of the Montezumas" came from Cora Haywood Crawford. "The Old Santa Fé Trail," by Henry Inman, had eight full-page illustrations by Frederic Remington, and was full of tales of Indian life and adventure, and of the days of the Mexican War. Ira Nelson Morris went "With the Trade Winds" on a jaunt in Venezuela and the West Indies, and from Richard Harding Davis we had "A Year from a Reporter's Notebook" and "Cuba in War Time." George Bronson Rea supplied "Facts and Fakes about Cuba." "On the Indian Trail" was the title of stories of missionary work among the Cree and Saulteaux Indians, by Egerton Ryerson Young. The Klondike excitement gave rise to numerous books on Alaska, most of them slight in form and containing not too much in the way of information for prospectors. Among them are to be noted "Golden Alaska," by Ernest Ingersoll; "Klondike: A Manual for Gold Seekers," by Charles A. Bramble; "The Gold Fields of the Klondike," by John W. Leonard; "Klondyke Facts," by Joseph Ladue; "The Little Klondike

Nugget," compiled by Max Maury; "Klondike, the Land of Gold," by Charles F. Stansbury; "Klondike and all about it," and the "Official Guide to the Klondyke Country and the Gold Fields of Alaska," both last anonymous. In conclusion we have "Romance and Reality of the Puritan Coast," by Edmund H. Garrett, with many little picturings, authentic or fanciful, and "Walks and Rides in the Country round about Boston," by Edwin Munroe Bacon, covering thirty-six cities and towns, parks, and public reservations within a radius of twelve miles from the Statehouse.

The table on p. 465 gives the figures of book production during 1897, as compared with that of 1896, from the columns of the "Publishers' Weekly."

LITERATURE, BRITISH, IN 1897. In this year 7,926 books were published in England, an increase of 1,353 over the 6,573 recorded in 1896; and of this number 6,244 were new books and 1,682 new editions.

Theological works showed a marked increase in numbers, as did educational works, works of history and biography, poetry and the drama, as well as yearbooks and volumes of *belles-lettres*, but the greatest increase by far was in the department of fiction, 300 more new novels having been published than in 1896, so that on an average 38 a week were sent from the press, while 200 more new editions were also published than saw the light the preceding year. In our own country 657 volumes represented the total output of works of fiction, including new editions, by American authors. These figures in both countries cover juvenile books. In the department of biography, in particular, notable additions were made to the lasting literature of Great Britain.

Biography.—The jubilee year gave rise to numerous biographies of the Queen, who both in her regal office and in her womanhood occupies the most commanding position at the close of the century. Among them may be noted "Sixty Years a Queen," by Sir Herbert Maxwell, illustrated; "The Personal Life of Queen Victoria," by Mrs. Sarah A. Tooley, and "The Private Life of the Queen," by "one of her Majesty's servants," C. Arthur Pearson; "Queen Victoria: Her Sixty Years' Reign and Diamond Jubilee," by Charles Morris; "Queen Victoria," by R. R. Holmes, illustrated, and a new edition of "The Life of Queen Victoria," by Mrs. M. G. Fawcett. Perhaps the most important book published in England during the year, certainly the most eagerly expected and warmly welcomed, was "Alfred Tennyson: A Memoir," by his son, Lord Hallam Tennyson, in two volumes, with photogravure portraits, facsimiles of portions of poems, and illustrations by Mrs. Allingham, Richard Doyle, Biscombe Gardner, etc. Written by the desire of the poet, and with the fullest sympathetic insight, it is a filial tribute of an unusual order. To literary biography belong also "The Letters of Elizabeth Barrett Browning," edited, with biographical additions, by Frederick G. Kenyon, in two volumes, full of the subtlest charm, and "The Life of Ernest Renan," by Madame James Darmesteter, which received the highest encomiums. Yet another of the books which make the year a red-letter one was the posthumous "Annals of a Publishing House: William Blackwood and his Sons, their Magazine and Friends," of which only the first two volumes were completed, by Mrs. Margaret O. W. Oliphant. "The Romance of Isabel Lady Burton" was the title given to the story of her life told in part by herself and in part by W. H. Wilkins, in connection with which must be mentioned "The True Life of Captain Sir Richard F. Burton," by his niece, Georgiana M. Stisted, with the authority and approval of the Burton family. "William Morris:

His Art, his Writings, and his Public Life," by Aylmer Vallance, contained 40 half-tone reproductions of designs by Morris, and from Temple Scott we had "A Bibliography of the Works of William Morris." William Carew Hazlitt gave new particulars and new material concerning "The Lambs: Their Lives, their Friends, and their Correspondence," and Stephen Wheeler edited "Letters and Unpublished Writings of Walter Savage Landor." "The Brontës in Fact and Fiction" contained further information on that remarkable family, vouchsafed by Angus Mackay, while from Sir William Wilson Hunter we had "The Thackerays in India, and Some Calcutta Graves," which derives its interest chiefly from the "culminating genius" of the family, the distinguished novelist. "Letters of Dante Gabriel Rossetti to William Allingham, 1854-1870" were edited by George Birkbeck Hill, who also arranged and edited "Johnsonian Miscellanies," in two volumes. An event of the deepest interest to scholars was the final issue of "The Unpublished Works of Edward Gibbon," printed *verbatim* from manuscripts in the possession of the Earl of Sheffield, who contributed a preface to the three volumes, which contained respectively "The Six Autobiographies" (from which the well-known autobiography of Gibbon was largely compiled), edited by John Murray, and "Gibbon's Private Letters to his Father, his Stepmother, Lord Sheffield, and Others, from 1735 to 1794," edited with notes, etc., by Rowland E. Prothero. "Recollections of Aubrey de Vere," going back some sixty years, were filled with delightful details of the literary life and men of the period, while the personality of the author was revealed by suggestion only; "Notes from a Diary, 1851-1872," of Sir Mountstuart Elphinstone Grant Duff, in two volumes, was another of the attractive autobiographies published during the year, full of anecdote, as was "A Passing World," by Bessie Rayner Parkes (Mme. Belloc), a granddaughter of Dr. Priestley and the author of "Vignettes" and "In a Walled Garden." "Men I have known," by Dean Frederick W. Farrar, brought before us the great men of the Victorian era, who are again encountered in W. Robertson Nicoll's life of "James Macdonell, Journalist." "Four Generations of a Literary Family: The Hazlitts in England, Ireland, and America, 1725-1896" came to us from a member of the family, W. Carew Hazlitt; David Christie Murray described "My Contemporaries in Fiction"; Emily Soldene published "My Theatrical and Musical Recollections"; and Alice Mangold Diehl, "Musical Memories" of illustrious names in the musical world. "The Wheel of Life" was the title of "a few memories and recollections" of Clement Scott, and "Literary Statesman, and Other Essays on Men seen from a Distance" came from Norman Hapgood. Two volumes contain "The Story of Gladstone's Life," by Justin McCarthy, and Vols. II and III also appeared of "The Political Life of the Right Hon. W. E. Gladstone," illustrated from "Punch," completing the work which comprises more than 150 cartoons and 400 sketches in the text. "The Yoke of Empire: Sketches of the Queen's Prime Ministers" was by Reginald Baliol Brett; Charles E. Lyne contributed a "Life of Sir Henry Parkes, G. C. M. G., Australian Statesman"; and "Cecil Rhodes: A Biography and Appreciation," by "an Imperialist," contained personal reminiscences by Dr. Jameson. "Rulers of India and the Chiefs of Rajputana" was by Brigade-Surgeon Lieut.-Col. Hendley, and Dr. George Smith selected "Twelve Indian Statesmen" as subjects for his pen. The "Life of Lord Cromer" was written by H. D. Traill; Robert Eadon Leader edited the "Life and Letters of John Arthur Roebuck," with chapters of autobiography, and "Lord

Cochrane's Trial before Lord Ellenborough, in 1814," was reviewed by J. B. Atlay. The "Standard Series" received important additions: "Hannibal—Soldier, Statesman, Patriot," by William O'Connor Morris; "Robert the Bruce and the Struggle for Scottish Independence," by Sir Herbert Eustace Maxwell; and "The Cid Campeador and the Waning of the Crescent in the West," by H. Butler Clarke, appeared in the "Heroes of the Nations." In the series of "Foreign Statesmen" we had "Joseph II," by J. Franck Bright; "William the Silent," by Frederic Harrison; "Charles the Great," by Thomas Hodgkin; and "Philip II of Spain," by Martin A. S. Hume, who also contributed "Sir Walter Raleigh: The British Dominion of the West," to the "Builders of Greater Britain Series"; and in the "Series of Famous Scots" "Kirkaldy of Grange" was by Lewis A. Barbe; "Fletcher of Saltoun," by G. W. T. Omond; "Thomas Chalmers," by W. Garden Blaikie; "Richard Cameron," by John Herkless; "Sir Walter Scott," by G. E. B. Saintsbury; "The Blackwood Group: John Wilson, John Galt, D. M. Moir, Miss Ferrier, Michael Scott, Thomas Hamilton," by George Douglas; "Tobias Smollett," by Oliphant Smeaton; and "James Boswell," by W. K. Leask. "Thomas and Matthew Arnold" were added by Sir Joshua Girling Fitch to the "Great Educators Series." "Sir Walter Raleigh" was the subject of the "Stanhope Essay" by John Buchan, and "Machiavelli" of the Romanes Lecture delivered in the Sheldon Theater, June 2, 1897, by John Morley. From Edith Sichel we had "The Household of the Lafayettes." David Hay Fleming wrote yet another life of "Mary, Queen of Scots"; "Falklands," by the author of "The Life of Sir Kenelm Digby," was superbly illustrated; "Cromwell's Place in History" was defined in six lectures delivered in the University of Oxford by Samuel Rawson Gardiner; "Waylen's House of Cromwell" was edited anew by J. G. Cromwell; Dorothea Townshend contributed the "Life and Letters of Mr. Endymion Porter," the well-known Caroline courtier; and Lady Newdegate-Newdigate transcribed and edited "Gossip from a Muniment Room: Being Passages in the Lives of Anne and Mary Fytton," in the days of Queen Elizabeth. "Letters of Sir Thomas Copley," edited by R. Copley Cristie, with an introduction and notes, belong to the same period. "Pickle the Spy; or, The Incognito of Prince Charles," by Andrew Lang, was a curious and interesting historical study. St. Clair Baddely made a study of the times of "Robert the Wise and his Heirs," carrying on the work begun in his earlier sketch of Joanna I, Queen of Naples. To military biography belong "Wellington: His Comrades and Contemporaries," by Major Arthur Griffiths; "The Crimean Diary and Letters of Lieut.-Gen. Sir Charles Ash Windham," edited by Major Hugh Pearse; "Letters from the Black Sea during the Crimean War, 1854-'55," of Admiral Sir Leopold George Heath; "Old Memories" (of the Mutiny), of Gen. Sir Hugh Gough; and "An Old Soldier's Memories," by S. H. Jones-Parry, of service in Burma, in the Crimea, and during the mutiny in India. "Richard Baird Smith: The Leader of the Delhi Heroes in 1857" found an enthusiastic admirer in Col. H. M. Vibart, and "Richard Henry Vivian, First Baron Vivian: A Memoir," by Hon. Claud Vivian, gave a portrait of a brave cavalry officer in the first half of the century. "Forty-one Years in India: From Subaltern to Commander-in-Chief" was the record of Field-Marshal Lord Roberts of Candahar, and "Twelve Years of a Soldier's Life" were edited by his widow from the letters of Major W. T. Johnson of the native Irregular Cavalry. "Roddy Owen: A Mem-

oir" came from that officer's sister (Mrs. Bovill) and G. R. Askwith, while "Under the Red Crescent" was the title of adventures of an English surgeon with the Turkish army at Plevna and Erzeroun, related by Charles S. Ryan, in association with his friend John Sands. "The Life of Sir Stamford Raffles, Founder of Singapore and the Zoo" was written by Demetrius C. Boulger; "The Life of Vice-Admiral Sir George Tryon, K. C. B.," by Rear-Admiral C. C. Penrose Fitzgerald; and "The Life of Sir John Hawley Glover, R. N.," by Lady Glover. "The Journal of Sir George Rooke" was edited by Oscar Browning. "Pictures from the Life of Nelson" were drawn by the able pen of W. Clark Russell, and a new edition, condensed and revised, and with much new material, was issued of "Lady Hamilton and Lord Nelson," by John Cordy Jeaffreson. "Recollections of Fenians and Fenianism," by John Leary, filled two volumes. "The Life and Letters of Benjamin Jowett, M. A., Master of Balliol College, Oxford," by Dr. Evelyn Abbott and Prof. Lewis Campbell, was pronounced "a revelation of one of the most fascinating and probably one of the most potent personalities of the century," and from L. V. Lester we had "A Memoir of Hugo Daniel Harper, D. D., Late Principal of Jesus College, Oxford, and for Many Years Head Master of Sherborne School, Dorset." "Arnold of Rugby," by J. J. Findlay, had an introduction by the Bishop of Hereford. "A Memoir of Anne Jemima Clough" was written by her niece Blanche Athena Clough, Vice-Principal of Newnham College, Cambridge, and from W. H. Woodward we had "Vittorino da Feltre, and Other Humanist Educators." "The Life and Times of Thomas Wakley, Founder and First Editor of the Lancet," by S. Squire Spriggs, was full of interest to the medical profession, as was "Vita Medica: Chapters of Medical Life and Work," by Sir Benjamin Ward Richardson, F. R. S. A new series of "Masters of Medicine," edited by Ernest Hart, was inaugurated with "John Hunter: Man of Science and Surgeon (1728-1793)," by Stephen Paget, who also wrote "Ambroise Paré and his Times, 1510-1590." "The Founders of Geology" were the theme of Sir Archibald Geikie in a series of lectures delivered before John Hopkins University, Baltimore, inaugurating the George Huntington Williams memorial lectureship, and "Pioneers of Evolution from Thales to Huxley," by Edward Clodd, had an intermediate chapter on the causes of arrest of the movement. "Philosophical Lectures and Remains of Richard Lewis Nettleship" were edited with a biographical sketch by A. C. Bradley and G. R. Benson in two volumes, and an "Autobiographical Sketch of James Croll, LL.D., F.R.S.," was accompanied with a memoir of his life and work by James Campbell Irons. "A Memoir of William Pengelly, F. R. S., Geologist," contained a selection from his correspondence edited by his daughter, Hester Pengelly, with a summary of his scientific work by Prof. Bonney. "The Work of Charles Keene," the famous artist of "Punch," had an introduction by Joseph Pennell and a bibliography by W. H. Cheson, and also contained some of Keene's unpublished drawings. "Verdi: Man and Musician" came from Frederick J. Crowest. "Records and Reminiscences of Goodwood and the Dukes of Richmond" were by John Kent, the author of "The Racing Life of Lord George Bentinck," and a unique volume was entitled "Lives of Twelve Bad Women," illustrations and reviews of feminine turpitude set forth by impartial hands, and edited by Arthur Vincent. In religious biography appeared Vol. IV, concluding the "Life of E. B. Pusey, D. D.," by Canon H. P. Liddon, edited by Rev. J. O. Johnston, Rev. R. J. Wilson, and

Canon Newbolt, completing the work, and "The Life and Times of Cardinal Wiseman," by the competent hand of Wilfrid Ward. "Private Papers of William Wilberforce" were collected and edited by A. M. Wilberforce, and "Might have been" was the title of some life notes by Joseph Parker, D. D. "The Life and Letters of William John Butler, late Dean of Lincoln, and Sometime Vicar of Wantage" was anonymous. "Chauncey Maples," pioneer missionary in East Central Africa for nineteen years and Bishop of Likoma, Lake Nyassa, found a biographer in his sister, Ellen Maples, and from Rev. A. N. Malan we had "Solomon Caesar Malan, D. D.: Memorials of his Life and Writings." Rev. J. T. Fowler edited the "Life and Letters of the Rev. John Baechus Dykes," the popular composer of hymn tunes, to whom we owe the music of Cardinal Newman's "Lead, Kindly Light." Dr. Augustus Jessopp wrote of "John Donne, Sometime Dean of St. Paul's, A. D. 1621-1631," and "The Life, Letters, and Writings of John Davenant, D. D. (1572-1641), Lord Bishop of Salisbury," we owe to Morris Fuller. To an earlier period belong "The Mission of St. Augustine to England according to the Original Documents," a handbook for the thirteenth centenary, edited by Arthur James Mason, D. D., at the suggestion of the late Archbishop Benson as a permanent record of the commemoration; "St. Francis of Assisi; His Times, Life, and Work," by Canon William J. Knox-Little; and "Cyprian: His Life, his Times, his Work," by Archbishop Edward White Benson, which had an introduction by Bishop Henry C. Potter. "St. Anselm of Canterbury" was commemorated by J. M. Riggs, and "The Life and Miracles of St. William of Norwich," by Thomas of Monmouth, were for the first time edited from the unique manuscript, with an introduction, translation, and notes by Dr. Augustus Jessopp and Montague Rhodes James. "Twelve Years in a Monastery" of modern days in England were described by Joseph McCabe, lately Father Antony, O. S. F. "Oliver Cromwell's Letters and Speeches" appeared in the "Centenary Edition of Thomas Carlyle's Works," edited by H. D. Traill, as did "Letters, 1804-1813" of Lord Byron in the edition of the poet's works edited by William E. Henley. W. E. H. Lecky contributed a biographical introduction to "The Prose Works of Jonathan Swift," Vol. I of which was edited by Temple Scott, and Vol. II, containing Swift's "Journal to Stella, 1710-1713," by Frederick Ryland. "Lord Bowen: A Biographical Sketch," by Sir Henry Stewart Cunningham, included a selection from the verses of the poet, and Wilfrid Austin Gill was the author of a sympathetic study of "Edward Cracroft Lefroy: His Life and Poems," which contained a critical estimate of the sonnets by the late John Addington Symonds. "James Clarence Mangan: His Selected Poems" contained a study by the editor, Louise Imogen Guiney. Vols. L, LI, LII, and LIII were issued of the "Dictionary of National Biography," edited by Sidney Lee, reaching "Shearman-Smirke."

Essays.—Under this head many volumes of a literary character are to be included. Of essays, properly speaking, there were several collections. "Essays from the 'Guardian'" represent some of the best journalistic work of Walter Pater; John Mackinnon Robertson offered "New Essays toward a Critical Method"; and Charles Whibley, "Studies in Frankness." R. A. Wenley contributed a volume of essays, entitled "Aspects of Pessimism," and "Platitudes of a Pessimist" came from the author of "The Life of a Prig." "The Quest of Happiness," left unfinished by Philip Gilbert Hamerton, was given to the public; a collection of "Essays and Speeches" was welcomed from W. S. Lilly;

"Occasional Papers" of Dean Church, written between 1846 and 1890, were put together in book form, as were "Essays and Addresses" of Sir J. Russell Reynolds, M. D., and "Common Thoughts on Serious Subjects," a series of addresses delivered by the late Chester Macnaghten, Principal of Rajkumar College, Kathiawar, India, to older Kumars of that institution. "An Essay on Comedy" and the uses of the comic spirit proved George Meredith a critic of no mean order, and from Walter Raleigh we had a scholarly discourse on "Style." "Epic and Romance" were the theme of essays on mediæval literature, by Prof. W. P. Ker; J. St. Loe Strachey ranged "From Grave to Gay" in the choice of themes; and from Vernon Lee (Violet Page) we had "Limbo, and Other Essays." "History in Fact and Fiction" was a literary sketch by Hon. A. S. G. Canning; "A Student's Pastime" was the title of a select series of articles by Rev. Walter W. Skeat, reprinted from "Notes and Queries"; "The Savage Club Papers" were edited by J. E. Muddock; "At Random: Essays and Stories" came from L. F. Austin; "Border Essays" of John Veitch were reprinted from magazines; and from the late Lady Camilla Gordon we had "Memories and Fancies." "Early Essays of John Stuart Mill" were selected by J. W. M. Gibbs. Vol. II of "A History of English Poetry," by William J. Courthope, published during the year, covered "The Renaissance and the Reformation: Influence of the Court and the Universities." From Clement Shorter we had a review of "Victorian Literature: Sixty Years of Books and Bookmen"; and from Richard D. Graham, "The Masters of Victorian Literature (1837-1897)." Edmund W. Gosse wrote "A Short History of Modern English Literature," and also "Seventeenth Century Studies," a contribution to the history of English poetry; Arthur Symonds vouchsafed "Studies in Two Literatures," and George Saintsbury contributed "The Flourishing of Romance and the Rise of Allegory" to the "Periods of European Literature Series." "The Age of Tennyson," by Hugh Walker, belonged to the "Series of Handbooks of English Literature." "Landscape in Poetry from Homer to Tennyson" was the theme of lectures at Oxford by Prof. Francis T. Palgrave; "The Old English Bible, and Other Essays" came from Francis Aidan Gasquet, D. D., and from Edward Dowden we had "A History of French Literature" and "The French Revolution and English Literature," the last a series of lectures delivered in connection with the sesquicentennial of Princeton University. Gilbert Murray contributed "A History of Ancient Greek Literature" to the "Series of Short Histories of the Literatures of the World," edited by Edmund Gosse, and from J. P. Mahaffy, D. D., came "A Survey of Greek Civilization." John Stuart Stuart-Glennie edited, with essays, annotated translations by Lucy M. J. Garnett of "Greek Folk-Poesy" in two volumes, the second of which was given to "Folk Prose." Vol. II was also published of "The Voyage of Bran," being a study of the Celtic doctrine of rebirth, by Alfred Nutt. "Gleanings from Ibsen" were selected and edited by E. A. Keddell and Percy C. Standing, with a preface on "Ibsenism," and Samuel Butler attempted to prove a woman of Sicily "The Authoress of the Odyssey." "The New Fiction, and Other Essays on Literary Subjects" proved charming reading from the pen of Henry Duff Traill, and from Elizabeth R. Chapman we had "Marriage Questions in Modern Fiction, and Other Essays." "Essays on the Novel as illustrated by Scott and Miss Austen" came from Adolphus Alfred Jack, while "Women Novelists of Queen Victoria's Reign: A Book of Appreciations" was the work of Mrs. M. O. W. Oliphant,

Mrs. Lynn Lynton, Mrs. Alexander, and others. "The Making of Abbotsford" was described by the Hon. Mrs. Maxwell Scott, and "The Homes and Haunts of Sir Walter Scott" by George S. Napier. Rev. J. Wood Brown made "An Inquiry into the Life and Legend of Michael Scot." Frederick G. Kitton prepared a bibliography and sketch of "The Novels of Charles Dickens" for the "Book-Lovers' Library," and J. O. Mitchell wrote of "Burns and his Times, as gathered from his Poems." "The Diary of Master William Silence" was the title of a study of Shakespeare and of Elizabethan sport, by the Right Hon. D. H. Madden, and Rev. T. Carter presented the father of the poet as "Shakespeare, Puritan and Recusant." "Natural History in Shakespeare's Time" consisted of extracts illustrative of the subject as he knew it made by H. W. Seager, and accompanied with pictures belonging thereto. Books appreciative of Nature came from many hands. "Memories of the Months" were by Sir Herbert Maxwell; "In Russet Mantle clad: Scenes of Rural Life," by George Morley; "The Woodland Life," a diary in English fields and woods, came from Edward Thomas; "In Garden, Orchard, and Spinney," from Phil Robinson; and "The Clock of Nature," from Hugh Macmillan, D. D., who contributed an introduction to "Lessons from Life (Animal and Human)," a compendium of moral teachings illustrated by curious and interesting habits, relations, instincts, peculiarities, and ministries of living creatures, compiled by T. R. Laurie Magnus supplied "A Primer of Wordsworth"; William Knight edited "Journals of Dorothy Wordsworth"; and W. Hale White (Mark Rutherford) edited, with notes, "A Description of the Wordsworth and Coleridge MSS. in the Possession of Mr. T. Norton Longman," with three facsimile reproductions. "The Love Affairs of Some Famous Men" were revived by E. J. Hardy, and "Stories of Famous Songs" were told by S. J. Adair Fitzgerald. Two volumes contained "The Romance of the Irish Stage," with pictures of the Irish capital in the eighteenth century, by J. Fitzgerald Molloy, and "In Praise of Music" was an anthology prepared by Charles Sayle. "The Epic of Sounds" was an elementary interpretation of Wagner's "Nibelungen Ring," by Freda Winworth, and "Wagner's Ring of the Nibelung and the Conditions of Ideal Manhood" was published anonymously. "Voces Academicæ," by C. Grant Robertson, reported humors of Oxford; "The House of Dreams," anonymous, and "Gods and their Makers," by Laurence Housman, belong to the school of mysticism and allegory. A welcome reprint was made of William Canton's two little books, "The Invisible Playmate" and "W. V.: Her Book," in one volume, which will be dear to all who love children. A cheap edition was offered of Alexander Pulling's study of "The Order of the Coif," being the head covering of the sergeant of the law; Charles William Heckethorn wrote of "The Secret Societies of all Ages and Countries"; and John Ashton, of "The Devil in Britain and America." Philip Norman devoted a volume to "London Signs and Inscriptions," and H. B. Wheatley supplied an introduction and descriptive notes to "Reliques of Old London," lithographed by T. R. Way. "English Epigrams and Epitaphs" were selected by Aubrey Stewart, and "Welsh Folk-Lore" was a collection of the folk tales and legends of North Wales, by Rev. Elias Owen. In the "Pamphlet Library" "Literary Pamphlets" were edited by Ernest Rhys, and "English Essays" were edited, with an introduction, by J. H. Lobban, for the "Warwick Library." "A Dictionary of English Authors" was supplied by R. F. Sharp; Arthur L. Humphreys

wrote of "The Private Library"; and the history and present condition of "The Free Library" was traced by John J. Ogle. F. G. Aflalo edited "The Literary Yearbook" for 1897, and Temple Scott made a record of "Book Sales of 1896." Part IV was reached of "The English Dialect Dictionary," edited by Joseph Wright, covering "Caddle-Chuck"; Henry Sweet was responsible for "The Student's Dictionary of Anglo-Saxon"; and Edward E. Morris contributed an "Austral-English Dictionary," of Australian words, phrases, usages, etc.

Fiction.—When we consider that 1,960 new books of fiction were written in 1897 in the United Kingdom, it seems hardly possible to attempt more than a mere summary of the more important. "The Christian," by Hall Caine, was decidedly the most successful, though the hero would by no means be conceded the type of what the name suggests. Another of Robert Louis Stevenson's posthumous novels was "St. Ives," which, left unfinished by the author, was completed by Arthur Quiller-Couch ("Q"); "The Well Beloved," by Thomas Hardy, belongs to the period of that writer's adolescence; and from R. D. Blackmore came "Dariel," a romance of Surrey and the Caucasus. "The Water of the Wondrous Isles" was another of William Morris's prose poems, and "Trooper Peter Halket of Mashonaland," by Olive Schreiner, was also a parable of the highest literary merit rather than a work of fiction, which dealt with present-day conditions in South Africa. "In Kedar's Tents," by Henry Seton Merriman, led among the novels of adventure, of which many were written during the year, and among which may be mentioned "Lochinvar," by S. R. Crockett, who also published "Lad's Love" and "The Surprising Adventures of Sir Toady Lion," the last for children; "John Marmaduke," a romance of the English invasion of Ireland in 1649, by Samuel Harden Church; "Spanish John," by William McLennan; "In the Days of Drake," by J. S. Fletcher; "The King with Two Faces," by M. E. Coleridge; "The Clash of Arms," by J. Bloundelle Burton; "The Last Recruit of Clare," by S. R. Keightley; "Fierceheart the Soldier," a romance of 1745, by J. C. Snaith; "His Majesty's Greatest Subject," by S. S. Thorburn; and "The Fascination of the King," by Guy Boothby, who wrote also an Australian story, "Sheila McLeod." "The Chevalier d'Auriac" and "A Galahad of the Creeks" came from S. Levett Yeats; Conan Doyle was represented by "Uncle Bernac"; William Clark Russell by "A Tale of Two Tunnels," "The Last Entry," "The Two Captains," and "A Noble Haul"; Sir Walter Besant, by "A Fountain sealed"; S. Baring-Gould wrote "Guavas the Tinner" and "Bladys of the Stewponcy"; "The Beth Book," by Madame Sarah Grand, was one of the sensations of the year; Du Maurier's "The Martian" hardly sustained the level of his other novels; George MacDonald published one story, "Salted with Fire"; Mrs. Margaret O. W. Oliphant's two last stories published in one volume were entitled "The Ways of Life"; and from John Oliver Hobbes (Mrs. Mary Craigie) we had "The School for Saints." Benjamin Swift (William R. Paterson) followed his striking novel of last year, "Nancy Noon," with "The Tormentor," and from Jerome K. Jerome we had "Sketches in Lavender, Blue, and Green." Beatrice Harraden published "Hilda Strafford: A California Story" and "Untold Tales of the Past"; Marie Clothilde Balfour described "The Fall of a Sparrow"; and Violet Hunt was heard from in "Unkist, Unkind." Ernest W. Hornung wrote two novels, "The Bride from the Bush" and "My Lord Duke," both having the scene laid in Australia; Dorothea Gerard (Madame Longard de

Longarde) wrote two also, "A Spotless Reputation" and "Miss Providence"; W. E. Norris described "Marietta's Marriage," and George Paston chronicled "The Career of Candida." "Mifanwy: A Welsh Singer" was by Allen Raine; "Deborah of Tod's," by Mrs. Henry de la Pasture; "The Wise and the Wayward," by G. S. Street; "Dracula," by Bram Stoker; "The Adventure of the Broad Arrow" and "Maurice Quain," by Morley Roberts; "A Nineteenth Century Miracle" and "The Beautiful Miss Brooke," by Z. Z. (Louis Zangwill); and "Iva Kildare: A Matrimonial Problem," by Mrs. L. B. Walford. W. J. Dawson looked "Thro' Lattice Windows" and outlined the education of "God's Foundling"; Hannah Lynch tried "An Odd Experiment"; and Julian Sturgis dwelt upon "The Folly of Pen Harrington." "A Spanish Maid" was found by L. Quiller-Couch, a sister of Arthur Quiller-Couch, among the fishermen of the English coast, and from Frances Montrésor came "At the Cross Roads." Anthony Hope (Anthony Hope Hawkins) sent out "Phroso"; Grant Allen, "An African Millionaire"; Joseph Hutton, "The Dagger and the Cross"; Maxwell Gray (Mrs. M. G. Tuttle) told the tale of "Sweethearts and Friends"; and Shan F. Bullock that of "The Charmer." W. Pett Ridge wrote "Secretary to Bayne, M. P.," and Eden Phillpotts, "Lying Prophets"; Evelyn Sharp described "The Making of a Prig," and J. H. Crawford, "A Girl's Awakening." "The Crime and the Criminal" was by Richard Marsh; "Margot," by Sidney Pickering; Gilbert Parker gave us another Canadian story, "The Pomp of the Lavillettes"; and John Strange Winter (Mrs. H. E. V. Stannard) led us "Into an Unknown World." "The Mutable Many" was by Robert Barr; "The Jessamy Bride," by Frank Frankfort Moore, who wrote also "The Impudent Comedian, and Others"; "Nulma," an Anglo-Australian romance, came from Mrs. Rose Murray Campbell-Praed, and she also wrote "The Romance of a Chalet." "Barbara: Lady's Maid and Peeress" and "Mrs. Crichton's Creditor" were the two novels by Mrs. Alexander (Mrs. A. F. Hector); "They that sit in Darkness," by John Mackie, belonged to the young literature of Australia; "A Daughter of Strife" was by Jane Helen Findlater; while Mary Findlater wrote "Over the Hills"; Rhoda Broughton, "Dear Faustina"; George Gissing, "The Whirlpool" and "Human Odds and Ends"; Mrs. M. J. Fleming, "A Pinchbeck Goddess"; and T. Gallon, "Tatterley" and "A Prince of Misheance." Books that found interested readers were "Fortune's Footballs," by G. B. Burgin; "The Touchstone of Life," by Ella MacMahon; "In Golden Shackles," by Alien; "Macleod of the Camerons" and "The Freedom of Henry Meredyth," by M. Hamilton; "Arrested," by Esmé Stuart; "A Bachelor's Bridal," by Mrs. H. Lovett Cameron; "Ripple and Flood," by James Prior; "Broken Away," by Beatrice Ethel Grimshaw; and "Beyond the Pale," by Mrs. Bertha M. Croker, who was also at home in "The Kingdom of Kerry." E. A. Rowlands contributed "The Fault of One." "The Massarenes" was in Ouida's most caustic vein, and her prolific pen sent out also "Muriella: or, Le Selve" and "An Altruist." Marie Corelli was responsible for "Ziska: The Problem of a Wicked Soul"; when the half-gods of ambition go for woman, according to Annie E. Holdsworth, "The Gods Arrive"; and Francis Gribble also made a plea for domestic life in "Only an Angel." Scotland was the scene of "God's Winepress," by Arthur Jenkinson; George Manville Fenn narrated the distresses of a girl "Cursed by a Fortune"; Adeline Sergeant chose "The Lady Charlotte" for a heroine, and also wrote "In the Wilderness" and "In Vallombrosa"; from Charlotte M. Yonge we

had "Founded on Paper; or, Uphill and Downhill between the Two Jubilees" and "The Pilgrimage of the Ben Beriah," the last a story of the wanderings of Israel in the desert; Rosa Nouchette Carey also had two books, "Doctor Luttrell's First Patient" and "Other People's Lives"; "Daughters of Thespis" was the only one of John Bickerdyke; as "The Royal Christopher" was that of Justin Huntly McCarthy; "Traeked by a Tattoo," suggested Fergus W. Hume; "In the Tideway" and "In the Permanent Way," by Mrs. Flora Annie Steel, were sufficiently remote in scene, the Hebrides being the theater of the one, while native and English life in India was the theme of the second volume of short stories; Frances Mary Peard was heard from again in "The Career of Claudia"; and William Westall exhausted all the resources of incident in "With the Red Eagle." "The Queen of the Moor," by Frederic Adye, brought a refreshing breath with her, while from Florence Marryat we had "A Passing Madness" and "In the Name of Liberty." Among volumes of short stories, "Symphonies" of George Egerton and "In a Dozen Ways of Love," by Lily Dougall, deserve mention, as do also "The Dominant Note, and Other Stories," by Mrs. Lucy Lane Clifford (Mrs. W. K. Clifford); "Methodist Idyls," by Harry Lindsay; "While the Billy Boils," sketches and stories of Australian life, as "The Outspan" was the title of tales of South Africa by J. P. Fitzpatrick. "A Creel of Irish Stories" came from Jane Barlow, the author of "Irish Idyls." Three books for children must not be omitted, "Will Shakespeare's Little Lad," by Imogen Clark, illustrated by Reginald Birch; "The Knights of the Round Table," stories of King Arthur and the Holy Grail, by William H. Frost, illustrated by Sydney Richmond Burleigh; and "The Laughter of Peterkin," by Fiona Macleod, who has thrown into this form of a fairy tale for children the ancient masterpieces of the Gael, "The Three Sorrows of Story-telling." The Gadshill edition of Dickens in 32 volumes was inaugurated during the year, edited by Andrew Lang, and an Edinburgh edition of "The Works of Robert Louis Stevenson" was also issued.

Fine Arts.—Two art books called forth by the jubilee were "The Art of Painting in the Queen's Reign," by A. G. Temple, with 77 reproductions from the works of the chief artists of the period, and "English Illustrations in the Sixties," by Gleeson White, containing illustrations in etchings, photogravure, and line by Lord Leighton, Millais, Du Maurier, and many others. W. J. Anderson gave a general view of "The Architecture of the Renaissance in Italy" and Reginald Blomfield wrote "A History of Renaissance Architecture in England, 1500-1800." "Historic Ornament" was considered by James Ward, author of "The Principles of Ornament"; and "The Connoisseur," by Frederick S. Robinson, consisted of essays on the romantic and picturesque associations of art and artists. "Art and Life, and the Building and Decoration of Cities" was the title of a series of lectures by members of the Arts and Crafts Exhibition Society, delivered at the fifth exhibition of the society in 1896; and "The Art of the House," by Rosamund Marriott Watson, was supplemented by many illustrations from the loan collection at Bethnal Green, the South Kensington Museum, and elsewhere. "Potters: Their Arts and Crafts" came from J. C. L. Sparks and Walter Gandy; and "A Text-book dealing with Ornamental Designs" from C. Stephenson and F. Suddards. "Old English Glasses," by Albert Hartshorne, was an account of glass drinking vessels in England from early times to the end of the eighteenth century, illustrated by about 70 tinted plates and several

hundred illustrations in the text; and yet another handsome volume was "The Chippendale Period in English Furniture," by K. Warren Clouston, with 200 illustrations by the author. "Memorials of Christie's," a record of art sales from 1766 to 1896, by W. Roberts, filled two volumes. In the "Connoisseur Series" appeared "Historical Portraits," by Henry B. Wheatley, with 71 illustrations taken direct from the originals at the National Portrait Gallery and elsewhere, and "Portrait Miniatures, from the Time of Holbein (1631) to that of Sir William Ross (1860)," by G. C. Williamson, from whom we had also "Richard Cosway, R. A.," both finely illustrated. "The Collection of Miniatures in Montagu House," was catalogued by Andrew McKay and privately printed; "White Athenian Vases in the British Museum" were reproduced in plates by A. S. Murray and A. H. Smith; and "Pictures from Greek Vases: The White Athenian Lekythi" were drawn in color from the originals by Henry Wallis. From Mrs. Arthur Bell (N. D'Anvers) we had "Thomas Gainsborough: His Life and Works," and Claude Phillips discussed "The Earlier Work of Titian." "Early Portraits of Queen Victoria were reproduced and collected into a volume. "The Confessions of a Collector" came from William G. Hazlitt, and in the "Collector's Series" we had "Fine Prints," by Frederick Wedmore. Walter Crane wrote "Of the Decorative Illustrations of Books Old and New" for the "Ex-Libris Series," another issue of which was "Decorative Heraldry," by G. W. Eve. "The Artists and Engravers of Book-plates" were treated by H. W. Fincham. "Foreign Bookbindings in the British Museum" consisted of illustrations of 63 examples selected on account of their beauty or historical interest, with an introduction and descriptions by W. Y. Fletcher. "An Illustrated Record of the Retrospective Art Exhibitions held at South Kensington, 1896" contained 256 reproductions of exhibits compiled and edited by John Fisher; W. J. Stillman edited a superb volume, "Venus and Apollo in Painting and Sculpture," and other costly illustrated books were "A Legend of Camelot: Pictures and Poems," by George Du Maurier; "The Deer Forests of Scotland," by Augustus Grimble, illustrated by Archibald Thorburn; "British Deer and their Horns," by John Guille Millais, with 185 text and full-page illustrations, mostly by the author; "The Horse in Art and Nature," by Cecil Brown; "Medals and Decorations of the British Army and Navy," by John Horsley Mayo, in two volumes; "Christ and his Mother in Italian Art," by Mrs. Julia Cartwright Ady; "Cathedral Cities: York, Lincoln, and Beverley," drawn and etched by Robert Farren, with an introduction by E. A. Freeman; and "A Book of Fifty Drawings," by Aubrey Beardsley. "The Blazon of Episcopacy," being the arms borne by or attributed to the archbishops and bishops of England and Wales, with an ordinary of the coats described and of other episcopal arms, came from Rev. W. K. Riland Bedford. Books on music included "The Orchestra and how to write for it," by F. Corder; "Symphonies and their Meaning," by Philip H. Goepf; "Chats to Violin Students on how to study the Violin," by J. T. Carodus; "Technics of Violin Playing on Joachim's Method," by C. Courvoisier; and "The Violin Bow: Its History, Manufacture, and Use," by Henry Saint George, who illustrated his own work.

History.—Vol. V of "A History of Our Own Times," by Justin McCarthy, carried us "From 1880 to the Diamond Jubilee," and from P. Anderson Graham we had a review of "The Victorian Era." "Sixty Years of Empire, 1837-1897" consisted of con-

tributions by Sir Charles Dilke, John Burns, Joseph Pennell, Lionel Johnson, and others. "Sixty Years of the Queen's Reign" were reviewed by Sir Richard Temple, and "Victoria, Queen and Empress: The Sixty Years," by Sir Edwin Arnold, outlined briefly the scientific and historical achievements of the period. In addition, Sir Walter Besant inaugurated the "Stories of the Empire Series" with "The Rise of the Empire"; Edgar Sanderson treated of "The British Empire in the Nineteenth Century"; and "Deeds that won the Empire" were chronicled by Rev. W. H. Fitchett. "The Lost Empires of the Modern World: Essays in Imperial History," by Walter Frewen Lord, gave some account of the lost territories of Portugal, Spain, France, and Holland, supplementary to his former work, "The Lost Possessions of England." Rev. Alfred J. Church told "Stories from English History, from the Lord Protector to Victoria"; "Domesday Book and Beyond" was the title of three essays in the early history of England, by Prof. Frederic William Maitland; Henry Hartwright reviewed "The Story of the House of Lancaster"; Vol. XV was issued of "Letters and Papers, Foreign and Domestic, of the Reign of Henry VIII," arranged and catalogued by James Gairdner and R. H. Brodie; Alfred Kingston treated of "East Anglia and the Great Civil War"; and to Allan Fea we owe "The Flight of the King: Being a Full, True, and Particular Account of the Miraculous Escape of his Most Sacred Majesty King Charles II, after the Battle of Worcester." Vol. II of Samuel R. Gardiner's "History of the Commonwealth and Protectorate, 1649-60," covered the period 1651-'54, and the same historian defined "Cromwell's Place in History," besides answering "What Gunpowder Plot was" to the question propounded by John Gerard, S. J., last year, "What was the Gunpowder Plot?" "The Early History of the Scottish Union Question" was written by G. W. T. Omond; from Mrs. Oliphant we had "A History of Scotland for the Young"; the first three volumes were issued of "The History of Scotland from Agricola's Invasion to the Extinction of the last Jacobite Insurrection," by Dr. J. Hill Burton, Historiographer Royal of Scotland; and in the series of "County Histories of Scotland" appeared "A History of Dumfries and Galloway," by Sir Herbert Maxwell, and "Moray and Nairn," by Charles Rampini. "Byways of History," by Dr. James Colville, was the title of studies in the social life and rural economy of the olden time in Scotland. The first of five volumes which will contain a history of the "The Royal Navy," from the earliest times to the present, by William Laird Clowes, came from the press, and David Hannay also wrote "A Short History of the British Navy, 1217-1688." Vol. I appeared of "A History of the Administration of the Royal Navy and of Merchant Shipping in Relation to the Navy," covering the period 1509-1660, by M. Oppenheim, who also edited "Naval Accounts and Inventories of the Reign of Henry VII, 1485-'8 and 1495-'7." "The Navy and the Nation" came from Lieut.-Col. Sir George S. Clarke and James R. Thursfield; "Naval Administrations, 1827-1892," were reviewed by the late Sir J. H. Briggs; Lieut.-Col. Cooper King wrote "The Story of the British Army," and "Historical Records of the Maltese Corps of the British Army" were compiled by Major A. G. Chesney. Col. Turse discoursed of "Military Expeditions beyond the Seas." Vol. VI of "Social England," edited by H. D. Traill, carried us from the battle of Waterloo to the general election of 1885, and Thomas Hay Sweet Escott, in "Social Transformations of the Victorian Era," made a survey of the court and country. The two volumes entitled "The Court of England under George IV" were founded

on a diary, interspersed with letters, written by Queen Caroline and various other distinguished persons, and from W. W. Tomlinson we had a description of "Life in Northumberland during the Sixteenth Century." William White's history of "The Inner Life of the House of Commons, 1860-1870," was edited, in two volumes, by Justin McCarthy, who also contributed a preface. "Heroic Japan," a history of the war between China and Japan, was written by F. W. Eastlake and Yōshi-Aki Yamada, and Rev. J. McGowan was the author of "A History of China." "British India," by Rev. Robert W. Frazer, was the only addition to the "Story of the Nations Series"; and from Demetrius Boulger we had "The Story of India." "The Story of the Indian Mutiny" was told yet again by Ascott Robert Hope Moncrieff, and from Lieut.-Gen. McLeod Innes, V. C., came "The Sepoy Revolt." "The Benin Massacre," by Capt. Alan Boisen, was supplemented by "Benin, the City of Blood," by Commander R. H. Bacon, and Gen. Sir John Adye gave an historical sketch of "Indian Frontier Policy." "The Northwestern Provinces of India" were the theme of W. Crooke. Vol. I of "Letters received by the East India Company from its Servants in the East," covering the years 1602-13, had an introduction by Frederick Charles Danvers, and Gen. Sir Charles Gough collaborated with Arthur D. Innes upon "The Sikhs and the Sikh Wars," tracing the rise, conquest, and annexation of the Punjab state. Sidney Langford Hinde chronicled "The Fall of the Congo Arabs"; Frank W. Sykes described the campaign in the Matoppos in "With Plumer in Matabeleland"; Lieut.-Col. Plumer wrote "An Irregular Corps in Matabeleland"; and from Col. R. S. S. Baden-Powell we had "The Matabele Campaign, 1896." Arthur Glynn Leonard told "How we made Rhodesia," and "The Story of an African Crisis," by Edmund Garrett and E. J. Edwards, claimed to be the truth about the Jameson raid and Johannesburg revolt of 1896, told with the assistance of the leading actors in the drama. "The Story of Australia" was written for "The Story of the Empire Series" by Miss Flora Shaw, and "Stories of Australia in the Early Days" came from Marcus Clarke. W. W. How and H. D. Leigh were the joint authors of "A History of Rome to the Death of Cæsar," and Alice Gardner proclaimed "Rome the Middle of the World." "Sources of Greek History (B. C. 480-35)" were arranged by G. F. Hill, and "Greece in the Nineteenth Century," by Lewis Sergeant, was a record of Hellenic emancipation and progress from 1821 to 1897. "Europe in the Sixteenth Century, 1494-1598," by A. H. Johnson, was the fourth volume, in order of time, in the series of eight volumes dealing with "Periods of European History" edited by A. Hassall. Vols. III and IV completed Justin H. McCarthy's history of "The French Revolution," and Gen. Meredith Read devoted two illustrated volumes to "Historic Studies in Vaud, Berne, and Savoy, from Roman Times to Voltaire, Rousseau, and Gibbon." George Hooper made a study of "The Campaign of Sedan." "Lectures on Ecclesiastical History," delivered in Norwich Cathedral by Dean Frederick W. Farrar, Rev. J. Armitage Robinson, Canon Frederick Meyrick, and others, were accompanied with a preface by the Dean of Norwich; Rev. William Holden Hutton delivered the Birbeck Lectures on "The Church of the Sixth Century," and Henry Olfrey Wakeman wrote "An Introduction to the History of the Church of England, from the Earliest Times to the Present Day." "The Story of our English Towns," by P. H. Ditchfield, had an introduction by Dr. Augustus Jessopp; Dean Charles W. Stubbs published "Historical Memorials of Ely Cathedral," and Robert B. Holt

dwelt upon "Whitby, Past and Present." "A History of Pembroke College, Oxford," was written by Douglas Maclean; "The Church of St. Mary the Virgin, Oxford," came from T. G. Jackson; and "Cambridge described and illustrated" from T. D. Atkinson. Rev. T. D. Raikes contributed "Fifty Years of St. Peter's College, Radley." "A Cornish Parish," by Canon Joseph Hammond, gave an account of St. Austell—town, church, district, and people. Three clan histories written during the year were "The Clan Donald," by Rev. A. Macdonald, Minister of Kilmarnan, and Rev. A. Macdonald, Minister of Kiltarlity; a "History of the Frasers of Lovat," by Alexander Mackenzie; and "Records of the Clan and Name of Fergusson or Ferguson," by James and Robert Menzies Fergusson. "The Story of an Irish Sept," their character and struggle to maintain their lands in Clare, was written by N. C. Macnamara.

Physical, Moral, and Intellectual Science.—"The Ancient Volcanoes of Great Britain," by Sir Archibald Geikie, in two volumes, with seven maps and numerous illustrations, was a monumental work of lasting value, in that it involves practically the volcanic history of the globe. It has been pronounced the crowning work of the chief of the English survey and a stepping stone in the science of geology which no subsequent discoveries can displace. Vols. XXIII, XXV, and XXVI of "Memoirs of the Geological Survey of India" were issued, the first covering the "Geology of the Central Himalayas," by C. L. Griesbach, the next "The Geology of the Bellary District, Madras Presidency," by R. B. Foote, and the last "The Geology of Hazara and the Black Mountain," by C. S. Middlemiss. W. W. Howard attempted to trace "The Evolution of the Universe"; "Man's Place in the Cosmos, and Other Essays" came from Prof. Andrew Seth; and Karl Pearson filled two volumes with "The Chances of Death, and Other Studies in Evolution." Posthumous "Essays" of John G. Romanes were edited by Charles Lloyd Morgan, and Part III was also published of his "Darwin and after Darwin." Sir John W. Dawson wrote on "Relics of Primeval Life: Beginning of Life in the Dawn of Geological Time, and Robert Munro, M. D., discussed "Prehistoric Problems." In this connection, perhaps, may be mentioned "The Dolmens of Ireland: Their Distribution, Structural Characteristics, and Affinities in Other Countries," in three volumes, by W. Copeland Borlase, and a new edition of Sir John Evans's work upon "The Ancient Stone Implements, Weapons, and Ornaments of Great Britain." In the "Biological Series of Cambridge Science Manuals" we had "The Vertebrate Skeleton," by Sidney H. Reynolds; "Light Visible and Invisible" was discussed by Silvanus P. Thompson; and Lord Armstrong wrote on "Electric Movement in Air and Water. "Some Unrecognized Laws of Nature" were investigated by Ignatius Singer and Lewis H. Berens. In "The Dawn of Modern Geography" C. Raymond Beazley gave a history of exploration and geographical science from the conversion of the Roman Empire to 900 A. D., with the account of the achievements and writings of the early Christian, Arab, and Chinese students and explorers. "An Essay on the Foundations of Geometry," by Bernard A. W. Russell, appeared in the "Cambridge University Press Series," and Part I of "The Tutorial Chemistry," devoted to "Non-Metals," by G. H. Bailey, was edited by William Briggs. "Papers and Notes on the Genesis and Matrix of the Diamond" were edited from the unpublished manuscripts of H. Carvill Lewis by T. G. Bonney. J. Norman Lockyer made notes on "Recent and Coming Eclipses," and the "Concise Knowledge Astronomy" was written by Agnes

M. Clerke, A. Fowler, and J. Ellard Gore. "The Concise Knowledge Natural History" came largely from officials of the British Museum, and "The Royal Natural History," edited by Richard Lydekker, contained 72 superb colored illustrations and upward of 2,000 engravings in the text. "Eggs of British Birds, with an Account of their Breeding Habits: Limicolæ," by Frank Poynting, contained 54 colored plates, and "Colored Figures of the Eggs of British Birds, with Descriptive Notices," by the late Henry Seebohm, was pronounced decidedly the finest work on British oölogy that has yet been published. "A Sketch of the Natural History of Australia," by F. G. Aflalo, contained also some notes on sport; "The Naturalist in Australia" was W. Saville-Kent; and W. C. McIntosh and A. T. Masterman wrote "The Life Histories of the British Marine Food Fishes." From Prof. L. C. Miall we had "The Natural History of Aquatic Insects"; W. A. Clarke compiled "First Records of British Flowering Plants"; J. C. Willis published "A Manual and Dictionary of the Flowering Plants and Ferns"; "The Yew Trees of Great Britain and Ireland" were the theme of John Lowe, M. D.; and J. H. Crawford was the author of two volumes, one upon "Wild Flowers of Scotland" and the other upon "Wild Life in Scotland," the last being illustrated by John Williamson. "The New Psychology," by E. W. Scripture, appeared in the "Contemporary Science Series," as did "Hallucinations and Illusions," by Edmund Parish. From Andrew Lang we had "The Book of Dreams and Ghosts," as well as a work on "Modern Mythology," most of which was written in refutation of "Contributions to the Science of Mythology," which were vouchsafed by Max Müller during the year, and W. T. Stead also told "Real Ghost Stories." Two volumes contained William Crooke's study of "The Popular Religion and Folklore of Northern India." Rev. H. N. Hutchinson examined "Marriage Customs in Many Lands," while "Teaching and Organization" were the theme of P. A. Barnett and others. Frederick Spencer contributed "Chapters on the Aims and Practice of Teaching"; Charles Morley made "Studies in the Board Schools," while "English Schools at the Reformation" were the theme of A. F. Leach. L. C. Miall gave the result of "Thirty Years of Teaching," and John Charles Tarver told plain truths in "Some Observations of a Foster Parent." James Sully made a study of "Children's Ways," and "Foundations of Success," by S. de Brath, was a plea for rational education. "The Opus Majus of Roger Bacon" was edited, with an introduction and analytical table, by John Henry Bridges, in two volumes.

"Various Fragments" of Herbert Spencer were collected into a volume during the year. Upon divers themes they range in date from 1852 to 1896. Vol. I was issued of a "History of Intellectual Development on the Lines of Modern Evolution," by John Beattie Crozier, coming down to the closing of the schools of Athens by Justinian, and John Theodore Merz also published the first volume of "A History of European Thought in the Nineteenth Century." H. S. Nash traced carefully "The Genesis of the Social Conscience," showing the relation between the establishment of Christianity in Europe and the social question. In the "Social Science Series" appeared "Parasitism, Organic and Social," by J. Massart and E. Vandervelde, and "Allotments and Small Holdings," by J. L. Green, while "The Story of a Great Agricultural Estate," an account of the origin and administration of the Beds and Bucks and Thorney estates, by the Duke of Bedford, was an important contribution to the literature of the vexed question of ownership of land. J. A. Hobson attacked "The

Problem of the Unemployed," and Vol. IX was issued of "Life and Labor of the People of London," edited by Charles Booth, containing "Comparisons, Survey, and Conclusions." "Rich and Poor," by Mrs. Bernard Bosanquet, was declared a wise and good book, at once suggestive and entertaining; Ernest Belford Bax published "Outspoken Essays on Social Subjects"; J. Maccum wrote on "Ethics of Citizenship"; "Social Switzerland," by William Harbutt Dawson, was a valuable study of conditions and experiments in that republic; and Bertrand Russell delivered six lectures on "German Social Democracy," which in book form contained an appendix on social democracy and the woman question in Germany by Alys Russell. "Juvenile Offenders" was the contribution of William Douglas Morrison to the "Criminology Series," "The Rational or Scientific Idea of Morality" was set forth by P. F. Fitzgerald, and from Bernard Bosanquet we had a study of the "Psychology of the Moral Self." "The Ethics of John Stuart Mills" were edited, with introductory essays, by Charles Douglas.

Coming to politics, we have "The Truth about Agricultural Depression" told by Francis Allston Channing, M. P. "War Famine and our Food Supply" were the theme of R. B. Marston; Ernest Edwin Williams complained of "The Foreigners in the Farmyard"; and William S. H. Gastrell considered "Our Trade in the World in Relation to Foreign Competition, 1885-1895." "Politics in 1896," an annual edited by Frederick Whelen, contained contributions by H. D. Traill, H. W. Massingham, G. Bertrand Shaw, and others, and "The Statesman's Yearbook," edited by J. Scott Keltie and I. P. A. Renwick, reached its thirty-fourth year of issue. "Government and Parties in Continental Europe" were reviewed by Lawrence Lowell; "Foreign and Colonial Speeches" of Hon. Joseph Chamberlain were collected in book form; and in "England and India" Romesh C. Dutt made a plea for a larger native participation in the government of that country. "The Coming Commonwealth," by R. R. Garran, discussed Australian federation. "Popular Fallacies regarding Bimetallism" were exposed by Sir Robert G. Edgecumbe, and "The First Battle" contained the story of the great presidential election in the United States in 1896. "The Defense of the Empire" was the title given a selection from the letters and speeches of the late Earl of Carnarvon, edited by Sir George Sydenham Clarke, who inaugurated the new "Imperial Library" with a volume of his own upon "Imperial Defense." "National Defenses" was also the theme of Gen. C. P. Maurice. J. S. Risley made a study of "The Law of War." "The Eastern Crisis" was the subject of a letter to the Duke of Westminster from William E. Gladstone; "The European Concert in the Eastern Question" was a collection of treaties and other public acts, edited, with introductions and notes, by T. E. Holland; and "The Eastern Crisis of 1897 and British Policy in the Near East," by G. H. Perris, gave a key not only to the causes and the possible consequences of the Græco-Turkish War, but also to the larger developments and wider issues of the Eastern question. "War and a Wheel," by Wilfred Pollock, described the Græco-Turkish War as seen from a bicycle; "With the Turkish Army in Thessaly," by Clive Bingham, was illustrated and contained maps and plans, while two other war correspondents who vouchsafed volumes were William Kinnaird Rose, the author of "With the Greeks in Thessaly," and G. W. Stevens, who proclaimed "The Conquering Turk." "The Book of Parliament," by Michael Maedonagh, gave an account of the customs and curiosities of the two houses, and from Harry Furniss we had

"Pen and Pencil in Parliament." "The Municipal Yearbook of the United Kingdom, 1897" was issued by Robert Donald, and "Political Pamphlets" in the "Pamphlet Library" were selected and arranged by A. F. Pollard.

Among religious works are to be mentioned "ΛΟΓΙΑ ΙΗΣΟΥ: Sayings of Our Lord," discovered and edited by Bernard P. Grenfell and Arthur S. Hunt (see page 23 *ante*), who also edited Series II of "Greek Papyri"; "The Spirit on the Waters: The Evolution of the Divine from the Human," by Dr. Edwin A. Abbott; "Recent Advances in Theistic Philosophy of Religion," by Rev. James Lindsay; "Socrates and Christ," a study in the philosophy of religion, by R. A. Wenley; and "The Evolution of the Idea of God," a somewhat superficial inquiry into the origin of religions, by Grant Allen. "The Providential Order of the World" was the theme of the Gifford Lectures for 1897, by Dr. Alexander Balmain Bruce, and in the "Living Paperson Present-Day Themes Series" we had "The Truth of the Bible and Kindred Subjects," by Sir John W. Dawson, Rev. William Wright, Rev. M. Kaufmann, and others. "The Bible: Its Meaning and Supremacy" was the theme of Dean F. W. Farrar, and Dr. George Salmon offered "Some Thoughts on the Textual Criticism of the New Testament." "The Christian Ecclesia" was the title of a course of lectures by Fenton John Anthony Hort on the early history and early conceptions of the *ecclesia*, with which were included four sermons, and "Village Sermons" of the same divine were also published; the work of Dr. Edwin Hatch on "The Influence of Greek Ideas and Usages upon the Christian Church" was edited by A. M. Fairbairn; and "Outlines of the History of the Theological Literature of the Church of England from the Reformation to the Close of the Eighteenth Century" were the Bishop Paddock Lectures for 1896-'97 delivered by Dr. John Dowden. The Baird Lecture for 1897 was by Robert Herbert Story upon "The Apostolic Ministry in the Scottish Church." "The Celtic Church of Wales" came from J. W. Willis Bund. "Religious Thought in England in the Nineteenth Century" was discussed by Dr. John Hunt, and Hugh Mortimer Cecil was the author of "Pseudo-philosophy at the End of the Nineteenth Century: I. An Irrationalist Trio—Kidd, Drummond, Balfour." "Unthinkables" was by Frederick H. Balfour, and was somewhat in line with the "Foundations of Belief," by Arthur Balfour. "Christian Instincts and Modern Doubt" was the title of essays and addresses in aid of a reasonable, satisfying, and consolatory religion, by Rev. Alexander H. G. Crauford, and "The Ancient Faith in Modern Light" of a series of essays by various clergymen. "Oliver Cromwell: A Study in Personal Religion" came from Dr. Robert F. Horton; "Certain Aspects of Life" were considered by the Bishop of Durham; "The Revel and the Battle" was the title of a volume of sermons by the Bishop of Southwell; and "The Heritage of the Spirit" of another similar volume by Bishop Creighton, of London. Canon Gore gave a practical exposition of "The Sermon on the Mount." "Sermons Preached on Special Occasions" by Canon Liddon were collected, as were sermons, addresses, and essays by Rev. William Robertson Nicoll, under the title of "The Return to the Cross." "The Threshold of the Sanctuary," by Canon B. W. Randolph, consisted of chapters on preparation for holy orders, and John Telford wrote the "History of Lay Preaching in the Christian Church." "Later Gleanings," a new series of gleanings of past years, theological and ecclesiastical, were welcomed from William F. Gladstone, and Robert Anderson, the Assistant

Commissioner of Police in London, questioned "The Silence of God" on certain questions of life in reverent mood. Part II of Vol. III and Vol. IV of "New Testament Hours," by Dr. John Cunningham Geikie, completed that work, and "Gateways to the Bible" were supplied by Dr. Geikie, Rev. A. H. Sayce, William Elliot Griffiths, and others. "The Incarnation: A Study of Philippians II, 5-11," by Canon Edwin Hamilton Gifford, was supplemented by "Philippian Studies," by Dr. H. C. G. Moule, and Dr. George Matheson caught "Side-lights from Patmos." S. Baring-Gould made "A Study of St. Paul." "The Power of an Endless Life, and Other Sermons" were by David Wright; Robert Lawrence Ottley delivered the Bampton Lectures before the University of Oxford upon "Aspects of the Old Testament"; and "Christianity and the Progress of Man, as illustrated by Modern Missions" was by W. Douglas Mackenzie. "Ideals of Strength," by John MacLaren Watson, contained a sketch of the author's life. W. Walsh revealed "The Secret History of the Oxford Movement." "Essays in Liberalism" were written by "Six Oxford Men," and a third series was issued of "Oxford House Papers." "The Observances in Use at the Augustinian Priory of St. Giles and St. Andrew at Barnwell, Cambs." were made public; T. W. Arnold examined "The Preaching of Islam"; and E. L. Butcher wrote "The Story of the Church of Egypt." Three volumes contained "The Book of the Dead," translated from the Egyptian text according to the Theban recension, by Dr. E. A. Wallis Budge, who also prepared "An Egyptian Reading Book for Beginners." Mrs. Annie Wood Besant discoursed upon "Four Great Religions." "The Hope of Israel" was the review of the argument from prophecy by Rev. Francis H. Wood; Benjamin B. Warfield set forth "The Right of Systematic Theology"; and "A Concordance to the Greek Testament according to the Texts of Westcott and Hort, Tischendorf, and the English Revisers," was the work of Dr. William F. Moulton and Rev. A. S. Geden. "A Guide to Biblical Study" was offered by A. S. Peake.

Books of a miscellaneous character which may as well be included here as anywhere were: "Progress in Printing and the Graphic Arts during the Victorian Era," by J. Southward; "Achievements of Cavalry," by Gen. Sir Evelyn Wood; "Stray Military Papers," by Henry W. Lovett Hine; "The Effect of Maritime Command on Land Campaigns since Waterloo," by Major C. E. Callwell; "The Naval Annual," edited by Hon. J. A. Brassey; and "Naval Gunnery," by Capt. H. Garbett, R. N.; "The British Mercantile Marine," a short historical review, by Edward Blackmore; "Chronicles of the Bank of England," by B. B. Turner; and "Great Public Schools," by various authors. "An Outline of the Law of Libel" was given by W. Blake Odgers, and "Four Lectures on the Law of Employers' Liability at Home and Abroad," by Augustine Birrell. "Lectures on the Actions of Medicines," being the course of lectures on pharmacology and therapeutics delivered at St. Bartholomew's Hospital by Dr. Thomas Lauder Brunton during the summer of 1896 were published, as were "The Sequels of Disease," the Lumleian Lectures before the Royal College of Physicians by Sir Dyce Duckworth, M. D., with observations in prognosis in disease. "Waste and Repair in Modern Life" was a timely volume by Dr. Robson Roose, and "Food and its Functions" was a text-book for students of cookery by James Knight. "Petroleum," in two volumes, by Boverton Redwood and George T. Holloway, contained maps in colors showing the principal petroleum districts of the world, and Iltyd I. Redwood wrote on "Mineral Oils and their By-products."

Samuel Rideal discussed "Water and its Purification," and W. J. Atkinson Butterfield was heard from on "The Chemistry of Gas Manufacture." A. J. Wallis Taylor proposed "Motor Cars; or, Power Carriages for Common Roads" and "Carriages without Horses shall go" was the title of a paper on horseless locomotion, read before the British Association at Liverpool by A. R. Sennett. A. M. Drew Smith vouchsafed "Confidences of an Amateur Gardener," and "Gleanings on Gardens," chiefly on those of the ancient style in England, came from S. Felton. C. J. Cornish spent "Nights with an Old Gunner," which included other studies; and "Fish-Tails and Some True Ones," by Bradnock Hall, was intended for anglers. Vol. III of "The Sportsman's Library" was given to "The Sportsman in Ireland," and other issues were respectively "The Reminiscences of a Huntsman," by Hon. Grantley F. Berkeley, and "The Art of Deer Stalking," by William Scrope. "The Tame Fox and Other Sketches" came from Finch Mason, and "Mountain, Stream, and Covert: Sketches of Country Life and Sport in England and Scotland" from Alexander Innes Shand. Vol. III appeared of "British Dogs," devoted to "Practical Kennel Management," by Hugh Dalziel, D. G. T. Gray, Mrs. Jagger, and others, edited by W. D. Drury. In the "Isthmian Library" we had "The Complete Cyclist," by A. C. Pemberton, Mrs. Harcourt Williamson, C. P. Sisley, and Gilbert Floyd, edited by B. Fletcher Robinson, and illustrated; R. Allanson Winn gave his attention to "Boxing," and "Crocket" had its history, rules, and secrets set forth by Arthur Lillie in a book that was illustrated by Lucien Davis and others. "Golf in Theory and Practice" was by H. S. C. Everard, and K. S. Ranjitsinhji wrote "The Jubilee Book of Cricket."

Poetry.—From the Laureate of England came "The Conversion of Winckelmann, and Other Poems" of no particular merit, and from William Watson we had "The Hope of the World, and Other Poems" and "The Year of Shame," to which last the Bishop of Hereford contributed an introduction, and which was in part a reprint of "The Purple East." "New Poems" were announced from Francis Thompson, and "Green Arras" was a rather striking volume by Laurence Housman. Theodore Watts-Dunton chronicled "The Coming of Love," and Arthur Symons "Amoris Victima." "Poems" of J. L. Tupper were selected and edited by William M. Rossetti; Dora Sigerson (Mrs. Clement Shorter) published "The Fairy Changeling," with other poems; "Realms of Unknown Kings" came from Laurence Alma-Tadema; "Wild Flower Lyrics, and Other Poems," from J. Rigg; "A Light Load," from Mrs. Dollie Radford; "Ireland, with Other Poems," from Lionel Johnson; "Opals," from Olive Custance; "The Song Book of Bethia Hardacre," from Miss Fuller Maitland; "Fidelis, and Other Poems," from C. M. Gemmer; "Songs and Meditations," from Maurice Hewlett; "The Love-Philter, and Other Poems," from Helen F. Schweitzer; and "Poems," from Horace Smith. Richard Le Gallienne contributed a paraphrase of the "Rubaiyât of Omar Khayyam," and W. Alison Phillips translated "Selected Poems of Walter von der Vogelweide." "Australia to England" was the title of a poem by John Farrell on the occasion of the Queen's jubilee, and the "Jubilee Greeting at Spithead to the Men of Greater Britain" was written by Theodore Watts-Dunton. "Admirals All" was the title of a collection of vigorous verse about the sea and naval heroes, by Henry Newbolt; "A Day's Tragedy" was a novel in rhyme, by Allen Upward; "The Houses of Sin," by Vincent O'Sullivan, was as repulsive a volume as could be conceived in this decadent epoch, being given mostly to the praises

of corruption; and "Christ and the Courtesan," by R. H. Fitzpatrick, was an attempt at imitation of Rossetti. A. E. Hills was the author of "Elfin's Luck, and Other Poems"; Capel Shaw, of "Two Decades of Song"; James Downman, of "Shreds and Patches"; Herbert Warren, of "By Severn Sea"; Christian Burke, of "The Flowering of the Almond Tree"; Lisa Wilson, of "Verses"; and Clara S. Dickins, of "Margaret and Margarites." "The Battle of the Bays," by Owen Seaman, the author of "With Double Pipe," "Horace at Cambridge," and "Tillers of the Sand," was a delicious volume of humorous verse, recalling Calverley. "Songs of the Maid," by John Huntley Skrine, belong to the department of patriotic poetry; Scotland was the birthplace of "Poems," by J. B. Selkirk; "Songs of Love and Death," by Margaret T. Armour, were collected from magazines and papers; and a striking contribution to religious poetry was made in "The Desolate Soul," by Maria Monica. "From Dawn to Dark" came from George Milner; "Lays and Legends of the Wealds of Kent," from Miss Lilian Winsor; "Tannhäuser, and Other Poems," from H. E. Clarke; "The Cross beneath the Ring," from E. F. M. Benecke; "Ver Lyre," from Charles Newton Robinson; "Ballads of Revolt," from J. S. Fletcher; and "Poems for Little People and those of Larger Growth," from J. R. Eastwood. Edward Verrall Lucas compiled "A Book of Verses for Children," and "Red Apple and Silver Bells" was a book of verse for children of all ages by H. Hendry, illustrated by A. B. Woodward. "Selected Poems" of John Stuart Blackie were edited with an appreciation by Archibald Stodart Walker; Arthur Symons edited "A Selection from the Poems of Mathilde Blind"; Austin Dobson comprised in his "Collected Poems" all the verses written by him during the last thirty years in his opinion worthy of preservation; and George Meredith arranged his own "Selected Poems." "Selections from the Works of Sir Lewis Morris" were also published; Rev. D. C. Tovey accompanied "The Poetical Works of James Thomson" with a memoir and critical appendices; and E. K. Chambers edited "Poems of Henry Vaughan" in two volumes. "Chaucerian and Other Pieces" were edited from numerous manuscripts, by Rev. Walter W. Skeat, as a supplement to his edition of "The Complete Works of Geoffrey Chaucer," and Vol. IV completed the Centenary edition of "The Poetry of Robert Burns," edited by W. E. Henley and T. F. Henderson. Among collections of poetry are to be mentioned "The Flower of the Mind," a choice among the best poems made by Alice Meynell; "A Collection of Old Ballads," collected and edited by Andrew Lang; Vol. VII of "English Minstrelsy," a national monument of English song, collated and edited with notes and historical introductions by S. Baring-Gould; "Scottish Poetry of the Eighteenth Century," edited by George Eyre Todd for the "Abbotsford Series"; "Bards of the Gael and Gail"; examples of the poetic literature of Erin, done into English after the meters and modes of the Gael by Dr. George Sigerson; "English Lyrics from Chaucer to Poe, 1340-1849" were edited by William E. Henley; "English Lyric Poetry, 1500-1700" was selected by Dr. F. Ives for the "Warwick Library of English Literature"; A. T. Quiller-Couch edited "English Sonnets" in the "Diamond Library"; "English Epithalamies," edited by R. H. Case, formed one of the "Border Anthologies"; selections from the poetry of Wordsworth were edited by Edward Dowden and Andrew Lang respectively in the "Athenæum Press Series" and in the series of "Selections from the Poets"; John Churton Collins contributed a "Treasury of Minor British Poetry"; Francis Turner Palgrave compiled a second series of the "Golden

Treasury," embracing "Modern Poetry"; Dr Richard Garnett edited "The Poetry of Samuel Taylor Coleridge" for the "Muses Library"; "Four Poets: Selections from Wordsworth, Coleridge, Shelley, and Keats" came from Oswald Crawford; and "The White Ship" was the title of a little book of poems selected from the works of Dante Gabriel Rossetti. "The Poetry of Sport" was compiled for the "Badminton Library" by Hedley Peck. "The Case of Rebellious Susan" was a clever comedy in three acts by Henry Arthur Jones.

Voyages and Travels.—Englishmen traveled far and wide during 1897, and many made record of their experiences. Sir W. M. Conway described "The First Crossing of Spitzbergen," J. W. Gregory, A. Trevor-Battye, and E. J. Garwood making contributions to the volume; Abel Chapman visited "Wild Norway"; Mrs. Alec Tweedie went "Through Finland in Carts"; and Charles Edwardes, the author of "Letters from Crete," told of travels "In Jutland with a Cycle." "The Mount," by the late Philip Gilbert Hamerton, was a narrative of a visit to the site of a Gaulish city on Mount Beuvrey, with a description of the neighboring city of Autun; Bickford Smith furnished "Cretan Sketches"; Mrs. R. M. King described "Italian Byways"; Dr. Hans Gadow was at home "In Northern Spain"; and R. Thirlmere published "Idyls of Spain." "Servia" was described as the poor man's paradise by Herbert Vivian, and "The Land of the Bora," by "Snaffle," told of sport in Dalmatia and Herzegovina. E. Whyinper supplied "A Guide to Zermatt and the Matterhorn," and Grant Allen added "Cities of Belgium" to the series of "Historical Guides." Mrs. F. Max Müller wrote "Letters from Constantinople"; "The Sultan and his Subjects" were the theme of Richard Davey; W. M. Ramsay gave "Impressions of Turkey during Twelve Years' Wanderings"; Mrs. W. M. Ramsay described "Everyday Life in Turkey"; H. C. Thomson, the author of "The Chitral Campaign," in "The Outgoing Turk" recorded impressions of a journey through the western Balkans; and "Naples in the Nineties" came from Eustace Neville Rolfe. "Sketches of Travel in Normandy and Maine," by the late Edward A. Freeman, contained illustrations from drawings by the author, and a preface by W. H. Hutton. Clive Bingham took "A Ride through Western Asia"; "In Court and Kampong," by Hugh Clifford, contained tales and sketches of native life in the Malay peninsula; "The Ruined Cities of Ceylon" were visited by Henry W. Cave; "The Land of the Monuments," by Joseph Pollard, had an introduction by William Wright; Margaret M. Bottome in "A Sunshine Trip" caught glimpses of the Orient; "Picturesque Burma: Past and Present" came from Mrs. Ernest Hart; Sir George Scott Robertson's work upon "The Kaffirs of the Hindu-Kush" was illustrated by A. D. McCormick, and "Korea and her Neighbors," by Mrs. Isabella Bird Bishop, from photographs by the author; J. Hosie spent "Three Years in Western China"; Vol. II of "The Cities and Bishoprics of Phrygia" was issued; and "Letters from Armenia," from the scene of the recent massacres, came from James Rendel Harris and Helen B. Harris. A revised fourth edition was published of "Transcaucasia and Ararat," notes of a vacation tour in the autumn of 1876 by James Bryce, with a supplementary chapter on the recent history of the Armenian question, and from the same eminent authority we had "Impressions of South Africa" gained in a tour made in 1895. F. R. Statham described "South Africa as it is"; H. Lincoln Tange wrote "In South Africa"; "Soldiering and Surveying in British South Africa" was described by J. R. MacDonald; "British Central Africa"

DIVISIONS.	1896.		1897.	
	New books.	New editions.	New books.	New editions.
Theology, sermons, biblical, etc.	503	100	594	109
Educational, classical, and philological	529	114	692	236
Novels, tales, and juvenile works.	1,654	525	1,960	717
Law, jurisprudence, etc.	132	50	98	47
Political and social economy, trade, and commerce.	247	99	531	110
Arts, sciences, and illustrated works.	315	65	288	30
Voyages, travels, geographical research	191	32	173	48
History, biography, etc.	580	137	604	141
Poetry and the drama.	284	123	298	129
Yearbooks and serials in vols.	313	...	422	...
Medicine, surgery, etc.	117	45	152	59
Belles-lettres, essays, monographs, etc.	130	23	227	48
Miscellaneous, including pamphlets, not sermons.	239	26	210	8
Totals	5,234	1,339	6,244	1,682
		5,234		6,244
		6,573		7,926

was the theme of Sir Henry H. Johnston; and Mary H. Kingsley told of "Travels in West Africa." "Through Unknown African Countries" was an account of the first expedition from Somaliland to Lake Lamu, by A. Donaldson Smith; "The New Africa," by Aurel Schulz, M. D., and August Hammer, told of a journey up the Chobé and down the Okovanga rivers; and Vol. IV of "A Historical Geography of the British Colonies," by C. P. Lucas, covered "South and East Africa." Frances MacNab told of life "On Veldt and Farm"; "Nature and Sport in South Africa" came from no less an authority than H. A. Bryden, the author of "Kloof and Karroo"; and A. G. Bagot described vividly "Sport and Travel in India and Central America." Lord Brassey sailed "In the Sunbeam to New Zealand"; and Arthur P. Harper wrote of "Pioneer Work in the Alps of New Zealand." Albert F. Calvert described "My Fourth Tour in Western Australia." May Crommelin went "Over the Andes from the Argentine to Chili and Peru." "The Tenth Island," according to Beckles Wilson, was Newfoundland; G. W. Stevens termed the United States "The Land of the Dollar"; and Lady Howard of Glossop published her "Journal of a Tour through the United States." "Two Health Seekers in Southern California" were Dr. W. W. A. Edwards and Beatrice Harraden. "Leaders into Unknown Lands," by Arthur Montefiore, contained descriptions of six of the most famous journeys of recent explorers. The "Diary of a Tour through Great Britain in 1795" of Rev. William MacRitchie was edited by David MacRitchie; A. H. Rorway gave pictures of life "In the West Country," and described "Highways and Byways in Devon and Cornwall"; James J. Hissey illustrated his own wanderings "On Southern English Roads"; and H. Snowden Ward, with the assistance of Catherine Weed Ward, prepared "The Shakespearian Guide to Stratford-on-Avon." "The Ayrshire Homes and Haunts of Burns" came from H. C. Shelley. "The Pioneers of the Klondyke" was an account of two years' police service in the Yukon, narrated by M. H. E. Hayne, of the Northwestern Police, and recorded by H. West Taylor, illustrated by photographs taken on the spot by the narrator. "Roughing it in Siberia," by Robert Louis Jefferson, the author of "A wheel to Moscow," gave some account of the Trans-Siberian Railway and the gold-mining industry of Asiatic Russia; and "In the Land of Tolstoi," recording experiences of famine and misrule in Russia, was rearranged and rewritten by

Will Reason from the Swedish work of Jonas Stadling. Nansen's "Farthest North" was published simultaneously in England and the United States.

The table on p. 476 gives the figures of book production in England during the year, compared with those of 1896 from the columns of the "London Publishers' Circular."

LITERATURE, CONTINENTAL, IN 1897.

Notwithstanding the immense and ever-increasing mass of literary productions, it is believed that the following report, though necessarily condensed, gives a fair view of the year's work in both the highways and byways of literature:

Belgium.—Research in national history, active as always, has produced L. Delplae's "La Belgique sous la Domination française"; Count Oswald de Kerehove de Deuterghem's "Les Préliminaires de la Révolution belge de 1830" ("curious and piquant revelations"); H. Lonchay's authoritative "La Rivalité de la France et de l'Espagne aux Pays-Bas, 1635-1700"; Vol. I of "Monasticon Belgium," published by Dom Ursmer Berlière, a Benedictine monk; Victor Vander Haeghen's interesting inventory of the archives of Ghent; and H. Pirenne's curious "Livre de l'Abbé Guillaume de Ryckel, 1249-'72" (accounts of the abbey of St. Trond, showing the economic situation in the thirteenth century). The useful "Dictionnaire encyclopédique de Géographie historique de la Belgique," by Jourdain, Van Stalle, and de Heusch, is completed. Other historical works are E. Gossart's "Charles-Quint et Philippe II" and "Elizabeth of England and her Suitors"; G. Kurth's "Ste. Clothilde"; and F. Magnette's remarkable "Joseph II et la Liberté de l'Escaut." E. Hubert tells much that is new about "La Torture aux Pays-Bas autrichiens pendant le 18. Siècle." Under "Geography and Travel" are listed "En Égypte, Palestine et Grèce," by Father Portmans; "En Congolie," by the brilliant Edmond Picard (converted from opposition to the colony almost to enthusiasm); and the delightful "Lettres de Voyage," by the late Émile de Laveleye, the third and last volume of whose "Essais et Études" has also appeared.

In religious history there are A. van Hoonacker's "Les Nouvelles Études sur la Restauration juive"; "Essai d'Anthropologie chinoise," by Mgr. de Harlez; A. Camerlynck's "St. Irénée et le Canon du Nouveau Testament"; and Franz Cumont's masterly "Les Mystères de Mithra." Maurice de Wulf has an original work on "L'Esthétique de St. Thomas d'Aquin," and Crahay one "Sur la Politique de St. Thomas d'Aquin." A. Sluys and J. Verkoyen have studied "La Vie et les Œuvres de Comenius." A. Proost considers the "Réforme des Humanités." E. Matthieu recounts "L'Histoire de l'Enseignement primaire en Hainaut"; O. Pyfferoen makes remarkable "Rapports sur l'Enseignement professionnel en Angleterre et en Allemagne"; similar interesting investigations are Eugène Nève's "L'Enseignement professionnel des Industries artistiques en Europe" and Omer Buyss's "Les Écoles professionnelles et les Écoles d'Art industriel en Allemagne et en Autriche." In economics and sociology there are Henri Vander Linden's promising "Les Gildes marchandes dans les Pays-Bas au Moyen-Age," Gen. Brialmont's disquieting "L'Accroissement de la Population et ses Effets dans l'Avenir," socialist Hector Denis's "Histoire des Sciences économiques et socialistes," A. Allard's "La Crise agricole," and E. Nys's important "Études de Droit international." Literary history and criticism are contributed to in Tito Zanardelli's "Dante et ses Précurseurs," the interesting "L'Élément historique dans le Coronement Loois," by Léonard Willems, Edmond Picard's paradoxical "Discours sur le Renouveau au Théâtre," and the Jesuit A. J.

Delattre's "Le Cerveau Picaresque," a satire against Picard. Noteworthy prose works in *belles-lettres* are Georges Rodenbach's "Bruges la Morte" and "Le Carillonneur"; Arnold Goffin's "Le Thyse"; Paul Arden's "Vieilles Amours"; Eug. Demolder's "La Légende d'Yperdamme"; and Maurice Maeterlinck's drama "Aglavaine et Sélysette" (in his familiar manner).

In poetry, there are: a new series of "Poèmes" by the original and extravagant Émile Verhaeren, who in "Les Heures claires" appears "to wish to return to simplicity, clearness, and sincerity"; Maurice Maeterlinck's "Douze Chansons"; Ad. Hardy's promising "Croquis Ardennais"; the late Jean Casier's "Chants intimes" and "Eneensoir" and Édouard Ned's "Poèmes," classed as "Catholic poetry"; Léon Hennebicq's "Poèmes d'Hier et d'Aujourd'hui"; Gustave Kahn's "Limbes de Lumières"; Victor Arnould's "Chansons et Ballades"; Jean Delville's "Frisson de Sphinx"; and "Aurore et Couchant," by Mme. Amélie Struman-Picard, an old writer. "Deep-rooted disagreements" and "violent invectives" are attributed to "the young ones," whose books, moreover, are said to excite but little enthusiasm. Writing for the stage seems to be rarely cultivated. Noteworthy efforts are G. van Zype's drama "Tes Père et Mère," R. Ledent's "Les Entraves," and R. Warsage's "Marguerite," a comedy in verse.

In contrast with the agitation and polemics of French literature in Belgium, Flemish literature is in "a state of dull placidity." However, literary activity is increasing in variety, and national history and archæology, especially, are assiduously cultivated. Noteworthy work in this direction includes the curious "De Namen en de korte Geschiedenis der Huizen van Meehelen," by Ad. Reydam; Julius Frederichs's study on "the Inquisition in the old Duchy of Luxembourg up to the end of the sixteenth century"; the late J. J. Mulder's important study "on the stubborn resistance made by Antwerp in the sixteenth century to the edicts against the heresy of Protestantism in the reigns of Charles V and Philip II"; L. van Laeken's not very fair work "on the excesses of the Sansculottes in Flemish Belgium"; the celebrated "Keure van Hazebroek," published, with commentary, by Ed. Gailliard; and J. van Hoorde's fine essay on the landscape painters Xaveer and Cesar de Coek. M. de Quéker has studied "the action of official and private beneficence." Prof. Vercoullie is preparing a new edition of his excellent etymological dictionary of "the tongue of the Netherlands." Hipp. Meert's "Distels" deals with mistakes of style committed by most Flemish writers when using their mother tongue. Jan Bols, a priest, has printed "Honderd oude vlaamsche Liederen," and we are told that here, as in Holland, successful efforts are being made to popularize such old songs. There is little prose fiction of the first class. The freshest and most original is "De gouden Vlinder," by Hendrik de Marez, a promising beginner; Cyrille Buyss has produced better work than the novel "Op't Blauwhuis"; "Driften," by R. Stijus, is called "a collection in extravagant colors"; and "Van Vrouwenleven" is uninteresting prose by Hélène Lapidoth-Swarth, whose reputation as a poet is borne up in "Diepe Wateren." There is no other poetry of real importance to record, and the plays published are generally mediocre. "De Herbergprinses" by Nestor de Tière is a libretto for which Jan Bloekx wrote admirable music; the piece enjoyed a brilliant success.

Bohemia.—Publications illustrating national development are the valuable work, describing all artistic objects in the kingdom, issued by the Bohemian Academy (third volume); L. Niederle's "O

původu Slovanů. Studie k. slovanským starožitnostem"; Hostinský's treatise on Bohemian popular songs and ballads; an ethnological description of Bohemia in course of preparation by the Academy; and Jaroslav Goll's interesting and not unpleasantly prejudiced "Čechy a Prusy ve Středověku" (relations between Prussia and Bohemia). Stolba writes of Holland "Na pudě moři urvané"; and St. Vráz has published, in the magazines, interesting pictures of the islands of eastern Asia. Of literary criticism and history there is little—Vrehlický's "Studies and Portraits," Jar. Vlček's "History of Bohemian Literature," Ernst V. Kraus's "Goethe a Čechy" (Goethe and Bohemia), Matthias Murko's "Deutsche Einflüsse auf die Anfänge der böhmischen Romantik," and biographies such as Vlček's "Safařík" and Jakubec's "Ant. Marek." "In fiction, Bohemian literature still lacks the modern novel of character." Stories are numerous, but originality is rarer. The most successful seem to be those describing the life of the country people of Bohemia, such as Rais's "Pantáta Bezoušek," Vřesníek's "Na hrubé hroudě," and Klosterman's "Skláři" and "V srdci hvozdu šumavských." Also to be noted are "Návštěvy," "Maloměstská šlechta," and "God among the People" (a study of beliefs), by Herites, who lays his scenes, as usual, in small country towns; the popular Kosmák's "Kaleidoscope Pictures" of rustic life; Hermann's "Two Prague Idyls"; V. Mrštík's "Tale of May"; "Bavlnkový Zeny" (successful pictures of the Slavonians of Moravia), by the brothers Mrštík; M. Havel's "Poslední svého rodu" and "Rodiny dvou sester" (tales of middle-class society); and a third collection of gorgeous "Retouched Pictures" of past ages, by Zeyer. In poetry, too, there is little that rises above the mass of mediocrity, of first collections by young men. Noteworthy are Čech's "Prayer to the Unknown" (seems to mark the summit of his power); Vrehlický's "Collected Works" (reflective verses in a minor key); Neruda's posthumous "Friday Songs" (fine, powerful, patriotic); Maehar's poems of 1893-'96 (among his best); Heyduk's pleasant lyrics "Ptačí Motivy" and "Nové eiganské Melodie"; Sládek's melancholy "In the Winter's Sun" Sová's "Calmed Mournings"; Dvořák's "Meditations" (prominent among the works of the young Roman Catholic poets by its "fine language and earnest religious spirit"); and the fervent verse of Neuman (one of the "young authors who form the group of the 'Modern Review'").

Dramatic literature also includes many attempts by beginners, as well as Zeyer's "Donna Zaneha" and "Zdob ružového jitra" (a "pretty pastoral of biblical times"), Vrehlický's tragedy "Marie Calderonová" and "Epinona" (drama of Christian martyrdom in Rome), and Svoboda's remarkable "Dědečku, dědečku!" (simple picture of domestic life). Literary vigor seems to have abated somewhat, on the whole, though much has still been published.

Denmark.—An important history of Denmark, by J. Steenstrup, E. Holm, Kr. Erslev, A. Heise, W. Møllerup, J. A. Fredericia, and A. D. Jørgensen, is appearing. Julius Clausen's "Frederik Christian, Hertug af Augustenborg (1765-1814). En monografisk Skildring"; H. Beystrup's "Christen Berg: En dansk Politikers Udviklingshistorie, 1829-'66"; V. Dahlerup's "Det danske Sprogs Historie i almenfattelig Fremstilling"; F. Rønning's "Rationalismens Tidsalder. Sidste Halvdel af 18. Århundrede"; P. Hansen's "Den danske Skueplads. Illustreret Theaterhistorie" (completed); A. Aumont and E. Collin's "Det danske Nationalteaters Historie"; R. Petersen's "Frederik Barfod," all have a national interest. Hans Kaarsberg's "Nor-

dens sidste Nomade" describes the Laplanders. H. Vodskov writes on early "Sjæledyrkelse og Naturdyrkelse." In art criticism there are Karl Madsen's monograph on the Danish painter J. Th. Lundbø and F. Beckett's study of Florentine art and "Renaissanceen og Kunstens Historie i Danmark."

Not much of value seems to have appeared in *belles-lettres*, though in the matter of form a high degree of perfection has been reached. New novels and stories are the veteran H. F. Ewald's historical novel, "Liden Karsten, en Fortælling fra Kong Hanses Dage"; Herman Bang's "Ludvigsbakke" (showing "keen perception of the small things in character and human life"); Karl Gjellerup's "Mollen" (novel of country life, elaborate character analysis); Karl Larsen's "Uden for Rangklasserne" (sketches of Copenhagen life and slang); the humorous stories of S. Sehandorph ("Frigjort" and "Frøken Gram") and G. Wied; the humorous "Kuriøse Historier fra Heksenes Tid," by Woldemar (pseudonym); "Den yderste Dag," by Johannes Jørgensen, the brilliant poet, who has of late years gone deeply into religious speculation; Mme. Matilda Mallings "Eremitage—Idyllen" (idolizing Rousseau); Ernesto Dalgas, a newcomer, presents "Krøniker," tales, some collected, others original, marked by refined taste, though somewhat strongly colored. Lyric poetry is supplied in "Hinsides Bjergene" (Italian pictures in good verse) by Otto C. Fønns; the gifted young Helge Rode's volume of poems, showing serene yet intense feeling; and Aage-Matthison Hansen's "Stjernerne." A revised and altered edition of Holger Drachmann's "Strandby Folk" has been produced.

France.—Again the Revolution and the first empire have furnished subjects for a number of noteworthy books: Charles Gomet's "L'Histoire financière de l'Assemblée Constituante"; Henri Welschinger's excellent "L'Histoire du Roi de Rome"; Count Murat's "L'Histoire des Campagnes du Roi Murat en Espagne"; "L'Histoire de l'Armée de Condé," by Bittard des Portes; "Une Famille vendéenne pendant la grande Guerre: Mémoires de Bouteillier de Saint-André"; Col. de Pontbriand's "Les Guerres de la Chouannerie"; Countess Potoeka's memoirs on Napoleon's stay in Poland; Baron du Bourgoin's "Souvenirs Militaires"; Marquis de Maleyssie's "Mémoires d'un Officier aux Gardes françaises, 1789-'93" (excellently edited by G. Roberti); the entertaining "Mémorial de I. de Norvins" (social history of the times); F. Masson's "Napoléon et sa Famille" (an "excellent guide through the enormous Napoleon literature of the last few years"); Albert Sorel's "Bonaparte et Hoche en 1797" (a clear representation of a decisive year); and Léon Lecestre's edition of Napoleon's "Lettres inédites (An VIII—1815)," which had been unpublished hitherto as likely to diminish the prestige of the emperor. M. C. d'Arguzon's book on Hortense Beauharnais is good, but to be taken *cum grano salis*. Continued interest in the second empire is shown in Villefranche's impartial "Histoire de Napoléon III"; Lamy's "Essai sur la Guerre de 1870" (favorable portrait of Napoleon); Gen. Fleury's very interesting "Mémoires"; the Marquis Philippe de Massa's "Souvenirs et Impressions, 1840-'71"; Imbert de Saint-Amand's "Louis Napoléon et Mademoiselle de Montijo" (dispassionate and truthful) and "Napoléon III et sa Cour"; and Palat's "Bibliographie générale de la Guerre de 1870-'71" (compiled with more diligence than judgment). Recent history is told in E. Zevort's "L'Histoire de la Troisième République" (an excellent, impartial summary); "L'Alliance franco-russe," by Jules Hansen, a Dane by birth; Jules Ferry's "Discours" (Vol. VI); Count de Mun's

speeches (6 vols.), a record of fascinating eloquence; Henri Doniol's "M. Thiers: le Comte de Saint-Vallier: le général de Manteuffel. Libération du Territoire, 1871-73. Documents inédits"; Challemel-Lacour's speeches (masterpieces); the Duc de Broglie's "Histoire et Politique"; "Œuvres posthumes du Général Trochu: La Société, l'État, l'Armée, le Siècle de Paris"; Jules Simon's posthumous delightful "Derniers Mémoires des Autres"; the ardent Bonapartist Prosper Mérimée's "Une Correspondance inédite" with the Legitimist Mme. de La Rochejacquin; and Victor Hugo's "Correspondance, 1815-35." Eugène Pierre describes the "Politique et Gouvernement" of France. Various older periods of French history form the themes of Maurice Prou's "La Gaule Mérovingienne"; N. Jorga's "Philippe de Mézières (1327-1405) et la Croisade au XIV^e Siècle"; Ch. Baudouin de Mony's "Relations politiques des Comtes de Foix avec la Catalogne jusqu'au Commencement du XIV^e Siècle"; "Les Libertins en France au XVII^e Siècle," by F. T. Perrens ("libertins" here meaning "free-thinkers"); "Le Père Joseph et Richelieu," by Gustave Fagniez (picturing the dual rôle of the "Éminence grise" as missionary and diplomat); "Memoirs of the Duke of Cröy on the Court of Louis XV and of Louis XVI"; and Pierre de Nolhac's "Études sur la Cour de France. Marie-Antoinette, Dauphine." Édouard Drumont has issued a second series of his "Mon vieux Paris." Frantz Funck-Brentano traces "Origines de la Guerre de Cent Ans." Schlumberger's masterly "L'Épopée byzantine à la Fin du X^e Siècle" and K. Waliszewski's "Histoire de Pierre le Grand" are cited as good examples of thorough research presented in an attractive style. "Études d'Histoire du Moyen Âge, dédiées à Gabriel Monod," is a graceful tribute, which serves also to show French advance in historiography, a subject dealt with in H. d'Arbois de Jubainville's "Deux Manières d'écrire l'Histoire: Critique de Bossuet, d'Augustin Thierry et de Fustel de Coulanges." Miscellaneous contributions to history are Ch. Seignobos's "Histoire politique de l'Europe contemporaine, 1814-96" ("remarkable for its range and insight"); I. Bourlier's "Les Tchèques et la Bohême contemporaine"; M. A. de Bovet's "La jeune Grèce"; C. de la Jonquière's "Les Italiens en Érythrée"; Count Benedetti's "Essais diplomatiques" (new series); and Victor Bérad's "La Politique du Sultan" (history of the Armenian massacres). In biographical literature we have: F. Picavet's "Gerbert: un Pape philosophe"; B. de Monvel's "Jeanne d'Arc"; Eugène d'Eichthal's impartial, forceful presentation of "Alexis de Tocqueville"; Gagnière's correspondence of the Duchess of Burgundy; De la Brière's "Champollion inconnu"; Pierre de Ségur's life of the famous Mme. Geoffrin, entitled "Le Royaume de la Rue Saint-Honoré" (referring to her *salon*); "Une Éducation impériale: Guillaume II," by F. Ayme, instructor in French to the Princes William and Henry during 1875-77; Maurice Leudet's fairly unbiased "Guillaume II intime"; E. Mailard's "Le Président Félix Faure"; and "Pasteur: The History of a Spirit," by Duclaux. In the broad division "Description and Travel," including much social history and records of colonization, belong: H. Taine's posthumous "Carnets de Voyage: Notes sur la Province" (impressions of French provincial life); Pierre de Coubertin's "Souvenirs d'Amérique et de Grèce"; Mme. Alphonse Daudet's "Notes sur Londres"; Henri Ramin's "Impressions d'Allemagne" (not entirely trustworthy); J. G. Freson's "Terre germanique: études sur l'Art, les Mœurs, la Politique"; J. C. Brousolle's "Pèlerinages ombriens"; Pierre Leroy-Beaulieu's "Les nouvelles Sociétés anglo-saxonnes" (English colonies in Aus-

tralia and South Africa); Louis Malosse's "Impressions d'Égypte" (charming descriptions; anti-British); G. Vullier's "La Tunisie"; Commandant Toutée's "Dahomé, Niger, Touareg: Récit de Voyage"; "Une Mission française en Abyssinie," by Vignères; P. Combes's "L'Abyssinie en 1896: le Pays, les Habitants, la Lutte italo-abyssine"; Émile Sénart's "Castes dans l'Inde" ("studied with much philosophic method"); and works by Blavet on Madagascar, Dubois on Timbuctoo, Félix de Rocea on the Amou Daria. Contributions to economics and sociology, numerous, as always, include the Vicomte d'Avenel's curious "La Mécanisme de la Vie sociale"; Maurice Block's accurate and impartial "Petit Dictionnaire politique et social"; Ernest Babelon's "Les Origines de la Monnaie considérées au Point de Vue économique et historique"; Jules Roche's polemical "L'Impôt sur le Revenu" (against the income tax); Anatole Leroy-Beaulieu's vigorous arraignment of "L'Antisémitisme"; P. Guillot's "Les Assurances ouvrières"; P. de Rousiers's "Le Trade-Unionisme en Angleterre"; A. Métin's "Le Socialisme en Angleterre"; E. Seillière's "Études sur Ferdinand Lassalle"; Henri Mazel's "La Synergie sociale"; Th. Funck-Brentano's "Morale politique. La Science sociale"; E. Durkheim's "Le Suicide: Étude sociologique"; A. Delvincourt's "La Lutte contre la Criminalité dans les Temps modernes"; F. Gairal's "Le Protectorat international"; I. I. de Lanessan's "Principes de Colonization"; and F. Quéniën's "Histoire de la Colonisation française." A. Revivère's "Les Femmes dans la Science" appears in an enlarged edition. In naval circles F. E. Fournier's "La Flotte nécessaire: ses Avantages stratégiques, tactiques et économiques" has received deservedly much attention. E. Delaperrière's "La France administrative et l'Armée" and "La France économique et l'Armée" deal with an important subject. Of philosophical works, the most noteworthy is Fouillée's admirable "The Positivist Movement and the World's Conception of Sociology." Th. Ribot writes of "L'Évolution des Idées générales." Albert Réville's "Jésus de Nazareth: Études critiques sur les Antécédents de l'Histoire évangélique et la Vie de Jésus" is another contribution to Christology. "Literary criticism," we are told, "is in a very flourishing state." The statement is borne out by noteworthy works, such as Virgile Rossel's conscientious "Histoire des Relations littéraires entre la France et l'Allemagne" and "Histoire de la Littérature française hors de France"; Adolphe Jullien's "Le Romantisme et l'Éditeur Renduel" (a history of a "period of brilliant literary vigor"); "Penseurs et Poètes," by Gaston Paris; Father Pacheu's "De Dante à Verlaine" (a "conscientious study of mysticism in literature"); Gaston Jourdan's authoritative "Histoire du Félibrige (1854-96)"; F. Brunetière's "Le Roman naturaliste"; E. Gilbert's "Le Roman en France pendant le XIX^e Siècle"; Hugo P. Thieme's "La Littérature française du XIX^e Siècle" (a bibliography, incomplete and deficient); Henri Weil's charming "Études sur le Drame antique"; Charles Dejob's "Études sur la Tragédie" (continuing his studies on the literary relations of France and Italy); Jules Lemaitre's lively and witty "Impressions de Théâtre" (treats the younger school fairly but does not favor it); René Doumic's "Essais sur le Théâtre contemporain" ("solid and a little gloomy"); E. M. de Lyden's "Le Théâtre d'autrefois et celui d'aujourd'hui" (anecdotic); Catulle Mendès's "L'Art au Théâtre" (republishing of dramatic criticisms on plays produced in 1895); and Hippolyte Lencou's "Le Théâtre nouveau" (interviews with French dramatists, on the influences in contemporary French drama). Modern literary movements furnish matter for Ernest La

Jeunesse's readable "Les Nuits, les Ennuis et les Âmes de nos plus notoires Contemporains" (peculiar criticism, "of a sort of audacious impertinence"); Lucien Muhlfeld's "Le Monde ou l'on imprime" (indiscriminate praise of the "Jeunes"; style labored); Remy de Gourmont's "Le Livre des Masques" (disappointing; uniform laudation); Jacques Plowert's "Petit Glossaire pour servir à l'Intelligence des Auteurs décadents et symbolistes," and Victor Charbonnel's "Les Mystiques dans la Littérature présente," all three dealing with the symbolists; and Maurice Le Blond's "Essai sur le Naturalisme" (heralded by the author as the very newest literary school). Monographs on individual writers are those by the Duc de Broglie on Malherbe, André Hallays on Beaumarchais (admirable), and Gaston Deschamps on Marivaux (all three in the series "Grands Écrivains français"); A. Rousset's "Lamennais intime"; Henry Hârisse's "L'Abbé Prévost"; Edmond Biré's laudatory book on Honoré de Balzac; "Autour d'Honoré de Balzac" (containing much new information), by Vte. Spoelberch de Lovenjoul, whose "La véritable Histoire de 'Elle et Lui'" (favorable to George Sand) and Paul Mariéton's "Une Histoire d'Amour" are two interesting works on the love affairs of George Sand and Alfred de Musset; Michel Revon's "George Sand"; a brilliant study of Leconte de l'Isle, by Jean Dornis (pseudonym of a lady); Hector Malot's autobiographical "Le Roman de mes Romans"; E. Toudouze's physiological, psychological, and pathological analysis of Zola; and Antoine Laporte's "Emile Zola: l'Homme et l'Œuvre" (contains an excellent bibliography). The literature of art has been enriched by Robert de la Sizeranne's "Ruskin et la Religion de la Beauté"; Gustave Larroumet's "Little Portraits and Art Notes" (showing fine and acute critical taste); Riérons-Gevaert's judicial "Essai sur l'Art contemporain"; the useful and interesting "Répertoire de la Statuaire grecque et romaine" (Vol. I of which is a pocket edition of Clarac's "Musée de Sculpture"), by Salomon Reinach, author also of "La Sculpture en Europe avant les Influences gréco-romaines" and "Chroniques d'Orient," second series, 1891-'95.

Productions in prose fiction deserving special mention are Pierre Loti's Basque story "Ramuntcho" (hailed as a masterpiece, although some critics find that "washed-out emotionality" goes hand in hand with his "passionate passages of love" and "sad strains"); Vte. M. de Vogüé's "Jean d'Agrève" (brilliant style, delightful descriptions); René Bazin's "With all one's Soul" ("fine and searching analysis"); Anatole France's "L'Orme du Mail" (lively, witty sketches of life in the provinces); Émile Pouillon's delicate love idyl "L'Image"; Maurice Paléologue's "On the Ruins"; Paul and Victor Margueritte's gay "Le Carnaval de Nice" and "La Pariétaire" (short stories); Bernard Lazare's "Les Porteurs de Torchés"; the late Alphonse Daudet's "Le Trésor d'Arlatan" (a sketch of the district Camargue) and "Fédor: Pages de la Vie"; J. K. Huysmans's "La Cathédrale" (in which the author "endeavors to interpret the cathedral of Chartres"); Édouard Rod's "Là-Haut" ("one of his best") and "L'Innocente"; and Paul Bourget's "Recommencements" (10 tales, admirably told) and "Voyageuses" (6 short stories). Further new works of fiction are E. Daudet's "Les Fiançailles tragiques," "Rolande et Andrée," and "Pauline Fossin"; G. Ohnet's "Le Curé de Favières"; François Coppée's "Coupable" (seems to differ from the ordinary *feuilleton* novel only in its exquisite style); J. H. Rosny's "Un double Amour" and "Une Rupture"; Léon Daudet's "Suzanne" (not very happily conceived nor composed) and "La Flamme et l'Ombre"; Marcel Prévost's "Dernières

Lettres de Femmes"; Hugues Le Roux's "Le Maître de l'Heure"; "Arc en-Ciel et Sourcil rouge," by C. Mendès; P. Maël's "Castel-rouge" and "Bois d'Amour"; R. Maizeroy's "Joujou"; J. de La Brète's "L'Imagination fait le Reste"; Charles de Berkeley's "Marcelle," a pretty little love story; Émile Ollivier's "Marie-Magdeleine" (with an autobiographical tinge); "Passions de jeunes Filles," by P. Sales; "Noblesse Américaine," by Pierre de Coulevain (pseudonym of Mlle. A. Favre); "Un Divorce," by Th. Bentzon (Mme. Blanc), an early work, commonplace; Mme. Caro's well-written "Idylle Nuptiale"; Mme. H. Malot's "L'Amour dominateur"; and new issues in the series "Romans pour les jeunes Filles": A. Robida's "Le Mystère de la Rue Carême-prenant" ("admirable character studies, charming pictures of scenery, strong analysis"); Jean Thierry's bright "M. le Neveu"; and Jean Bertheroy's heavy, stilted "Les trois Filles de Pieter Waldorp." Poetry is still in a languid state. The Academy bestowed the Prix Boileau-Despréaux on "La Maison de l'Enfance," by Fernand Gregh, a newcomer (somewhat influenced by Verlaine), who has been much praised. Auguste Angellier's "À l'Amie perdue" also attracted attention. The following plays have been produced: Victorien Sardou's "Spiritisme" ("an anecdotal drama"; a "complete and deserved failure," says an American writer); "Messidor," a lyrical drama, text by É. Zola, music by A. Bruneau; Jules Case's "La Vassale" (another sex-problem play); Albert Gainon's "Le Partage" (a mournful picture of the sufferings of a lover jealous of the husband of his mistress); Auguste Germain's brilliantly successful "L'Étranger"; Pierre Denis's drama "Jusqu'à la Mort" ("À la Vie! À la Mort"? A dramatization of Gen. Boulanger's career); Pailleron's "Mieux vaut Douceur — — — et Violence" (two one-act plays); Paul Hervieu's comedy "La Loi de l'Homme" (has same merits and faults as his "Tennilles"); "L'Évasion," comedy (a strong satire on the theory of atavism) and "Bienfaiteurs," comedy (didactically moral), both by Brieux; Abel Hermant's comedy "La Carrière" (great success, much literary merit); "Snobs," by Gustave Guichés; Maurice Donnay's "La Douleuse" ("a comedy of love," plot complicated, "surroundings cleverly reproduced"); and Jean Richepin's "Le Chemineau" (a rustic comedy, "an *opéra comique* in fine verse").

Germany.—In historical literature there has been a flood of patriotic publications, called forth by the centenary of the birth of William I, notably those by W. Oncken ("Unser Heldenkaiser") and O. Lorenz. Victor von Strantz's "Illustrierte Kriegschronik" is a republication of illustrations which appeared in 1864, 1866, and 1870-'71 in the Leipzig "Illustrierte Zeitung."

Further contributions to national history in its various phases are Hermann Grimm's "Beiträge zur deutschen Culturgeschichte" ("a noble little book," personal in tone); "Geschichte der rheinischen Städtekultur," by Heinrich Boos; Albert Naudé's reliable "Beiträge zur Entstehungsgeschichte des Siebenjährigen Krieges"; Heinrich Friedjung's "Der Kampf um die Vorherrschaft in Deutschland, 1859-'66" (thorough); Oscar v. Lettow-Vorbeck's excellent "Geschichte des Krieges von 1866 in Deutschland"; Albert Pfister's "Aus dem Lager des Rheinbundes 1812-'13" (full account of part played by Würtemberg); Heinrich v. Poschinger's "Fürst Bismarck und der Bundesrat" (material collected rather than digested; adversely criticised by H. Kohl); L. Rösel's "Alt-Nürnberg" (1895); E. Reicke's "Geschichte der Reichsstadt Nürnberg"; and "Kaiser Wilhelm II als Redner: eine Sammlung der Reden des deutschen Kaisers"

von 1889 bis 1896." Bruno Wagener, in "Kaiser, höre die Wahrheit," appeals to the Emperor to become a *Volkskaiser*, instead of remaining a *Hof- and Parteikaiser*. Georg Wislicenus shows us "Deutschlands Seemacht sonst und jetzt." Noteworthy additions to the history of other countries are A. Brückner's "Geschichte Russlands bis zum Ende des 18. Jahrhunderts"; Wittmann's "Abriss der schwedischen Geschichte"; Robert Davidson's valuable "Geschichte von Florenz" (critical, yet forms pleasant reading); Benger's "Rumänien: ein Land der Zukunft, 1866-96" (a record of recent progress); and N. I. Hofmeyr's "Die Buren und Jamesons Einfall in Transvaal." The Prussian Historische Institut in Rome has begun the publication of "Quellen und Forschungen aus italienischen Archiven." In ancient history we have Julius Beloch's "Griechische Geschichte" (Vol. II); Hermann Peter's "Die geschichtliche Literatur über die römische Kaiserzeit bis Theodosius I. und ihre Quellen"; and Otto Seeck's "Geschichte des Unterganges der antiken Welt" (Vol. II). Under "Description and Travel" are noted G. Hirschfeld's "Aus dem Orient"; Oswald Kunhardt's "Wanderjahre eines jungen Hamburger Kaufmannes: eine Reise um die Erde in 1000 Tagen"; Gustav Brühl's "Zwischen Alaska und Feuerland"; Bernhard Stern's "Zwischen Kaspi und Pontus: kaukasische Skizzen"; and Jean Habel's "Ansichten aus Südamerika" (valuable illustrations). New memoir literature and biography include C. Beyer's "Ludwig II., König von Bayern: ein Charakterbild" (offering little that is new); Martin Philippson's "Der grosse Kurfürst Friedrich Wilhelm von Brandenburg," 1. Theil: 1640-60 (not very original); Hans Blum's "Fürst Bismarck und seine Zeit" (Vol. VI, to 1895); Georg Schmidt's "Schönhausen und die Familie von Bismarck, bearbeitet im Auftrage der Familie"; M. Kronenberg's "Kant: sein Leben und seine Lehre"; Theodor Schliemann's "Heinrich von Treitschke's Lehr und Wanderjahre, 1834-66"; Willibald Beyschlag's "Aus meinem Leben"; Wilhelm Lang's "Graf Reinhard: ein deutsch-französisches Lebensbild, 1761-1837"; Alfred Bröckel's "Gutenberg: sein Leben, sein Werk, sein Ruhm"; "Tagebücher des Grafen August v. Platen," 1. Bd. (of interest); Mosapp's "Charlotte von Schiller"; "Zwingli's Stellung zur Schrift" (1896), by E. Nagel; and Georg Finsler's "Zwingli-Bibliographie" (1897), both excellent; monographs by G. Buchwald, A. Nebe, Paul Kaiser, etc., called forth by the quadricentennial of Philip Melancthon's birth; "Briefe von Richard Wagner an seine Zeitgenossen, 1830-83, zusammengestellt von Emerich Kastner"; A. v. Wenckstern's "Marx"; and Jacob von Falke's "Lebenserinnerungen" (gives a picture of the minor German states, and of the revival of art industry in Germany). Sociological topics are dealt with in Ernst Grosse's excellent "Die Formen der Familie und die Formen der Wirthschaft"; Georg Adler's interesting "Die imperialistische Socialpolitik: D'Israeli, Napoleon III, Bismarck"; Alfred Vierkant's "Naturvölker und Kulturvölker: ein Beitrag zur Socialpsychologie"; L. Stein's "Die sociale Frage im Lichte der Philosophie: Vorlesungen über Socialphilosophie und ihre Geschichte"; and Jos. Stammhammer's "Bibliographie der Socialpolitik." The relations of the Church to social conditions are dealt with in Fr. Naumann's "Was heisst christlich-sozial?" and Paul Göhre's "Die evangelisch-soziale Bewegung." Irma von Troll-Borostyani, in "Das Weib und seine Bekleidung," pleads earnestly for dress reform. Ritaro Hata offers "Gedanken eines Japaners über die Frauen, insbesondere über die japanischen." Otto Dornblüth, in "Die geistigen Fähig-

keiten der Frau," favors the higher education of women. A steady stream of pamphlets on the woman question is pouring from the press (some recent ones are E. von der Decken's "Die gebildete Frau und die neue Zeit"; Eliza Ichenhaeuser's "Die Ausnahmestellung Deutschlands in Sachen des Frauenstudiums" and M. Kronfeld's "Die Frauen und die Medicin," both favoring university education for women; "Die Erziehung der weiblichen Jugend in den höheren Berufsklassen vom 15. bis zum 20. Lebensjahre," two essays, by Luise Hagen and Anna Beyer; and O. Lassar's "Das medicinische Studium der Frau") and periodicals such as "Die Frauenbewegung" (Berlin), "Neue Bahnen" (Leipzig), "Die Gleichheit" (Stuttgart), "Die Frau" (Berlin), and "Die Hilfe" (Berlin) are representing the interests of women. "Der geniale Mensch" is considered by Hermann Türk. Educational history includes Georg Kaufmann's "Geschichte der deutschen Universitäten" (Vol. II); Athanasius Zimmermann's "Die Universitäten in den Vereinigten Staaten Amerikas: ein Beitrag zur Culturgeschichte"; third edition of Heinrich Schroeder's "Oberlehrer, Richter, Offiziere" (a picture of the wretched situation of German teachers); and H. Bonfort's pamphlet on "Das Bibliothekswesen in den Vereinigten Staaten." Eduard Hartmann philosophically illuminates "Tagesfragen," such as woman, the duel, gambling, etc., and aims at solving the problem of "Kategorienlehre." Otto Willmann's "Geschichte des Idealismus" (Vol. II) is written *con amore*. Max Schneidewin's theme is "Die Antike Humanität." "Nietzsche's Welt- und Lebensanschauung" is studied by Otto Ritschl. Ludwig Büchner strikes the balance of the century in the various branches of mental and public activity in "Am Sterbelager des Jahrhunderts: Blicke eines freien Denkers aus der Zeit in die Zeit." Among the literature called forth by the controversy on the ethics of dueling, two pamphlets by Georg von Below, "Das Duell und der germanische Ehrbegriff" and "Das Duell in Deutschland," deserve notice. Eduard Meyer's valuable "Die Entstehung des Judenthums: eine historische Untersuchung," Adolf Harnack's "Die Chronologie der altchristlichen Litteratur bis Eusebius," and Fritz Hommel's "Die alt-israelitische Ueberlieferung in inschriftlicher Beleuchtung" ("a strong protest against the modern school of Old Testament criticism") are noteworthy in the section "Religion and Theology." Noteworthy miscellaneous works are the brilliant Otto Gildemeister's "Essays: hrsg. von Freunden" (Vol. I); Albrecht Ritschl's "Gesammelte Aufsätze, neue Folge," collected by his son; Heinrich v. Treitschke's "Historische und politische Aufsätze" (Vol. IV); and Ludwig Bambergers "Gesammelte Schriften" (Vol. V). In literary history and criticism there are Richard Wülker's very important "Geschichte der englischen Litteratur"; Carl Küchler's "Geschichte der isländischen Dichtung der Neuzeit"; Gustav Körting's unsatisfactory "Geschichte des griechischen und römischen Theaters" (Vol. I of "Geschichte des Theaters in seinen Beziehungen zur Entwicklung der dramatischen Dichtkunst"); Johannes Volkelt's interesting "Aesthetik des Tragischen"; Alfred von Berger's "Studies and Criticisms" (upholding "the exalted models of the great writers"); Ludwig Geiger's "Dichter und Frauen" (essays on "loves of the poets"); Th. Gompertz's admirable "The Greek Thinkers"; J. Barnstorff's "Young's Nachtgedanken und ihr Einfluss auf die deutsche Litteratur"; "Litteratur und Theater," by Maximilian Harden, a clever critic but a *poseur*, anxious to be original, we are told; a little volume on theatrical matters in Berlin by Paul Linsemann, who finds much to criti-

eise; H. Milke's "Der deutsche Roman des 19. Jahrhunderts"; "Die deutsche Dichtung der Gegenwart: die Alten und die Jungen," by Adolf Bartels; Siegmund Schultze's "Wege und Ziele deutscher Literatur und Kunst" (adversely criticised); Alfred Bassermann's "Dante's Spuren in Italien," richly illustrated; "Dante, sein Leben und sein Werk, sein Verhältniss zur Kunst und zur Politik," by F. X. Kraus; Julius Burggrafs "Schiller's Frauengestalten" (dealing with the influence of woman on the poet); Friedrich Zarncke's posthumous "Kleine Schriften; 1. Band: Göthe-Schriften," collected by his son Eduard; Rudolf Steiner's "Goethe's Weltanschauung"; Hans K. Freiherr v. Jaden's "Theodor Körner und seine Braut" ("nothing new"); Erich Petzet's "Johann Peter Uz. Zum 100. Todestage des Dichters"; the third and last volume of "Gottfried Keller's Leben: seine Briefe und Tagebücher," by J. Baechthold; A. Römer's "Fritz Reuter in seinem Leben und Schaffen"; pamphlets by J. Wormstall ("Annette v. Droste-Hülshoff im Kreise ihrer Verwandten und Freunde"), J. Riehmann ("Erläuternde Bemerkungen zu Annette v. Droste-Hülshoff's Dichtungen"), and others, reviving the memory of a noted lyric poet; Michel Maria Rabenlechner's "Hamerling: sein Leben und seine Werke" (new material); K. Thdr. Galdert's "Emanuel Geibel"; A. B. Faust's "Charles Sealsfield, der Dichter beider Hemisphären"; Paul Gerber's "Wilhelm Raabe: eine Würdigung seiner Dichtungen"; and Adolf Bartels's "Gerhart Hauptmann." W. Dörpfeld and Emil Reisch's "Das griechische Theater: Beiträge zur Geschichte des Dionysos-Theaters in Athen und anderer griechischer Theater" throws important light on the question of the form of the Greek stage. And in the literature of art there are Adolf Furtwängler's "Intermezzi: kunstgeschichtliche Studien"; Berthold Daun's well-written "Adam Kraft und die Künstler seiner Zeit: ein Beitrag zur Kunstgeschichte Nürnbergs"; W. von Seidlitz's concise and impartial "Die Entwicklung der modernen Malerei" (No. 265 of the "Sammlung gemeinverständlicher wissenschaftlicher Vorträge"); Carl Neumann's suggestive "Der Kampf um die neue Kunst," dealing with the modern tendency recently attacked by Anton von Werner and Lenbach; and Eduard Hanslik's "Fünf Jahre Musik, 1891-'95: Kritiken."

A notable novel is F. Spielhagen's "Faustulus," good in characterization and dramatically consistent. Others are Adolf Wilbrandt's "Schleichendes Gift" and "Hildegard Mahlmann" (a study of a peasant poetess of the Ambrosius stamp); Ossip Schubin's "Heimkehr"; Eekstein's "Roderich Löhr"; Hermann Heiberg's "Ein doppeltes Ich" and "Die Rixdorfs"; "Ein Schlagwort der Zeit" (lifelike characterization) and "Heilendes Gift," by Fedor von Zobeltitz; Rosegger's "Das ewige Licht: Erzählung aus den Schriften eines Waldpfarrers"; Wilhelmine von Hillern's "Ein alter Streit" (describes the ancient Bavarian custom of "Haberfeldtreiben"); Ida Boy-Ed's "Nichts" and "Eine reine Seele"; Annie Bock's "Dora Peters" (modern, objective; heroine well characterized); Gabriele Reuter's "Aus guter Familie: Leidensgeschichte eines jungen Mädchens" (directed against the system of education of young girls); Hedwig Dohm's "Sibilla Delmar" (a characteristic picture of the dissatisfied wife); Schobert's "Art zu Art"; Max Halbe's "Frau Meseck: eine Dorfgeschichte" ("peculiar technique, masterly command of material"); Ernst Clausen's "Judas," thoroughly conventional; Theodor Fontane's "Die Poggenpuhls"; E. Bertz's "Das Sabinergut"; "Theater," by Hermann Bahr, "a many-sided *poseur*"; Willy Rath's "Prinzessin Sida"; A. Zapp's "Der Kampf um den

Dollar" and "Vornehme Proletarier"; and a group of historical novels: G. Ebers's "Barbara Blomberg" and "Arachne" (Egyptian again); F. Dahn's "Vom Chiengau" (with the author's usual excellencies and faults) and "Ebroin"; Richard Voss's "Unter den Borgias"; Conrad Alberti's "The Rose of Hildesheim"; August Sperl's "Die Söhne des Herrn Budiwoj" (showing thorough historical knowledge); C. Erdmann Edler's "Beatrix von Hohenzollern" ("the monstrosity of the characters and the strangeness of the style render it repulsive"); and Otto Reichert's "Der Bürgermeister: eine Geschichte aus Leipzig's alten Tagen." Among short stories are noted: "Männertreu.—Der Sohn seines Vaters," "Verrathenes Glück.—Emerenz," and "Das Räthsel des Lebens und andere Novellen," by the virtuoso Paul Heyse, who turns rather much to the description of psycho-pathological and hysterical natures; F. von Saar's "Herbststreigen" (containing, notably, "Requiem der Liebe"); Ernst v. Wildenbruch's "Der Zauberer Cyprianus" ("profound in psychology" and "brilliant in coloring"); Richard zur Megede's "Kismet"; Paul Anselm's "Drei Novellen" (notably "Peter Paul," original, and fine in execution); J. J. David's "Frühsehn" (a "stormy story"); L. Ganghofer's "Hochlandsgeschichten"; L. Hevesi's "Althofleute"; Rudolf Lindau's "Türkische Geschichten"; Herrenrecht's "In Sachen des Glaubens und Gewissens"; Adalbert Meinhardt's "Norddeutsche Leute"; Konrad Telmann's "Lucrecia" (simply entertaining, weak in character drawing) and "Vox populi"; Ernst Altkirch's "Ich, der Träumer" (rather light ware—mood pictures and phantasies); "Tragikomödien: fünf Geschichten," by Josef Ruederer (imaginative, acute observer, satirist); Walli Glück's "Das Märchenschiff und Anderes"; Paul von Schönthan's "Enfant terrible und C. W. Radebeul & Cie." and "Wiener Luft: Stimmungen und Geschichten"; E. Eschricht's "Reine Liebe: Geschichten aus dem fernen Orient" (interesting descriptions of Eastern life); Hans Hoffmann's "Bozener Märchen u. Mären" (poetical stories); the late Heinrich Not's "Edelweiss und Lorbeer: neue Bilder aus Tirol" (mannered); Detlef von Lilieneron's popular "Kriegsnovellen"; "Alte Schule: Erzählungen," by Marie v. Ebner-Eschenbach, whose husband Moriz, in "Hypnosis perennis.—Ein Wunder des heiligen Sebastian. Zwei Wiener Geschichten," shows qualities similar to those which distinguish the work of his wife; Mme. Clara Sudermann's "Siegerin"; Mme. Lou Andreas-Salome's "Aus fremder Seele" and "Ruth" (fine characterization; lacks warmth); "Severin," simply and neatly told by Anna, Countess Pongracz; and Maria Janitschek's "Vom Weibe" (strong, but at times showing rampant sexuality). Carl Wolf's "Geschichten aus Tirol. 3. Sammlung" and "Drei Erzählungen" (peasant stories with feeling for dramatic effect) and Wilhelm Schäfer's "Die Zehn Gebote: Erzählungen des Kanzelfriedrich" (plain, true pictures of North German peasant life) seem to lead us naturally to those writers of the people of whom Karl Schrattenthal (pseudonym of Karl Weiss), editor of "Dichterstimmen aus dem Volke," has already introduced a number to the public. His latest issues are "Aus dem bayerischen Wald," stories by the peasant girl Emerenz Meier, "Franz Wörther, ein Dichter und Denker aus dem Volke" (deeply felt, simple poetry, without phrase), and a second edition of the poems of Stine Andresen, a daughter of Schleswig-Holstein, who writes simply and from the heart. Schrattenthal lays stress upon the culture-historical importance of all such work, as indicating a new literary current, but some critics reply that it is simply a matter of extravagant enthusiasm over "nature-poets." "Lyric and nar-

rative poetry is declining," we are told. "Selected Poems" and "Poggfred: Kunterbuntes Epos in zwölf Kantussen" (great, powerful humor), by the noted Detlef von Lilienron; the epic "Pincelliade," by Ferdinand von Saar; Julius Wolff's "Assalide: Dichtung aus der Zeit der provençalischen Troubadours"; and "Das Lied der Menschheit, Bd. 3: Mose," by Heinrich Hart ("the only serious, worthy representative of epic verse to-day"), figure in the short list. Paul Heyse writes poetical reveries on "Das Goethe-Haus in Weimar." Further volumes of verse are "Emanuel Geibel's Gedichte aus dem Nachlass"; Otto Julius Bierbaum's "Pankrazius Graunzer, der Weiberfeind" (a delicious bit of neo-romanticism "in specifically modern mood"); J. V. Widmann's "Maikäfer-Komödie" (describing humanity in animal guise); "Verse, 1892-'6," of Richard Schaukal, a type of the literary *décadent*, poet and dandy, discursive and restless; Adolf Wilhelm Ernst's "Empor! Gedichte" (simple, straightforward); Otto Frommel's "Wandern und Weilen: Gedichte" (simple and kindly); "Hohe Lieder," by Franz Evers, a mysticist and true artist in verse; Emanuel Freiherr von Bodman's "Erde: ein Gedichtbuch"; Carl von Arnswaldt's "Gedichte" (good in form); "Wiedergeburt: der Dichtungen 3. Folge," by John Henry Mackay, an original, thoughtful lyricist, who "wrestles with form"; Adolf Schafheitlin's uncouth and unclear "Satur-nische Phantasien"; H. Landesmann's "Nachsommer: neue Gedichte von Hieronymus Lorm"; and "Traumgekrönt: neue Gedichte," by René Maria Rilke (not one of the great; has lyrical talent). E. v. Wildenbruch's dramatic legend "Willehalm" is described as a powerful allegorical picture of William I. Gerhart Hauptmann's "Die versunkene Glocke," a "tragedy of destiny in the guise of a fairy tale," attracted great attention in the dramatic world. As Kuno Francke says, it treats the theme of man's superhuman aspirations in a new and fascinating manner. Sudermann's "Mori-turi" (the common title of three one-act pieces: "Fritzchen," "Teja," and "Das ewig Männliche") and "Johannes" (biblical in subject, modern in spirit), performance of which was forbidden by the censor, were highly praised. Other plays of the year are Georg Hirschfeld's "Agnes Jordan" and "Die Mütter" (exciting plot, strong characterization, "a gloomy picture . . . of weak ambition," unsatisfactory in solution); Hermann Hango's "Nausicaa" and Leo Ebermann's conventional "Die Athenerin" (successful on the stage), classic in subject, but not in treatment; Ernst v. Wolzogen's comedies "Unjamwesi" (a literary whitewashing of Carl Peters), adversely criticised, and "Lumpengesindel," a picture of life in the Berlin *bohème*; Arthur Schnitzler's "Liebele" and "Freiwild" (concerned with honor and the duel); O. E. Hartleben's "Ein Ehrenwort" (also dealing with the duel) and "Die sittliche Forderung" (one act); Fulda's not remarkable comedy "Jugendfreunde"; Fedor von Zobeltitz's "Das eigene Blut" (hardly as strong as his "Ohne Geläut"); Marre's drama "Der Glückselige"; Paul Heyse's three one-act plays: "Der Stegreiftrunk," "Schwester Lotte," and "Auf den Dächern"; "Das Tschaperl" (showing decided advance), by Hermann Bahr, spirited, always surprising, always sensational; Oskar Fronz's "Das Kuckucksei," a "folk play"; Marie v. Ebner-Eschenbach's humorous one-act "Am Ende"; Carlot Reuling's "Das Stärkere"; Skowronnek's "Waidwund" (poor dialogue); Max Petzold's "Die Einzige"; Max Halbe's "Mutter Erde"; Eugen Zabel and Alfred Bock's "Der Gymnasialdirector" (an argument for new methods in education); Paul Lindau's "Die Venus von Milo"; Rudolf Lothar's "Ein Königsidyll" (weak, but promising); Walther

and Stein's "Papa Nietzsche"; Schönthan and Koppel-Ellfeld's comedies "Die goldene Eva" and "Renaissance," harmless and smooth; Blumenthal and Kadelberg's farce "Hans Hucklebein"; Von Trotha's "Hofgunst"; Max Dreyer's "Eine" (original, "a vigorous and not overdelicate burlesque"); "Jenseits der Liebe" (comedy) and "Der Lange Preusse" (play), by Rudolf Stratz, both unsuccessful, and showing want of concentration; "Stickluft," drama by Franz Servaes ("deep poetic feeling, coupled with a certain brutality"); L. Ganghofer's "Meerleuchten" (modern tendencies, with a melodramatic tinge); Eduard Stucken's "Yrsa" (strange platitudes in the language, yet promising); Fischer and Jarno's farce "Ascher-mittwoch"; and Juliane Déry's comedy "Die sieben mageren Kühe." Johanna Baltz, author of various popular patriotic plays, has written the festival plays "Zollernfrauen" and "Wilhelm der Grosse"; and Hans Neuert, a Bavarian actor and writer of peasant plays, wrote and produced "Zwergen der Liab" on the occasion of his jubilee. Innumerable other novelties have been produced.

Greece.—The Cretan incident and the resultant Græco-Turkish War have hampered literary activity. Of historical literature the late ex-Premier Epaminondas Deligeorgis's interesting "Political Year-books" (dealing with the disturbed period 1859-'62), Mme. Soteria Alimberti's "Amalia, the Queen of Greece" (anecdotes of the court), and an authentic biography of Theodor Grivas are noted. "Macedonica" (on Macedonian inscriptions and history), by Myaritis Dimitis, "Chaleis from a Physical and Medicinal Point of View," by Stephen Kallias, and George Papandreu's "The Dialect of Ancient Elis" are each of interest in its line. A. P. Kerameus published 40 unedited letters of the Patriarch Photius, with an introduction in Russian, and S. P. Lambros issued 144 unedited fables by George Ætolos, a Greek writer of the sixteenth century. The Archaeological Society has undertaken the publication of Lolling's "Catalogue of the Epigraphical Museum," a periodical entitled "Monuments of Greece" (*Μνημεῖα τῆς Ἑλλάδος*), to contain phototypes of the most important works of art, accompanied by short explanatory texts, and Caweran's topographical and architectural plans of the excavations on the Acropolis, 1885-'91. The Society *Παρθενώνας* has begun the publication of an annual, *Ἑπετηρίς*, containing contributions by various authors and reports on the very extended activity of the society. Gregor Maraslis has projected and begun a useful series of translations of masterpieces, the work being carried out under the direction of Lysander Padjiconsta, and including translations of Curtius's "Greek History," by Lambros; Ribbeck's "History of Roman Poetry," by S. Sakellaropoulos; Macaulay's "History of England," by E. Rhoidis; and Whitney's "Life and Growth of Language," by G. Hatzidakas. A new edition of the translation of Shakespeare by Bikélas has also appeared, "a healthy sign of revival at Athens."

Holland.—(Flemish authors under Belgium.) New historical works are P. L. Muller's "Onze gouden Eeuw"; "De Geschiedenis der Middeleeuwen" and "De nieuwe Geschiedenis 1517-1789" (Vol. I), both by A. G. van Dijk and P. F. C. Scharp de Visser; Jan ten Brink's "Parijs tijdens de Witte Terreur"; and "Amsterdam in de zeventiende Eeuw," by A. Bredius, H. Brugemans, G. Kalff, etc. Miscellaneous publications to record are F. Pijper's "Geschiedenis der Boete en Biecht in de christelijke Kerk," Vol. II; "Bijdragen tot de Geschiedenis van den nederlandschen Boekhandel," Vol. VII, Part I; Ch. M. van Deventer's "Platonische Studiën" and "Hellense Studien"; and P. Zilcken's "Moderne Hollandsche Etsers."

New novels are "Metamorphose" ("a dissection of a modern novelist which is autobiographical and interesting"), by L. Couperus, published in "De Gids"; Willem Paap's "Jean Collette," an anti-Semitic novel, "tolerably well written"; and "De Merelhof," by L. Stratenus. Here, too, the work of the younger writers is influenced by psychological, moral, and social theories. Examples of this class, dealing with the dark side of life, are Hora Adema's "Wornstekigen," half-scientific, half-fantastic; the much-discussed, not deep, somewhat affected "Vragensmoede," by Anna de Savornin Lohman, author also of "Levenserf"; and C. P. Brandt van Doorne's "Twyfel" (well told, in excellent style), both analyzing conflicts of faith; and Frans Coenen's "Een Zwakke," a depressing and uncompromisingly realistic picture of the dreary misery of "genteel poverty." More romantic are Van Schendel's "Drogon" (the hero of which seorns worldly power, but his human nature proves stronger than ethical maxims) and Adriaan van Oordt's impressive "Irmenlo," a dramatic story of the conflict between Christianity and heathenism in the Middle Ages. Annie Linden's "Gold" is a story of life in Dutch East India vividly told. Poetry of note is supplied in Frederik van Eeden's "Lioba: A Song of Loyalty," a beautiful dramatic poem, and Albert Verwey's "Aarde," reprints marked by "deep thought and stately rhythm." A costly illustrated edition of the poems of the late Jaques Perk has been issued. Pol de Mont, in a spirit of reunion, has brought out "Sedert Potgieter's Dood: Verzen van Noord- en Zuidnederlandsche Dichters," an anthology of Dutch and Flemish poetry, in which connection a Dutch critic informs us that the briskness and advance of Dutch poetry is not accompanied by a corresponding regeneration in Flemish literature. It appears that the old "De Gids" is already publishing contributions by the literary reformers and revolutionaries of a decade ago, while the "Nieuwe Gids," edited by Willem Kloos, is deteriorating.

Hungary.—The millennial exhibition has left its mark upon the literature and life of the year. Many books of a national character have appeared, of which some possess permanent value: Mór Geléri's interesting "Hungary in the Times of its Millennium" (written by prominent specialists); "Millennial Hungary and its Population," by the statistician Joseph de Jekelfalussy; Julius Laurencie's finely illustrated "The Millennium of Hungary and the National Exhibition" (Vol. II); and "Millennial Hungary," a new richly illustrated fortnightly in three languages, edited by Laurencie and Adolf Agai ("Porzo"). Zoltán Ferenczi's excellent "Life of Petöfi" (praised at home and abroad), in three volumes, published at the expense of the Kisfaludy Society, and Tamás Szana's interesting and valuable "Life of Miklós Izsó" (the "pioneer of modern Hungarian sculpture") are important biographies. Elek Benedek has issued "Hungarian Fairy Tales and Legends," in five volumes. Zsolt Beöthy has written a "Little Mirror of Hungarian Literature," and has edited, with prominent scholars, a larger history of Hungarian literature. Antal Rado has published a "History of Italian Literature" of "exceptional merit." Gustav Heinrich is editing an "Old Hungarian Library" (annotated texts of old works). Joseph Diner-Dénes, a talented art critic, in "Past and Future," records studies and impressions of men and movements in literature.

In fiction there are Ferencz Herczeg's not very successful psychological novel "Szabolcs's Marriage" and "The First Swallow" (short stories in his "light and masterly vein"); Robert Tábori's "Cracked Columns" (a characteristic picture of

rotten county administration); "September," a satirical novel by Zoltán Ambrús; Tamás Kóbor's "Marianne" and "Demigod, and Other Stories" (both showing "intimate observation and dramatic talent"); the versatile István Szomaházy's "Summer Clouds" and "Biarritz & Co." (showing inexhaustible imagination, wit, and a terse and elegant style); "In the Dock," humorous sketches of the law courts, by Ignaz Balázs; "Female Beauty," by the realist Sándor Bródy; Szaniszló Timár's "Vanity Fair" (philosophizing novelettes); and "The Lady with the Golden Gloves," by Gyula Pekár (a "quaint, complex, and powerful novelist"). Poetry to be noted includes Sándor Endrödi's fine, patriotic "Kurucz Songs"; Lajos Pósa's tender "Dear Mother"; a volume of excellent lyric poems by Baron Sándor Nikolics de Rudna and "Iza, and other Poems," by Ferencz Martos, both new writers of talent; and a new volume of poems by Emile Makai (noted for polished form), who also published two successful plays in rhyme—"Adventures" and "New Adventures." Lajos Dóczy's fine play "Princess Ellinor" is poetical rather than dramatic; the comedy "The Guards," by Bela Ujvári, a new playwright, is effective; and Károly Gerö, in "Pink Letters," successfully leaves farce for comedy. The most popular play of the year—beside a translation of Du Maurier's "Trilby"—was István Géczy's "The Wild Flower of Gyimes."

Italy.—The study of history, we are told, "seems to be awakening, and to be abandoning the field of overminute inquiries for that of comprehensive syntheses or brilliant monographs on some particular point of history." Historical works of note and interest are Michelangelo Schipa's "History of the Duchy of Naples"; Del Lungo's studies on Politian, entitled "Florentia"; P. Molmenti's "Venezia: nuovi Studi di Storia e d'Arte"; the correspondence of the statesman Bettino Ricasoli, and of the historian Michele Amari; and the prolific Luigi Chiala's "La Vita e i Tempi del Generale Giuseppe Dabormida." Tommaso Caivano writes interestingly of Venezuela. Recent events have inspired A. Rossi's "Alla Guerra greco-turca, aprile-maggio 1897," and Arn. Nicoletti-Altinari's "Fragli Abissini." Noteworthy new editions of ancient texts are the "De Bello Gotico" of Procopius, edited by Comparetti, and the "Epistolario" of Coluccio Salutato, edited by Novati. The fine facsimile edition of Leonardo da Vinci's Codex Atlanticus is being issued under the auspices of the Accademia dei Lincei. Paolo Luotto's "Il vero Savonarola ed il Savonarola di L. Pastor" is an elaborate and convincing defense. "Per Antonio Rosmini, nel primo Centenario dalla sua Nascita," by a number of Rosmini's followers, constitutes "the solemn affirmation of a philosophico-religious school," and "the fundamental principle of Rosmini's philosophy, the idea of Being considered as the divine origin of human intelligence, is here developed in several different ways." Gaetano Negri issues moderate and effective "Meditazioni vagabonde" on religious and metaphysical problems. "L'Europa giovane," by Guglielmo Ferrero (socialistic, eloquent, imaginative, an acute observer), has been called the most interesting book of the year; though the author seems to base conclusions on insufficient testimony, he is remarkable as a prolific author of ideas. A. Loria deals with "La Proprietà fondiaria e la Questione sociale." Two interesting pamphlets by Jessie White Mario deal, respectively, with "Il Sistema penitenziario e il Domicilio coatto in Italia" and "Le Opere pie e l'Infanticidio legale." Angelo Conti makes an interesting study of "Giorgione." Literary criticism is flourishing vigorously. Among the numerous noteworthy publications in this field is Franco Ridella's "Una Sventura postuma di Gi-

acome Leopardi," completely clearing the poet's memory from Ranieri's accusations. National literature is also dealt with in A. Cerrati's "La Letteratura italiana"; G. Marchesi's "Per la Storia della Novella italiana nel Secolo xvii"; E. Coli's "Il Paradiso terrestre Dantesco"; Ant. Zandonati's "Letteratura tridentina"; and "La Letteratura italiana nel Secolo xix," lectures (1871-'75) by Fr. de Sanctis, collected by F. Torraca. G. Ziino writes of "Shakespeare e la Scienza moderna."

The influence of D'Annunzio (a "consummate artificer in words") and of Fogazzaro is felt in fiction, Luciano Zuccoli's "La Morte d'Orfeo" (short stories) and "Roberta" (novel) and Enrico Butti's novel "L'Incantesimo" being cited as examples of the former's influence. Prose fiction to be noted includes also "La Signorina X. di X." (anonymous; assumes the "unexpected character of an exegetical controversy"); S. Farina's "Madonnina bianca"; A. G. Barrili's "Diamante nero" and "Galatea"; E. Castelnovo's "Il Fallo di una Donna onesta"; Regina di Luanto's "La Prova"; "L'Amuleto," by A. R. Z. Neera; Renato Fucini's fine scenes of Tuscan peasant life "All' Aria aperta"; and Giacomo Morandotti's vigorous short story "La Veglia." "La Via del Male" is a promising "romanzo" by Grazia Deledda, whose "Anime oneste" is cited with "Marco Delinas," a tale by Fulvia (Rachele Saporiti) as proof that educational and juvenile literature shows improvement. Poetry is more spontaneous than the novel or the drama. The influence of the "barbarous" meters of Carducci and D'Annunzio is less marked than formerly, symbolism does not flourish, and sociological disquisitions and metaphysical speculations hold no prominent place in verse, although some of the younger poets draw their inspiration from the ills of society, as does Mercurino Sappa in his sincere and effective "Pie Rime." Poetry of note is found in Fortunato Vitali's "Epoepa del Risorgimento" (23 meritorious sonnets; shows lyric rather than epic talent); "Nugæ," by Attilio Tambellini; "Nell' Ombra," by C. A. Fabris; the beautiful "Ore campestri," by Cesare Rossi, one of the best poets of the young Triest school; Giovanni Cena's "Madre" (noble verse, evincing deep feeling); the murdered Countess Lara's posthumous "Nuovi Versi," musical, elegant, replete with imagery and sensual exaltation; Giuseppe Mantica's fervent and introspective "Specchio"; and Arturo Graf's "Le Danaidi" (naturalness of representation, with great simplicity in technique). The drama is not national but foreign in feeling, this outside influence being felt even in Marco Praga's "Mamma," which aroused such interest. G. Rovetta's "La Realtà," which won the prize at a recent competition in Rome, is disjointed.

Norway.—Fridtjof Nansen's picturesque account of "Fram over Polhavet" is well known through translations. Sophus Bugge's "Helge-Digtene i den ældre Edda, deres Hjem og Forbindelser" is rather philological. L. J. Vogt gives a scholarly account of "Dublin a Norse Town." The question of Norway's position in the union with Sweden has called forth books such as Yngvar Nielsen's account of the "Bodö Case" and Bredo Morgenstierne's "Den Unionelle Ret," both advocating a firmer union. Legal works are F. Hagerup's detailed account of civil procedure and P. Kjerschow's codification of the criminal law. The mathematician Sophus Lie has rescued from oblivion Caspar Wessel, one of his predecessors. Philosophical literature is contributed to in H. C. Hansen's "Begrebet Frihed" (from Hegel's point of view), Alfred Eriksen's work on free will, Anathon Aall's "History of the Logos Idea," K. B. R. Aars's plea for "Moralen's Autonomi," and Chr. Benniche's "Tilværelsens Hem-

melighed" (an attempt to reconcile religion and science). Theological literature includes new editions of Gisle Johnson's "History of Christian Dogmas" and "Christian Ethics"; Krogh-Tønning's striking description of "The Process of Church Dissolution" (favoring a closer union of the Lutheran State Church with the Roman Church, an idea opposed by Jakob Sverdrup, Minister of Public Worship); and Axel Andersen's violent attack on "Church Pedagogics in Schools." In literary criticism there are Just Bing's "Tider og Idealer: Studier i fransk Poesie og Malerkunst," Erik Lie's survey of general literature, and Vilhelm Sommerfelt's monograph on Novalis (principally from a religious point of view). Snorre Sturlasson's sagas have been translated again by Gustav Storm, and issued in a finely illustrated *édition de luxe*, and a new edition of the voluminous works of Henrik Wergeland has appeared, with a delightful preface by Carl Nærup.

Noteworthy prose fiction includes Jonas Lie's "Dyre Rein" (well characterized); Thomas P. Krag's "Ada Wilde"; Hans E. Kinck's "Sus" (clever character analysis) and "Fra Hav til Hei," and his wife Minda Ranim's interesting "Lommen"; "Gunvor Thorsdatter til Hærø," by Miss Alvilde Prydz; Vette Vislie's fine "Solvending"; Miss Dikken Zwilgmeyer's "Ungt Sind," Mrs. Anna Munch's "Two Human Natures," Jens Tvends's "Straumgir" (pictures of the western peasantry), and Sven Hilssen's "Proletar" ("character sketches from the suburbs"), all four classed as "psychological"; the successful historical novel "I Kancelliraaden's Dage," by Tryggve Andersen, a new author; Albert Brock-Utne's strong novelette "Vinter"; new work of no great importance by Mons Lie, Bernt Lie, Vilhelm Krag ("Den glade Løitnant"), Peter Egge, and Otto Sinding; and new historical novels by Constantinus Flood, Charlotte Koren, and Marie. Also to be noted are Kristian Gløersen and Hagbart Wergeland's rural sketches and Capt. H. Angell's descriptions of "De sorte Fjeldes Sønner" from Montenegro (literature, but not fiction). Sigbjørn Obstfelder, whose peculiarly elegant diction and entirely original character drawing have seemed slow in winning the public, scored a distinct success with his lyrical love story "Korset." Per Sivle and Nils Collett Vogt have sustained their reputation with a new volume of poems each. Ibsen's gloomy "John Gabriel Borkman" naturally attracted attention both in Europe and the United States. Some found no flaws, while to others the technique seemed not as impeccable as hitherto, the characters were shadows, symbolical figures to fit theories. An American critic describes it as subtle, but a closet drama: "as a study, it is admirable; as a broad and free transcription of life, time will probably pronounce it to be a fine failure." Arne Garborg's masterly "Læraren," a pathetic tragedy of ideal Christianity, is written in dialect and therefore debarred from the stage. Johan Bojer's first production, "Et Folketog," and "Sanct Olaf" (historical drama) were successful. Gunnar Heiberg's comedy "Folkeraadet," a keen satire on modern parliamentary methods in Norway, rather disappointing from a literary standpoint, called forth a scene of violent disorder on its production.

Poland.—Historical works to be noted, most of them dealing with national subjects, are A. Macecki's, "The Lekhs in the Light of Historical Criticism" and "Smaller Writings from the History of the Past"; Smolenski's "The Last Year of the Great Diet," a supplement to Kalinka's well-known work; F. Piekosinski's "On the Dynasties and Descent of the Polish Nobility"; M. Dubiecki's "Karol Prozor" (a contribution to the history of the rebellion of Kosciuszko); and Alkar's "Prinee

Repin and Poland." The publication of a jubilee edition of the works of A. Swientochowski has been begun. S. Dickstein's "Hoëné-Wronski: His Life and Works" deals with an enigmatic character; J. Mycielski describes "A Century of Polish Painting"; S. Tarnowski is the biographer of the painter "Matejko," and has issued two more volumes of "Literary Studies"; K. Bartoszewicz deals with "Books of Polish Humor"; and F. Hösiek offers a three-volume biography of "Juliusz Slowacki," the "greatest Polish poet after Mickiewicz." Prose fiction to be noted includes, in the first place, "The Pharaoh," historical novel, by Boleslaw Prus; two other historical novels, W. Przyborowski's "The Knight Mora" (portraying types of seventeenth-century Poland) and T. J. Choinski's "The Last Romans"; two excellent stories by A. Dygasiński, "As" (history of a dog) and "The Pen"; Sewer's "On the Threshold of Art"; "Belonging to Nobody," by M. Gawalewicz; "The Spoiled Girl," by W. Kosiakiewicz (a gifted narrator); M. Balucki's "Wis and Dziunia" (shows acute observation); M. Laskowski's "The Blasé Man" and "Grown into the Ground"; K. Glinski's "The Defeat" (a rural idyl); W. Rey-mont's "The Female Comedian" and "The Ferments"; W. Gomulicki's poetical and thoughtful "Pictures of Venice"; Mme. W. Marrené's "History of an Ordinary Man"; Mme. G. Zapolska's naturalistic "A Fin-de-Siècle Wife"; Mme. Z. Kowerska's "In Service"; "Blagierzy," by I. Rogosz; and "Odrębna istota," "Pama Staryńska-Nemczys życia," and "Wielka partya," by W. Łos. In poetry attention is called to Mme. M. Konopnicka's excellent "Lines and Tunes," K. Tetmaier's selection of poems, and the work of L. Szczepanski, P. Kosminski, J. Kleinensiewicz, and J. Zulawski. Dramatists appear to have been active. "Cinderella" ("Popychadlo"), by the late J. Szutkiewicz (author also of "The Ball in the Foot"), A. Belcikowski's historical "A Market-Woman of Warsaw," and two comedies—M. Balucki's "The Female Slaves" and "The Women," by Z. Przybylski and Klemens Junosza—have been specially successful. Also to be recorded are E. Imbowski's "The Plaything," S. Kozłowski's "The Tournament" (tragedy in verse, strong principally in scenic effect), and S. Roniker's "tendency play" "Is it worth it?" Vol. I of F. Felicyan's "Dramatic Works" has appeared.

Portugal.—Few reports of literary activity reach us from this country. In *belles-lettres* there are José Ramos-Coelho's "Lampejos: Poesias" (1896); "Amores, Amores," by Teixeira de Queiroz (1897); and Alf. Botelho's "Azul e Negro" (1897). "Arte Portuguesa" is a prominent magazine. The periodical "O Archeologo Português, collecção illustrada de Materiaes e Noticias publicada pelo Museu Ethnographico Português—Prehistoria, Epigraphia, Numismatica, Arte Antiga" (Vol. I, 1895), takes up the work formerly carried on by the defunct "Revista archeologica e historica."

Roumania and Montenegro.—Roumania has its "Bibliographie de la Roumanie: Bulletin de la Librairie," published monthly at Bucharest. "Literatură și Știință" is a half-yearly collection of essays and articles, critical, literary, and scientific, published by C. Dobrogeanu-Gherea in collaboration with others. The publication defends the socialistic standpoint, and is one of the most noteworthy products of modern Roumanian literature. "Enciclopedia română publicată din însăreînarea și sub Auspiciile Asociațiunii transilvane pentru Literatura și Cultura l'oporelui român de C. Diaconovich" is in course of publication. Georges Bengesco, in his "Bibliographie franco-roumane du XIX^e Siècle" (Brussels, 1895), says: "French works relative to Roumania, and especially writings published in French and in France by Roumanians, have in-

creased considerably within the last fifty years." Among such is "Histoire des Roumains de la Dacie Trajane depuis les Origines jusqu'à l'Union des Principautés en 1859; avec une Préface par Alfred Rambaud" (1896), two volumes, the substance of six volumes published by A. D. Xénopol in his mother tongue. A second series of Hélène Vacaresco's collection of Roumanian folk songs appeared (1894), under the title "The Bard of the Dimbovitza," in English translation, and "Legends from River and Mountain" have been gathered by Carmen Sylva (who produced a new drama, "Ullranda," in the same year) and Alma Strettell (1896).

In Montenegro Prince Nicholas, an interesting political personage, created a great sensation with his poem "Pjesnik i Vila" ("The Poet and the Fairy," 1893), which was "a fiery appeal to the people of the Slavic races 'to unite against their German and Austrian oppressors.'" The gifted prince's "Empress of the Balkans" gives evidence of his ability as a dramatist.

Russia.—Russian works in all departments of literature seem as numerous as ever in the publishers' lists, but not very much appears worthy of special note. K. Golovin (a novelist, known by the pseudonym Orlovski) in "The Russian Novel and Russian Society" dilates upon the intimate connection between Russian life and literature, and deplores the growing tendency toward superficiality. Equally pessimistic is Karéef in "Thoughts on the Essential Points of Public Activity," embodying "the sad pages of the history of Russian self-consciousness." The adherents of "Economic Materialism" and "Marxism" are doomed to disenchantment, according to Karéef and Slonimski. The latter's criticism appeared in the "Viestnik Yevropy," and, in fact, we are informed that much of the literary activity of Russia finds vent in the monthly reviews. This holds true also of *belles-lettres*, of which comparatively little appears in separate volumes. Many of the books published are on educational or technical questions. The enormous success of V. N. Liaskovsky's "A. S. Khomiakoff: His Life and Works" shows the hold that Slavophilism has, a fact commented upon in the "Russian Review" ("Russkoïe Obosrénié") for February, 1897, by V. E. K., who calls Slavophilism "the very fruit of the life of our nation." As Herzen said, "in Russia there is a something which is peculiarly its own," and it is this which is being so earnestly studied. Hence the success of the books mentioned, and of the "Moscow Collection" ("Moskovski Sbornik"), by K. P. Pobedonostzev, praised even by the statesman's political and literary adversaries, and described as giving "a forcible, energetic, and logically founded exposition of our aims and ideals in the domain of religion, morality, and politics." Tshuproff and Posnikoff's "The Influence of Harvest and the Prices of Corn upon Some Points of Russian National Economy" (finding profit for peasants in plentiful harvests and low prices) has been mercilessly criticised. P. Boborukin's new novel "In a Different Way" (which appeared in "Viestnik Yevropy") is rather carelessly written, but shows his "quick grasp of all new manifestations of contemporary life"; he is thoughtful and observant rather than original. Further new works of fiction, all published in reviews, are K. Golovin's "Andrey Mologhin" and Miss Dmitrieff's "Mitinka the Teacher," in the "European Messenger" ("Viestnik Yevropy"); V. Svetloff's "The Little Corner of Colchida," Timkhovsky's "The Assistant Professor," "The Monjiks," a sketch by A. Tchekhof (author also of the unsuccessful comedy "Sea Swallows"), and P. Boborukin's "The Millions," in "Russian Thought"; Mme. B. Zhélykhovskaia's "Degeneration," in the

"Russian Review"; D. Olshanin's "The Irresponsible" and Orlovski's "The Honeymoon," in the "Russian Messenger"; Miss L. Gurevitch's "The Plateau," in the "Northern Messenger"; and Potapenko's "The Forgotten Sacristan" and M. Gorki's "Mr. Konovaloff," in the "New Word." In all of these, by authors of the most varying tendencies, describing all spheres of society, there is the same sadness, dissatisfaction, gloom.

Spain.—Here the section of national history is always voluminous. Noteworthy are the late Eduardo Pérez Pujol's incomplete "Historia de los Instituciones sociales de la España goda" (4 volumes), considered by some Spanish critics as in a measure conclusive, completed by A. Fernández Guerra, E. de Hinojosa, and Rada y Delgado in "Historia de España desde la Invasión de los Pueblos germánicos hasta la Ruina de la Monarquía visigoda"; Ricardo de Hinojosa's "Los Despachos de la Diplomacia Pontificia en España"; Lopez Ferreiro's "Los Fueros de Santiago y de su Tierra" (Vol. II.); Villamil y Castro's interesting "The Temporal Sovereignty of the Bishops of Lugo in its Relations to the Municipality" and "The Astorian Church of Santa Maria de Meira"; Dánvila's "History of the Reign of Charles III" (Vol. VI); O'Callaghan's "Episcopologio de Tortosa"; the thirty-one "Relaciones históricas de los Siglos xvi y xvii," published by Uhagón; Bové's "Assaig crítich sobre Ramon Sibiude"; "Recuerdos de cinco Lustros" and "Una Decada sangrienta," both contributions to contemporary history, by Villalba Hervás; the Marquis de San Román's "Guerra civil de 1833 á 1840 en Aragon y Valencia: Campañas del General Orúa" (Vol. II); J. R. Carracido's "Estudios histórico-críticos de la Ciencia española"; Father Teixidor's "Antiquities of Valencia" (Vol. II); Simonet's "Cuadros históricos y descriptivos de Granada"; "Joehs florals de Barcelona" for 1896; "Historia y Bibliografía de la Prensa sevillana," by M. Chaves; "Descripció de la Grandesa y Antiquitats de la Cuitat de Manresa" (first number in the "Biblioteca histórica Manresana," edited by Soler); the unpublished work of Magi Canyellas, an author of the seventeenth century; Labaña's "Itinerary of the Kingdom of Aragon" (in the collection of Aragonese authors); the "Biblioteca Bascongada"; the celebrated "Tractat del Regiment dels Prínceps e de Comunitats" of Fr. F. Eximenis, published in separate sheets in the "Revista de Catalunya"; A. Rodríguez Villa's masterly essay on "Don Francisco de Rojas, Embajador de los Reyes Católicos"; Cañal's excellent monograph on "San Isidoro" and his works; "Memorias de la Vida del Exmo. Señor Don José García de León y Pizarro" (Vol. III); and "Segundo Proceso instruido por la Inquisición de Valladolid contra Fray Luis de León," printed in full, with notes by Father Blanco García. Arabic studies are the interesting "Apuntes sobre las Escrituras Mozárabes Toledanas que se conservan en el Archivo Histórico Nacional," by Pons Boigues, and Ribera's "Bibliófilos y Bibliotecas de la España Musulmana," an extract from a larger work in course of preparation. Román y Zamora's "Repúblicas de Indias, Idolatrias y Gobiernos en México y Perú antes de la Conquista" forms part of the "Colección de Libros raros y curiosos que tratan de America." The "Historia del Descubrimiento y Conquista de Yucatán" is told by J. F. Molina Solís. G. Reparaz writes of "La Guerra de Cuba." R. Torres Campos reports on "La Geografía en 1895." A. and J. Luzón make an "Estudio geográfico de la Isla de Cuba," as does also F. Randeira Rodriguez, under the same title. In art history there are "Teatro lirico español anterior al Siglo xix," a collection of musical documents edited

by Pedrell, who is issuing also "Hispaniæ Schola Musica"; "Inventario de los Cuadros sustraídos por el Gobierno intruso en Sevilla el Año de 1810"; and Part II of the "Catálogo del Museo Arqueológico-Artístico Episcopal de Vich." Literary history and criticism have been contributed to in Perez Pastor's valuable "Documentos Cervantinos hasta ahora inéditos"; Ramón Menéndez Pidal's "La Leyenda de los Infantes de Lara"; Menéndez y Pelayo's critical biography of José Marchena, in the second volume of the "Literary Works" of the celebrated *abate*; Cotarelo's "D. Enrique de Villena: su Vida y Obras" and monographs on the actresses Maria Ladvenant and "la Tirana" (both in the series "Estudios sobre la Historia del Arte escénico en España"); and the incomplete second volume of the late Yxart's "El Arte escénico en España," a critical history of the contemporary Spanish stage. Noteworthy also are the speeches of reception at the Spanish Academy pronounced by Perez Galdós and Pereda, and answered by Menéndez y Pelayo and Galdós, the themes being "relations between the novelist and the public" and "the local novel" ("la novela regional").

Prose fiction to be noted is Juan Valera's "Genio y Figura" ("a scabrous subject ingeniously and discreetly treated"; "Paz en la Guerra" (on the struggles between Carlists and Liberals), by M. de Unamuno, a young writer, whose works are defective in language, but show interesting, original thought; "Cartucherita," a story of Andalusian life, by Reyes, another young author; "Tierra de Campos," by Macías, and "Marrodán primero," by Matheu, both describing political life; A. Calderon's "Nonadas" ("at once a vigorous and profound expression of modern liberal ideas and a model of chaste and elegant style"); the risky "Cuentos y Chascarrillos andaluces," by four anonymous authors; and "Misericordia" (a characteristic and sympathetic picture of the poor of Madrid). Noteworthy examples of Catalan literature are Massó's fine "Croquis Pirenees" and N. Oller's "Figura y Paisatge." The little poetry of note includes Verdaguer's Catalan poems "Jesus Infant" and "Flors del Calvari"; Teodoro Cuesta's collection of Asturian verses; Rueda's "Fornos" and "Camafeos"; and Herrero's "Nelson," "La Muerta Viva," and "Canción," (all three in one volume). The "Flores de Poetas ilustres de España" (Parts I and II) comprise works—many hitherto unknown—by poets of the sixteenth and seventeenth centuries. Of the drama, little need be said. Bonavent's "Gente conocida" shows excellent observation. An edition of the plays of Cervantes has been begun in the "Biblioteca Clásica," and Lope de Rueda's plays have been reprinted in the "Colección de Libros raros y curiosos."

Sweden.—Among new historical works there are H. Hildebrand's "Sveriges Medeltid" (Vol. II); J. Linck's "Konung Oscar II"; "Konung Oskar II och Sveriges Folk," by A. Rydfors; O. Levertin's "Från Gustaf's III's Dagar"; and C. O. Nordensvan's "Krigarlif-Några Verklighetsbilder tecknade för Sveriges Ungdom." The jubilee of King Oscar II has been commemorated by the University of Lund in a "Festskrift." G. de Geer tells "Om Skandinavien geografiska Utveckling under Istiden." To "Travel" belong C. Bildt's "Anteckningar från Italien af en svensk Diplomat"; R. Melander's "På Långtur. Friluftsbilder från Korvetten Frejas Expedition till Västindien. Vintern 1895-'96"; and E. Hemberg's "Jakt- och Turistskildringar från Tsarernas Land" and "På obanada Stigar: Jaktskizzer, Sagor och Noveller från Lappland." Under "Jurisprudence and Political Science" are noted E. R. Sundén's "Om svensk Konungsätt att Uplösa Riksdag" and E. Hildebrand's "Svenska

Statsförfattningens historiska Utveckling från äldsta Tid till våra Dagar." To "Philosophy and Religion" belong E. Liljeqvist's "Antik och modern Sofistik"; S. A. Fries's "Fredrik Fehr, hans Verksamhet och Betydelse som Teolog"; and C. Rohdin's "Religion og Kyrka." "Om svenskan om Skriftspråk" is by G. Cederschiöld. Fredrik Wulff offers suggestive ideas "Om Värsbildning: rytmiska Undersökningar." J. Mortensen considers "Profandramat i Frankrike." In "Svenska Pressens Historia till Statshöfningen 1772," Otto Sylwan continues an excellent work. J. Vising presents a monograph on "Dante," and S. Adlersparre and S. Leijonhufvud one on "Fredrika Bremer." Finally, in the division "Belles-lettres" are classed G. af Geijerstam's "Kampen om Kärlek"; O. H. Dumrath's "Kvinnans Könslif"; Sigurd's "Marie på 'Gyllene hästen'"; and "Catharina Månsdotter," by Wilhelmina. It appears that there has been much complaining in regard to the slight attention given by the state to literature, especially in comparison with the condition of affairs in the two other Scandinavian countries, where state aid is quite generously given.

Grouping Finnish publications together, we have Axel O. Heikel's "Trachten und Muster der Mordvinen; hrsg. von der Société finno-ougrienne" (in Finnish and German); "Japanesiska Studier och Skizzer," by K. Zilliacus; E. Favorin's "Kärlekens fria Religion"; and E. Aspelin's "Elias Brunner"—all issued at Helsingfors. Prof. Seiling, of the Polytechnic Institute in Helsingfors, published interesting statistics concerning the higher education and public position of women in Finland (see the "Nation," March 11, 1897, p. 182); the "Handbuch des Finnländischen Frauenvereins" gives further information on this subject; and Baroness Alexandra Gripenberg, Vol. I of whose work on "The Condition of Women in Europe and America" appeared a few years ago, has written a pamphlet on "Elizabeth Cady Stanton och Kvinnoaksarbetet."

LITERATURE, SPANISH - AMERICAN.

While it is impossible to give full lists here of important publications, it will be attempted to mention from time to time some of the most noteworthy literary efforts of our Southern brethren. The "List of Books, Pamphlets, and Maps received at the Library of the Department of State," issued serially by the United States, always records numerous Spanish-American publications, mostly government reports and pamphlets.

A record of some books of the past two or three years is given herewith.

Cuba.—The unhappy state of affairs is not calculated to foster the gentler arts, but more peaceful times may bring forth new poets in a country which numbered among its writers Gabriel de la Concepción Valdez, Juan Clemente Zenea, José María Hérédia, Antonio Bachiller y Morales, and, more recently, Gertrudis Gomez Avellaneda de Sabater ("Poesias liricas" and "Peregrina") and José Martí (killed in 1895). F. J. Balmaseda issued in 1894 "El Misceláneo: Colección de Producciones científicas y literarias."

Mexico.—"Antología de Poetas mexicanos," published by the Academia Mexicana; N. León's "Catálogo bibliografico y crítico de Autores y Escritores referentes á Vegetales de Méjico y sus aplicaciones, desde la Conquista hasta el Presente" (1895).

Argentine Republic.—A work on American languages (1894) by B. Mitre, F. A. Berra's "Resumen de las Leyes naturales de la Enseñanza" (1896), and C. F. de Oliveira's pamphlet "El Cacique blanco" (1893).

Peru.—Cabello de Carbonera's pamphlet "El Conde León Tolstoy" (1894); Federico Elguera's

"Marionetes" (1894), viewing the world as a huge puppet show, healthy and clean in tone, free from the vicious cynicism so easily caught by the Spanish-Americans from the French; a "Geografía comercial de la América del Sur," by Carlos B. Cisneros and Rómulo E. Garcia, to be complete in 12 volumes, begun in 1897. The vigorous young "Sociedad Geográfica de Lima" has been publishing in its "Boletín" (now in its seventh volume) important material from the literary remains of the distinguished scientist Antonio Raimondi, whose great work on Peru remains unfinished.

Chili.—The National Library, Santiago, issues an "Anuario de la Prensa chilena," a catalogue of books printed in Chili and received at the library. The volume for 1892 records 976 books issued by 176 publishing houses. Vol. XIII of J. T. Medina's "Colección de Documentos inéditos para la Historia de Chile, 1518-1818," has appeared. Among the new books are "Historia económica," by A. Brañas (1894); T. Guevara's "Incorrecciones del Castellano"; J. T. Medina's "La Imprenta en Manila desde su Orígenes hasta 1810" (1896); "Juan Diaz de Solís: Estudio histórico" (1897); "Francisco de Aguirre en Tucumán" (1896); and A. Lopez Ferreiro's "Fueros municipales de Santiago y de su Tierra" (1896).

United States of Colombia.—Rafael M. Merchan's temperate "Cuba: Justificación de su Guerra de Independencia" (Bogotá, 1896).

Uruguay.—B. Fernández y Medina's "Antología uruguaya"; "Historia de la Confederación argentina" (1896, 5 volumes), by A. Saldias; D. Granada's "Reseña historico-descriptiva de antiguas y modernas Supersticiones del Río de la Plata" (1896).

Brazil.—Cezar Zama's "Historia dos tres grandes Capitães da Antiguidade: Alexandre, Aníbal e Cesar" (1894) and "Traços biographicos e politicos dos tres grandes Oradores de Antiguidade: Pericles, Demosthenes e Cicero" (1896). There is a "Revista Brazileira," and an academy of letters has been established.

LOUISIANA, a Southern State, admitted to the Union April 30, 1812; area, 48,720 square miles. The population, according to each decennial census since admission, was 152,923 in 1820; 215,739 in 1830; 352,411 in 1840; 517,726 in 1850; 708,002 in 1860; 726,915 in 1870; 939,946 in 1880; and 1,118,587 in 1890. Capital, Baton Rouge.

Government.—The following were the State officers during the year: Governor, Murphy J. Foster; Lieutenant-Governor, Robert H. Snyder; Secretary of State, John T. Michel; Treasurer, Alexander V. Fournet; Auditor, W. W. Heard; Attorney-General, M. J. Cunningham; Superintendent of Education, Joseph V. Calhoun; Adjutant General, Allen Jumel; Commissioner of Agriculture and Immigration, Jordan G. Lee; Chief Justice of the Supreme Court, Francis T. Nicholls; Associate Justices, S. D. McEnery, succeeded by Newton C. Blanchard, Lynn B. Watkins, Joseph A. Breaux, and Henry C. Miller—all Democrats.

Finances.—The assessment rolls, as made up in December, 1897, show a decrease in 12 parishes only, while the remaining 47 show increase. The total for 1897 is \$259,798,213.75, against \$251,911,316 in 1896. This increase is made up almost entirely in the country parishes. The increase from the parish of Orleans is \$256,418, while the country parishes show an increase over last year of \$7,630,479.75.

The decrease in some of the country parishes is due to the recent drought and overflow, and the decrease in the first district of New Orleans can be attributed to the bank failures.

As an evidence of the growing prosperity of the State it is noted that while ten years ago it was difficult for the State to secure a fiscal agent among

the city banks, the large banks were bidding against each other for the agency this year and offering bonuses or interest on deposits. The fiscal agent must pay the coupons on State bonds when they fall due and become the depository of all the State's funds. Formerly the agent had to advance money to pay the coupons as they fell due, but now the State's balances range from \$500,000 to \$2,000,000.

The condition of the State debt, Aug. 1, as given by the Auditor, was: Total consolidated bonds, \$10,776,100; total constitutional bonds, \$101,700; total bonded debt, \$10,877,800; total floating debt, \$1,177,931.39; total debt, \$12,055,731.39.

Education.—The latest statistics of the public schools available show the following figures for 1896: Number of white public schools, 2,077; number of colored public schools, 940; number of public schools, 3,017; white pupils enrolled, 103,868; colored enrollment, 66,079; white teachers employed, 2,630; colored teachers employed, 1,052; number of white private schools reported, 296; number of colored private schools reported, 60. There were 123 more public schools than in 1895, 5,630 more pupils, and 147 more teachers.

The State Board of Education adopted resolutions making it the duty of superintendents to see that the rule in reference to uniformity of text-books is observed, and that only those selected by the board are in use in the schools; and it was decreed that failure on the part of a teacher to comply after notice by the superintendent shall be deemed sufficient ground for his dismissal.

The Fisk Free and Public Library, in New Orleans, was opened this year.

The closing exercises of the sixth annual session of the Audubon Sugar School were held in New Orleans, July 3, when two seniors were graduated. The school is now made a part of the State University and Agricultural and Mechanical College, and removed to Baton Rouge. The experiment station at Audubon Park is to be continued, and the students of the Sugar School are to be brought to the experiment station during October, to remain for about three months, or during the grinding season. Having passed this period under the direction of experienced instructors in the culture of sugar, they will again return to the capital to resume their theoretical work.

The Sugar School grew out of the experiment station which was established in 1885 by Dr. W. C. Stubbs. The school was established in 1891, and has had more than 60 students; half of the number have been from Louisiana, mostly the sons of sugar planters. The requirements are that the students must be over seventeen years of age, and must possess a fair knowledge of English, arithmetic, plain geometry, and algebra through quadratics.

Public Library.—The Fisk Free and Public Library in New Orleans, in which are united the Fisk Free Library and the Lyceum or Public-School Library, was opened Jan. 18. It has 40,000 volumes, and in its reading-room are 30 daily papers and 200 periodicals. The circulation is about 300 books daily, and the daily average of readers is 500. This library is managed in harmony with the Howard Memorial Library, which has 35,000 books of reference.

Militia.—There were 44 companies in the State military service in July. An order was issued requiring all companies to have at least 40 privates each in September, or to be mustered out at that time. The first company of cavalry in the militia was organized in New Orleans, June 14, as the First Louisiana Cavalry Troop.

Banks.—Officers of two New Orleans banks that failed in 1896 were convicted this year. In May,

W. P. Nicholls, President of the Bank of Commerce, was convicted of embezzlement and sentenced to three years' imprisonment; the cashier was acquitted. Henry Gardes and Walter W. Gerault, of the American National, were convicted of embezzlement of the funds, and Thomas H. Underwood, who was tried with them, was acquitted.

Cruelty to Animals.—In December, in a case carried up from a recorder's court in New Orleans, the Supreme Court upheld the constitutionality of the laws for the prevention of cruelty to animals. The decision covers both State and city legislation for the protection of dumb animals, and decrees that the penalties inflicted by the recorders' courts for offenses committed in the city's streets or other public places are proper and legal.

Industries.—The year was not in all respects prosperous. There were floods and droughts, and these consumed a large portion of the resources of the sections afflicted. The yellow-fever cases and consequent excitement and quarantine caused interruption and loss to trade.

Suffering from Drought.—Distribution of supplies to the people of the drought-stricken district of north Louisiana began about Nov. 1, 1896. The \$65,000 given from the State treasury was exhausted by the end of January. Thirteen parishes were affected by the drought. Money and supplies were raised from various sources. In March the number of destitute people was estimated from 75,000 to 100,000, and there was little prospect of their being able to help themselves.

The Flood.—The Governor issued a call to the people of the Delta, April 3, saying, in part: "The vast flood now coming down the Mississippi has overtopped all the records. The volume of water which has to pass out to sea through the channels of the main stream and the Atchafalaya is undoubtedly greater than the levees have been heretofore called upon to withstand. After years of patient industry, enormous sacrifice, and burdensome taxation by the alluvial districts of our commonwealth, aided by the State at large and the National Government, protection against overflow, if not brought to a state of perfection, has at least reached a stage justifying the hope of an early consummation of a levee system secure against any contingency. These bulwarks should be held at all hazards. Their downfall means your impoverishment, and perhaps your ruin. Bear in mind that in this contest you have the advantage of fighting as an organized army with able commanders. The engineers of the United States, the whole corps of State engineers, the chiefs of the various districts, with all their staffs and disciplined forces, are now in action along the front."

The levees were strengthened and all possible precautions were taken against the coming flood. The first break in the State occurred April 16, in Madison Parish. The river reached its highest at New Orleans, May 13-14, when the gauge showed a flood mark of 19½ feet. The water only touched that point for one day, and then declined. This was an excess of 1-6 foot above any previous flood on record. But this extraordinary flood wrought in Louisiana a smaller damage than has ever been recorded of any overflow. The levees which failed were the weakest on the entire line, and even they were intact when the river at Vicksburg, nearly opposite, reached the unparalleled height of 52 feet above low-water mark. But when the flood rose half a foot higher those two levees succumbed. Below the mouth of Red river, hundreds of miles of embankment withstood the flood.

When the New Orleans Levee Board made up its account of the cost of protecting the city against the flood the total was found to be \$171,000.

Fever.—The first case of yellow fever in New Orleans occurred about Sept. 6. The "Baton Rouge Advocate" said, Oct. 6: "For a month or more previous to the discovery of the first case in New Orleans a mild type of fever, which the physicians pronounced to be dengue, had prevailed at Ocean Springs and other points on the Gulf coast, and thousands of the citizens of New Orleans had come in contact with them by means of the cheap excursions which went out regularly every week from that city. In addition to this, hundreds of New Orleans families had spent the summer at these coast towns, and as soon as the Ocean Springs cases were announced to be yellow fever a wild stampede of these families took place, and the germs of infection were distributed over New Orleans. Never before, perhaps, did a disease break out under circumstances more favorable for its uncontrollable spread. To add to the danger of the situation litigation had tied up by legal process the funds set aside for the disposition of the garbage of the city, and owing to this fact New Orleans was probably filthier than has before been the case in twenty years."

Sept. 24 a mob gathered around a school building in which fever patients were to be treated, while it was being put in readiness. The police were unable to control the mob, and while they were engaged in front of the building two incendiaries, with a can of oil, proceeded to the rear and quickly had the building in flames. An alarm was turned in, but the first engine had scarcely arrived when its hose was cut. When other engines arrived, their hose also was destroyed by the mob; but the arrival of a large squad of officers enabled the firemen to work, and the main portion of the building was saved.

Lawlessness.—In May the President sent to Congress a message concerning the lynching of three Italians at Hahnville, Aug. 8, 1896, recommending an appropriation of \$6,000 for their families, without admitting the liability of the United States in the premises. In reference to the law that allows foreigners in Louisiana all the rights and privileges of citizenship while they are still under the protection of a foreign government, the "Picayune" says: "Nothing is more common than for Italians here to announce an intention of becoming citizens, although they never consummate citizenship. The mere declaration gives them the rights of citizenship in Louisiana and permits them to hold licenses as masters of vessels navigating American waters, which they could not do otherwise. But, although they may vote and hold office in Louisiana, they are foreigners still under the United States statutes, and are still under the care of their own governments. Probably nine tenths of the Italians who hold political rights in Louisiana, voting and holding office, are not actual citizens, but only prospectively so."

Three negro murderers were hanged by a mob at Amite City, Jan. 20, and three others, also accused of murder, were hanged by a mob at St. Gabriel, Dec. 12.

Political.—The new registration law requires that the applicant, with his own hand, and without the dictation or suggestion of any one, in the presence of the supervisor of registration or his clerks or assistants, shall write and fill up the blanks in a printed form which shall set forth the State and date of his birth, his age, the dates during which he has lived in the State and parish in which he desires to register, and whether he has ever been convicted of treason, embezzlement of public funds, malfeasance in office, larceny, bribery, illegal voting, or other crime punishable by hard labor or imprisonment in the penitentiary, or whether he is

an idiot or is insane, such persons being denied the right to vote. The applicant is required to make oath to his statement, and, if it be found satisfactory, he is then admitted to registration. If, from any cause, the applicant be unable to write, the supervisor of registration shall read to him the printed questions, and he may get some other person to write out the answers of the applicant for the filling out of the blank.

The constitutional-convention proposition has been accepted by the people by a majority of about 30,000. Nominating conventions were held, and candidates for members of the convention chosen, the election taking place at the same time that the question of holding the convention was voted upon, Jan. 11, 1898.

LUTHERANS. Three of the four general bodies and a number of independent synods are working toward unity in doctrine and in practical operations. The merging of small synods and the formation of new organizations brings the number of district synods to 61. The statistics for the United States and Canada, based on the report of 1897, presents the following totals: Four general bodies and 14 independent synods, numbering 6,206 ministers, 10,169 congregations, and 1,489,874 communicant members; 3,471 parochial schools, 2,777 teachers, and 204,048 pupils; 5,425 Sunday schools, 54,155 officers and teachers, and 510,832 pupils. The benevolent offerings for the year, reported through the regular synodical boards, amounted to \$1,262,988.51, but this does not include large contributions made by individuals and congregations. The latest revised statistics of Lutherans in the world, as they appear in the forthcoming seventh edition of "Lutherans in all Lands," by the Rev. John N. Lenker, D. D., are as follow: 33,365 ministers, 49,474 congregations, 57,069,526 baptized members, 101,121 parochial schools, and 9,446 deaconesses. The educational institutions of the Church in this country number 123, of which 25 are theological seminaries, 44 colleges, 40 academies, and 14 ladies' seminaries, aggregating property valued at \$4,355,551 and endowment amounting to \$1,539,391, employing 765 professors and instructors, and having 12,284 students, of whom 2,668 (many institutions not reporting this item) are in course of preparation for the office of the ministry. The purely benevolent institutions number 97, which report property valued at \$2,555,541, endowment amounting to \$199,562, and 44,270 inmates. There are 137 periodicals published in English, German, Norwegian, Swedish, Danish, Icelandic, Finnish, French, and Slavonian, and in the services of the Church in this country 14 different languages are employed.

The following tabular statement shows the numerical strength of the four general bodies and the independent synods:

NAME.	Synods.	Ministers.	Congregations.	Communicants.
General Council.....	9	1,177	2,010	338,604
General Synod.....	25	1,158	1,506	186,351
Synodical Conference.....	5	1,839	2,416	499,623
United Synod. South.....	8	213	431	41,638
Independent Synods.....	14	1,819	3,806	423,658
Totals.....	61	6,206	10,169	1,489,874

Of the four general bodies, the General Synod and General Council held their biennial conventions during the year, of which brief reports are here presented.

General Synod.—The thirty-eighth convention of this body was held in Mansfield, Ohio, June 9-17, 1897. There were 221 delegates present, including 115 clerical and 106 lay delegates. Official visitors

were present from the United Norwegian Church, the General Council, the General Conference of the United Brethren in Christ, and the General Synod of the Reformed Church of the United States, and letters of fraternal greeting from the United Synod of the Lutheran Church in the South, the General Synod of the Reformed Church in America, and the United Presbyterian Church of North America. The opening sermon was delivered by the retiring president, the Rev. H. Louis Baugher, D. D., of Gettysburg, Pa. The convention was opened according to the new order for the opening of synods as prepared by the Committee on Common Service, and the following officers were elected: The Rev. M. W. Hamma, D. D., president; the Rev. William S. Freas, D. D., secretary; and Louis Manss, treasurer. The work of the convention consisted in the consideration and action on the biennial reports of the boards by whom the affairs of the body are managed.

Foreign Missions.—The report of the Board of Foreign Missions was read by its secretary, the Rev. George Scholl, D. D. The receipts for two years ending April 30, 1897, amounted to \$85,120.99, with an indebtedness of \$7,176.80, occasioned chiefly by a diminished income from legacies and the failure of the coffee crop in the African mission. A retrenchment of \$4,000 was made in the work in India and of \$1,000 in Africa. Three missionaries returned during the biennium and five new ones were sent out. A hospital has been opened in India and the mission congregations and schools are flourishing. The force of workers in the India mission number 188, whose labors are distributed over a large territory, embracing 470 villages, 384 organized congregations, and 15,699 baptized Christians and 3,065 candidates for baptism. The mission has a printing establishment and bookbindery; a reading room and book depot; 148 Sunday schools, with 6,588 pupils; 177 elementary schools, with 165 teachers and 4,656 pupils; a boarding school, with 118 pupils; a college, which, together with its branches, employs 49 teachers, who instruct 882 students. This is an increase of 13 teachers and 208 students over the number reported two years ago. The medical department embraces a hospital and a dispensary with two woman missionaries in charge; also a zenana department with six missionaries in charge. The mission in Liberia, Africa, known as the Muhlenberg mission, with headquarters at Monrovia, consists of 4 missionaries, 1 native pastor, 223 communicant members, 2 Sunday schools, with 120 pupils, 3 schools with 2 native teachers and 80 pupils. The value of the industrial department of this mission is estimated at \$89,450, consisting of 480 acres of land, 60,000 coffee trees, and machinery.

Home Missions.—The report of the Board of Home Missions was presented by its secretary, the Rev. A. Stewart Hartman, D. D. The receipts for two years amounted to \$86,665.18, of which the Woman's Missionary Society contributed \$12,072.07 and the Sunday schools \$20,000. The board reported a deficit of \$13,500. The board has under its care 160 missions, served by 193 missionaries, reporting 16,993 communicant members. The missions enrolled and, with a few exceptions, receiving the aid of the board for the whole or part of the time since April 1, 1895, are distributed as follows: 39 in Pennsylvania, 20 in Nebraska, 15 in Kansas, 14 in New York, 11 in Ohio, 10 in Maryland, 9 in Indiana and Iowa respectively, 6 in California, 5 in Colorado and Illinois respectively, 3 each in Michigan and Missouri, 2 each in Kentucky, New Mexico, and Wyoming, and 1 each in the District of Columbia, New Jersey, Tennessee, West Virginia, and Wisconsin. Of these, 146 are English, 9 Ger-

man, 3 German-English, and 2 Scandinavian and English. With few exceptions these missions are in more than ordinarily promising and important fields, and the board asked for \$100,000 for the next two years. As an auxiliary in this work the Woman's Missionary Society deserves special mention. This society embraces 22 synodical societies, 722 auxiliaries, and a membership of 19,490. During the past two years they contributed \$42,807.74 to the work of the boards, and also sent boxes to missionaries, the contents of which were estimated at \$10,000. The Board of Home Missions received more than \$12,000 from this society.

The report of the Board of Church Extension, presented by the Rev. Harry H. Weber, secretary, showed receipts amounting to \$99,592.79 and appropriations made and aid granted to 178 churches, amounting in all to \$74,159.72. This represents 51 more churches aided than in the previous report. The assets of the board aggregate the sum of \$350,561.47. A resolution was passed to the effect that the sum of \$35,000 should be annually apportioned among the district synods.

Board of Education.—The biennial report of the Board of Education, presented by the Rev. Henry C. Haitheox, D. D., secretary, showed receipts amounting to \$20,631.26. The board reported the election of the Rev. Frank D. Altman as President of the Western Theological Seminary at Atchison, Kan., in connection with Midland College, and that measures had been inaugurated for the transfer of the German Theological Seminary at Chicago to the same place and uniting it with the Western Seminary. The board aided the following-named institutions: Carthage College, Carthage, Ill.; Midland College, Atchison, Kan.; and Hartwick Seminary, at Hartwick Seminary, N. Y. In aiding these institutions the board expended the sum of \$19,715.50.

Deaconess Board.—The report of the Deaconess Board was read by its secretary, the Rev. Frank P. Manhart. This board has under its care a mother house and training school at Baltimore, Md. The institution was opened Oct. 31, 1895, with appropriate services. Six deaconesses were set apart for their special work. They had received their training chiefly in the Kaiserwerth institutions in Germany. The present number of deaconesses in the Baltimore house is 7, with 7 probationers and 1 candidate. The faculty of the training school consists of 14 instructors. The course of study is arranged to prepare deaconesses "to do efficiently all such work in a congregation and community as may properly be assigned by a Christian pastor to a Christian woman educated and set apart for a service and ministry of help and mercy." The course covers two years. This is the only institution of its kind that is under the direct management of a general church body. The receipts of the board amounted to the sum of \$7,723.97.

Publication Society.—The assets of this society amount to \$77,276.87, and the sales for the year ending March 31, 1897, amounted to \$66,727.87. The number of periodicals issued monthly was 284,000, 4 new works were issued, new editions of 10 works, and 11 books and pamphlets were published for others, besides the proceedings of nearly all the district synods connected with the general body.

The next convention of the General Synod will be held at York, Pa., beginning May 24, 1899.

General Council.—The twenty-sixth biennial convention of the General Council of the Evangelical Lutheran Church in North America was held in Erie, Pa., Oct. 14-19, 1897. The sermon was delivered by the Rev. Frederick A. Kaehler, of Buffalo, N. Y. The following-named officers were elected:

The Rev. Edward F. Moldehnke, Ph. D., D. D., of New York city, president; the Rev. William K. Frick, of Milwaukee, Wis., English secretary; the Rev. Gottlieb C. Berkemeier, of Mount Vernon, N. Y., German secretary; the Rev. Gustav A. Brandelle, of Denver, Col., Swedish secretary; and William H. Staake, Esq., of Philadelphia, Pa., treasurer. Delegates were present from 9 district synods. The German synod of Manitoba (organized in 1897) was admitted as a member of the body. Official visitors were present from the General Synod, the United Norwegian Church, and the Danish Church in America. The convention represented more than half of the Lutheran Church in this country. This body is the most polyglot of all the general bodies of the Lutheran Church in the United States, and is drawing into closer union with synods that have hitherto been holding aloof from connection with general bodies, though organized on the same confessional basis as the General Council. Among these are the Danish and Icelandic synods and the United Norwegian Church, the latter of which is one of the largest Scandinavian organizations in the country. The work of the convention consisted chiefly in hearing and acting on reports of the general boards and standing committees, and legislating for the general interests of the Church. Two morning sessions were devoted to discussion of the "Principles of Faith and Polity," adopted at the time of the organization of the council in 1867. Following are the "Fundamental Principles of Faith":

1. There must be and abide through all time one holy Christian Church, which is the assembly of all believers, among whom the Gospel is purely preached and the holy sacraments are administered as the Gospel demands. To the true unity of the Church, it is sufficient that there be agreement touching the doctrine of the Gospel, that it be preached in one accord, in its pure sense, and that the sacraments be administered conformably to God's Word.

2. The true unity of a particular church, in virtue of which men are truly members of one and the same Church, and by which any church abides in real identity and is entitled to a continuation of her name, is unity in doctrine and faith, and in the sacraments, to wit: That she continue to teach and to set forth, and that her true members embrace from the heart and use the articles of faith and the sacraments as they were held and administered when the Church came into distinctive being and received a distinctive name.

3. The unity of the Church is witnessed to, and made manifest in, the solemn public and official confessions which are set forth, to wit: The generic unity of the Christian Church in the general creeds, and the specific unity of pure parts of the Christian Church in their specific creeds; one chief object of both classes of which creeds is, that Christians who are in the unity of faith may know each other as such, and may have a visible bond of fellowship.

4. That confessions may be such a test of unity and bond of union, they must be accepted in every statement of doctrine in their own true, native, original, and only sense. Those who set them forth and subscribe them must not only agree to use the same words, but must use and understand those words in one and the same sense.

5. The unity of the Evangelical Lutheran Church as a portion of the holy Christian Church depends upon her abiding in one and the same faith, in confessing which she obtained her distinctive being and name, political recognition, and her history.

6. The unaltered Augsburg Confession is by pre-eminence the confession of that faith. The acceptance of its doctrines and the avowal of them without

equivocation or mental reservation make, mark, and identify that Church, which alone in the true, original, historical, and honest sense of the term is the Evangelical Lutheran Church.

7. The only churches, therefore, of any land, which are properly in the unity of that communion, and by consequence entitled to its name, Evangelical Lutheran, are those which sincerely hold and truthfully confess the doctrines of the unaltered Augsburg Confession.

8. We accept and acknowledge the doctrines of the unaltered Augsburg Confession in its original sense as throughout in conformity with the pure truth of which God's Word is the only rule. We accept its statements of truth as in perfect accordance with the canonical Scriptures. We reject the errors it condemns and believe that all which it commits to the liberty of the Church of right belongs to that liberty.

9. In thus formally accepting and acknowledging the unaltered Augsburg Confession we declare our conviction that the other confessions of the Evangelical Lutheran Church, inasmuch as they set forth none other than its system of doctrine and articles of faith, are of necessity pure and scriptural. Pre-eminent among such accordant pure and scriptural statements of doctrine, by their intrinsic excellence, by the great and necessary ends for which they were prepared, by their historical position, and by the general judgment of the Church, are these: the Apology of the Augsburg Confession, the Smalcald Articles, the catechisms of Luther, and the Formula of Concord, all of which are, with the unaltered Augsburg Confession, in the perfect harmony of one and the same scriptural faith.

This general body is composed of various nationalities, and in its legislation must have regard for the needs and wants of a widely scattered constituency. There are within its bounds, or under the control of its district synods, 3 theological seminaries, 5 colleges, 3 academies, 12 orphanages, and 26 institutions of mercy. The next convention will be held in 1899.

Foreign Missions.—The Rev. William Ashmead Schaeffer, D. D., corresponding secretary, presented the report of the Board of Foreign Missions. The mission of the General Council is in the Madras Presidency, East India, with Rajahmundry as its central station. The total receipts of the board for two years amounted to \$40,606.25, and the expenditures to \$40,427.87. In view of the demands of the work in India, the Council determined to raise \$50,000 a year for the next two years.

Three missionaries returned, one (the Rev. N. Paulus) died, and two new ones were sent out. The following is a summary of the statistics of the mission: 7 missionaries and their wives, 1 native pastor, 3 zenana sisters, 4 evangelists and catechists, and 138 teachers. There are 7 principal stations, 113 villages where schools have been established, 191 villages where the Gospel is preached, 2,719 children in the schools, and 5,036 Christians, of whom 2,002 are communicant members of native congregations. The seminary at Rajahmundry, the principal school of the mission, is in charge of the Rev. Calvin F. Kuder; the girls' boarding school under the care of Miss Agnes I. Schade; and the caste girls' school under the care of Miss Kate S. Sadtler.

Home Missions.—The home-missionary operations are in charge of 3 general boards and the district synods. This work embraces 354 missions, at an annual expense of \$80,000. Only the 3 general boards render reports to the general body. The report of the board of English home missions was presented by the Rev. John E. Whitteker, superintendent of English missions. The income of this

board was \$26,351.26. In the period covered by the report the board aided 22 missions in Massachusetts, New Jersey, New York, Ohio, Indiana, Illinois, Wisconsin, Minnesota, North Dakota, Utah, Washington, and Oregon. The estimate of expenses for the next two years was placed at \$40,000, which amount was apportioned to the district synods. The report of the Board of German Home Missions was presented by its chairman, the Rev. Prof. John Nieum, D. D. This board supported 9 missionaries, who served 55 congregations and preaching stations, with a baptized membership of 5,800. The principal field of operation is the western part of Canada, east of the Rocky mountains. Six missionaries care for the scattered Lutherans in this vast territory. The missionaries, by the advice of the board, organized a synod on their territory, under the title of the German Synod of Manitoba and the Northwestern Territory, numbering 6 ministers, 52 churches and preaching stations, and 3,000 communicant members. The synod was organized at Winnipeg, Manitoba, July 22, 1897. The constitution of the New York ministerium was made the basis of the synodical constitution. The constitution of the General Council was adopted and a resolution was passed making application for admission into the general body. The receipts of the German board amounted to \$6,580.21, and the expenditures to \$6,659.52. The report of the Board of Swedish Home Missions was presented by the Rev. Gustav A. Brandelle. The field of operation of this board embraces Swedish settlements in widely scattered portions of the country, especially in the South, and in Utah and Montana. Most of the missionary operations of the Augustana Synod are carried on by the conferences of that body, the General Board having only a general oversight of the work. The Augustana Synod supported 200 mission congregations and stations, at an annual expense of \$25,460.

The Lutheran Mission and Church Extension Society presented a favorable report of its work. The receipts were \$8,800.44. The total assets amount to \$31,700.90. Missions were aided to the extent of \$10,700 in Philadelphia, New York, Illinois, and Ohio. Recently the society has been centralizing its efforts on the missions at Portland, Ore., Seattle, Wash., Milwaukee, Wis., and Duluth, Minn.

Immigrant Mission.—During the past two years the Immigrant Mission seemed to have lost much of its former importance, on account of the decrease of immigration. Nevertheless, the number of persons who spent some time in the Emigrant House, in New York city, was nearly 12,000. The receipts amounted to \$2,150.21. During the past two years 6,000 persons were furnished with free meals at the Emigrant House, and money was given to 135.

Board of Publication.—The report of the Board of Publication was presented by the Rev. Frederick W. Weiskotten, secretary. Five new publications were issued, a new series of Sunday-school lessons and teachers' helps were begun which have been enthusiastically received, wall charts and a paper for the primary school were issued, a "Bible Story" for the intermediate department of the Sunday school was published, and "The Lutheran," the official organ of the body, was issued by the new management. The sales amounted to \$33,209.07.

Deaconess Work.—Prof. Adolph Spaeth, D. D., LL. D., of Philadelphia, presented the report of the committee on deaconess work. This embraced the statement on this subject in the "Annual Cyclopædia" for 1896, and gave a general *résumé* of the work in this country. The number of women either actively engaged in this work or in course of training for it is 176, an increase of about 25 per cent. over the statistics of two years ago. The number of Lutheran deaconesses in the world is nearly 10,-

000. The six mother houses included in the report are in Philadelphia, Baltimore, Brooklyn, Milwaukee, Minneapolis, and Omaha.

Synodical Conference.—The Synodical Conference, an almost exclusively German general body, held no convention during the year, but its work was carried on by boards and committees. Following are the statistics for the present year: Five district synods, 1,839 ministers, 2,416 congregations, and 499,623 communicant members; 1,765 parochial schools, 875 teachers, and 100,119 pupils; 468 Sunday schools, 307 teachers, and 24,591 pupils—though the reports of Sunday schools are far from complete. The benevolent offerings of the congregations amounted to \$292,068.69, exclusive of contributions for current expenses of congregations and schools. The synodical institutions number 4 theological seminaries, 9 colleges, 7 academies, and 20 institutions of mercy. The next convention will be held in St. Louis, Mo., May 15, 1899.

United Synod, South.—The United Synod of the South held no convention this year. Its next convention will be held in 1898. It is composed of 8 district synods, numbering 213 ministers, 431 congregations, and 41,638 communicant members, whose benevolent offerings amounted to \$20,000. It supports 1 theological seminary, 4 colleges, 8 academies, 1 orphanage, and 1 seamen's mission.

Among the independent synods, the Joint Synod of Ohio, the Norwegian and German Iowa synods, and the United Norwegian Church are large organizations, carrying on educational enterprises and missionary operations of their own in numerous States. The 14 synods comprise 1,819 ministers, 3,806 congregations, and 423,658 communicant members; 1,217 parochial schools, 1,294 teachers, and 79,822 pupils; 1,284 Sunday schools, 5,760 teachers, and 77,266 pupils; and the benevolent offerings of the churches amounted to \$428,007.83. They support 11 theological seminaries, 15 colleges, 17 academies, and 18 institutions of mercy.

Conference of Deaconess Mother Houses.—The second annual conference of Lutheran Deaconess Mother Houses in the United States was held in Milwaukee, Wis., Oct. 20-22, 1897. The various mother houses were represented by the following delegates: Philadelphia, the Rev. Carl Goedel, Sister Magdalena Steinman, and the Rev. Dr. Adolph Spaeth; Omaha, the Rev. Erik A. Fogelstroem, Sister Bothilde Swenson and the Rev. Sven P. A. Lindahl; Baltimore, the Rev. Frank P. Manhart; Minneapolis, the Rev. Simon R. Tollefson, Sister Ingeborg Sponland, and the Rev. M. Falk Gjertsen; Milwaukee, the Rev. Dr. Jeremiah F. Ohl, Sister Martha Gensike, and the Rev. William A. Passavant; Brooklyn, the Rev. Martin H. Hegge and Sister Matilda Madland; the Rev. John N. Kildahl appeared as visitor from the newly established Norwegian house in Chicago, and Sisters Tena Petersen and Cecilia Nelson, the former in charge of the Swedish Bethesda Hospital in St. Paul, and the latter engaged in parish work in Minneapolis, but both connected with the Omaha mother house. The opening service of the convention was held in the chapel of the Milwaukee mother house, with an address of welcome by the Rev. William A. Passavant. The business sessions began on Thursday morning, Oct. 21, and the conference was formally organized by the election of the following-named officers: The Rev. Dr. Adolph Spaeth, president; the Rev. Dr. Jeremiah F. Ohl, English secretary; and the Rev. Carl Goedel, German secretary.

The following papers were read and discussed at the several sessions: "The Parish Diaconate," theses by the Rev. Erik A. Fogelstroem, with supplementary paper by the Rev. Dr. George U. Wenner, of New York city; "The Training of Deaconesses,"

theses by the Rev. Dr. Spaeth; "How may Interest in the Deaconess Cause be stimulated, and Devout Women be won for the Work?" by the Rev. Dr. Ohl; "The Relation of the Deaconess to the Training of Little Children," by the Rev. Carl Goedel; and "Peculiarities in American Social and Religious Life to be considered in the Training and Work of Deaconesses in America," by the Rev. Frank P. Manhart. The Milwaukee mother house was requested, by resolution of the conference, to issue an English edition of Theodore Schaefer's "Die Weibliche Diakonie." The conference adjourned to meet in Omaha, Neb., in 1898.

Danish Union.—At a convention held in Minneapolis, Minn., Sept. 30 to Oct. 2, 1896, a union was formed among the Danish Lutherans in this country which embraces the two largest bodies formerly in existence. The new synod is incorporated under the title "The United Danish Evangelical Lutheran Church in America," and embraces the "Danish Lutheran Church Association in America" and the "Danish Evangelical Lutheran Church in North America." The first synodical organization among the Danes in this country was effected in 1872, when the "Danish Lutheran Church in America" was organized; but as its ministers, to a large extent, held the dogmatical views of Bishop Grundtvig, of Denmark, not all the Danish pastors and congregations united with it, and even among those who entered the organization there was not perfect unanimity of view. And when, in the course of time, other Danes arrived, whose views differed from the Grundtvigians, controversies arose concerning the doctrines of the Church. In 1883-'84 a second synodical body was organized, which was known as the "Lutheran Church Association in America."

This organization was effected on the basis of the Lutheran confessions, and was naturally opposed to the principles of doctrine maintained by the original synodical body, organized in 1872, and there was no intercourse among them. In the synod of 1872 controversies continued for years among the "Grundtvigians" and the "anti-Grundtvigians" until the year 1894, when the latter party withdrew and organized the "Danish Evangelical Lutheran Church in North America" upon the basis of the Lutheran confessions. Thus it happened that there were two synodical organizations, which virtually held the same confessional basis, and whose principles were sufficiently harmonious to enable them to work together. These two bodies were merged into one synodical organization in 1896, as a united church, and held their first convention at Blair, Neb., May 27 to June 3, 1897. The Rev. G. B. Christiansen, of Omaha, Neb., was elected president; the Rev. N. S. Nielsen, of Waupaca, Wis., secretary; and Mr. H. Andersen, of Blair, Neb., treasurer. The united synod numbers 68 ministers, 110 congregations, and 7,994 communicant members; 60 parochial schools, 30 teachers, and 2,500 pupils; 91 Sunday schools, 352 teachers, and 3,887 pupils. It has a theological seminary at Blair, Neb., a college and a high school at Elkhorn, Iowa, two orphanages at Albert Lea, Minn., and Elkhorn, Iowa, a publication house at Blair, from which it issues its synodical paper, the "Dansk Luthersk Kirkeblad." It is the largest of the Danish organizations in the country and carries on extensive missionary operations in various parts of the country. The old Danish synod numbers 42 ministers, 100 congregations, and 12,000 members, and maintains three high schools or academies.

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MADAGASCAR, a French colony, formerly a kingdom, occupying the island of Madagascar, in the Indian Ocean near the east coast of Africa. It was finally recognized by the Queen as a French protectorate on Oct. 1, 1895, after the French troops had occupied Antananarivo, the capital; became a French possession by virtue of a convention concluded in January, 1896; and by a law promulgated on Aug. 6, 1896, was constituted a French colony, in which the Queen was retained as titular ruler of the natives, but a French Resident General assumed full control of the administration and a French military force remained in occupation of the island. The Queen is Ranavalona III, born in 1861, who succeeded Ranavalona II on July 13, 1883, and afterward married the Prime Minister Rainilaiarivony, who was the real head of the Government, and who waged two wars in defense of the independence of the country against the pretensions of the French, who claimed political rights over the island dating from the seventeenth century.

The administration is attached to the French Ministry of the Colonies. The cost of the army of occupation is borne by France. The Governor General and commander of the troops is Brig-Gen. Gallieni. The French military force in 1897 was composed of a regiment of marine infantry, three batteries of marine artillery, a colonial regiment, a battalion of the foreign legion, two companies of Senegalese guides, and two regiments of Malagasy rifles. The total strength was 5,699, including 191 officers. There were 4,558 infantry, 1,367 artillery, and 44 cavalry. Of the men, 1,220 were natives of the island and 560 were Algerians.

The area of Madagascar and dependent islands is

estimated at 228,500 square miles, and the population at 3,500,000, of whom about 1,000,000 belong to the Hova race, which from their country of Imerina, in the center, imposed their rule on the rest of the island, though it was often resisted by other tribes. Antananarivo has about 100,000 inhabitants; the port of Tamatave, on the east coast, which is connected with the capital by 735 miles of telegraph, has 15,000. Another telegraph line runs to the capital from Mojanga, on the west coast, a town of 10,000 inhabitants. About 450,000 of the Hovas are Protestants and 50,000 are Roman Catholics.

The native Government depended on the forced unpaid service that it exacted from all the inhabitants rather than on its revenue, though duties were collected on imports and exports, and a small poll tax was paid. Formerly considerable sums were obtained from gold-mining licenses and royalties. The local budget for 1897 was 4,376,427 francs; the expenditure of France, 15,875,233 francs. A debt of 15,000,000 francs was raised in France in 1886, of which 10,000,000 francs were paid to the French Government as a war indemnity. This debt, which paid 6 per cent. interest, was assumed by the French Government and converted, in 1897, into 3-per-cent. bonds running sixty years.

Besides gold, copper is mined in considerable quantities. Silver, lead, sulphur, graphite, and coal are found also. The chief occupation of the people is agriculture and the raising of cattle. Rice, sugar, coffee, and cotton are cultivated. The forests are extensive and contain valuable woods, which are being exported by European companies. The natives weave cloths from silk, cotton, and the fiber of the raffia palm, and are skilled also in metal work. The

chief exports are cattle, caoutchouc, hides, coffee, rafia, sugar, wax, gum copal, rice, and hemp. The trade is chiefly with Mauritius, Réunion, France, the United States, and Great Britain. The American trade increased in recent years.

The general revolt and outbreak of lawlessness that spread through the island in 1896 was put down by Gen. Gallieni, and in the beginning of 1897 comparative security was re-established. Communications between the capital and the ports of Tamatave and Mojanga were reopened. The people in the north who returned to their villages were armed by the French to enable them to resist the robber bands. The south was still in an anarchic condition. Thousands of the natives were impressed under the Hova law into the work of building roads. The Hovas had a million slaves, all of whom were made free by French law when Madagascar became a French colony, but to counteract the evils resulting from the sudden abolition of slavery the Governor General prepared a new labor law. Medical, normal, and technical schools were established at Antananarivo. The rebellion of the Fahavalo, Betsileo, Sakalava, and other tribes, which might have resulted in a general massacre of the whites but for the prompt and vigorous military measures of the new Governor General, was secretly fomented from the court of Antananarivo. Hence Gen. Gallieni deposed the Queen and sent her in exile to Réunion, issuing on Feb. 27, 1897, a proclamation in which he said that France was sole mistress in the island, and would bring civilization and introduce among the people her guiding principles of justice, peace, and equality for all.

The Queen claimed that her courtiers, without her knowledge, compromised her by relations with the Fahavalo rebels. A house was fitted up for her at St. Denis, and the French Government gave her an allowance of 24,000 francs a year. The Protestants induced the English Government to intercede for them, but the French Government would receive no representations respecting native Christians, as Madagascar was French soil and they were subjects of France. Great Britain, by treaty with the native dynasty, enjoyed perfect freedom of trade, subject to import and export duties limited to 10 per cent., most-favored-nation treatment, and the right of consular jurisdiction. After Madagascar was declared a French possession the French proposed to assume jurisdiction over foreigners and to introduce their customs system. Lord Salisbury would not admit that the war and its consequences justified the abrogation of British rights that were unassailable under the protectorate. He offered to compromise by accepting French jurisdiction over British subjects in Madagascar in return for the reciprocal surrender of French rights in Zanzibar. M. Hanotaux was unwilling to admit, after Madagascar was annexed to France, that the cases were parallel. The British Government, having recognized the French protectorate over Madagascar with all its consequences, on the assurance that the rights and immunities enjoyed by British subjects there would not be affected, would not agree to the effacement as a consequence of annexation of these stipulations, on the strength of which France had attained her position in Madagascar. In the end, the French minister agreed to the compromise proposed in respect to Zanzibar. With regard to the trading privileges also, Lord Salisbury declined to admit that French annexation could affect rights created by a covenant that existing treaties should be respected, and by an assurance that the protectorate should not be disturbed. M. Hanotaux denied that France had ever entered into a specific engagement not to annex Madagascar, and that the treaties, which were still valid under the protectorate, were

extinguished when Madagascar became a French colony. Germany and the United States had agreed to abolish their consular jurisdiction without demanding compensation. The bill subjecting Madagascar to the French customs tariff became law on April 17, 1897, but was not carried into effect till August. After the abolition of royalty the bands of marauders decreased considerably, and the nobles of Antananarivo who were held as hostages were released. The importation of laborers into the island without the sanction of the Governor General was forbidden by a decree published on June 16. In July an English missionary named Hall was expelled from Madagascar as a political agitator. The rivalry between Protestant and Catholic missionaries was so disquieting to the natives of Imerina that they asked for the establishment of lay schools at their own expense. Gen. Gallieni, who introduced schools wherever he carried his work of pacification, protected the native religions and customs equally with the Christian. A French company has undertaken to complete the canal from Tamatave to Andovoranto. A railroad is also projected to connect Tamatave with Antananarivo. A monthly steamship service was established between Havre and the ports of Madagascar and the east coast of Africa. The Sakalavas in the autumn still continued to attack the posts established in the west, but the troops gradually reduced them to submission and deprived them of their firearms.

MAINE, a New England State, admitted to the Union March 15, 1820; area, 33,040 square miles. The population, according to each decennial census since admission, was 298,269 in 1820; 399,455 in 1830; 501,793 in 1840; 583,169 in 1850; 623,278 in 1860; 626,915 in 1870; 648,936 in 1880; 661,086 in 1890. Capital, Augusta.

Government.—The following were the State officers during the year: Governor, Llewellyn Powers; Secretary of State, Byron Boyd; Treasurer, F. M. Simpson; Attorney-General F. A. Powers; Adjutant General, Selden Connor; Superintendent of Schools, W. W. Stetson; Commissioner of Labor, S. W. Matthews; Insurance Commissioner, S. W. Carr; Bank Examiner, F. E. Timberlake; Liquor Commissioner, J. W. Wakefield; Inspector of Prisons, Augustus W. Gilman; Secretary of the Board of Agriculture, B. W. McKeen. Supreme Judicial Court—Chief Justice, John A. Peters; Associate Justices, Charles W. Walton, Andrew P. Wiswell, L. A. Emery, Enoch Foster, W. P. Whitehouse, Thomas H. Haskell, and Sewall C. Strout; Clerk, W. S. Choate.

Finances.—The receipts in the treasury for the fiscal year ending Dec. 31, 1896, amounted to \$1,576,362.14; disbursements for all purposes, \$1,663,102.26; showing an excess of expenditures over receipts for the year of \$86,740.12. In the preceding year expenditures exceeded receipts to the amount of \$167,955. The fiscal year of 1896 closed with a cash balance on hand of \$203,500.58. The rate of taxation for the year was 2½ mills on the dollar, yielding a revenue of \$731,941.70. Owing to the reduction of one fourth of a mill in the rate of taxation, the amount of State tax assessed was \$81,130.60 less than in the previous year. The bonded debt of the State was reported at \$2,303,000, showing a reduction in two years of \$100,000. There was paid during 1896, as interest on the bonded debt, \$73,940; the aggregate sum paid as interest during 1895-'96 being \$249,380. The apportionment of the school fund and mill tax to the several cities, towns, and plantations amounted to \$509,589.10, which was divided *pro rata* among 210,264 pupils, giving to each pupil \$2.42.

Banks.—The Bank Examiner reported the total number of banks in the State at 104—52 savings

banks, 18 trust companies, and 34 loan and building associations. The aggregate amount of assets held by these institutions was \$70,459,586.26, showing an increase over the previous year of \$1,982,359.74. The total assets of the national banks doing business in the State were shown to be \$36,941,561.12, thus making the entire banking capital of the State \$107,401,147.38. These figures show that the capital invested in the State banking institutions was nearly twice that of the national banks in the State. The number of depositors in the savings banks was 163,115; amount of deposits, \$57,476,895.88; average for each depositor, \$352.37; average for each inhabitant, \$86.94. The amount of deposits had increased from \$1,466,457.56 in 1860 to \$57,476,895.88 in 1896. In 1896 the number of depositors had increased over 1895 by 2,899, and the amount of deposits by \$1,100,751.98. The aggregate of reserve and undivided profits amounted to \$3,134,393.02, being an increase of \$232,783.50 over the previous year. The amount of loans and investments within the State held by the savings banks was \$26,164,585.84, showing a larger percentage of the funds of these banks invested in the State than ever before. The total earnings of the savings banks for the year were \$2,461,361.67, being but 4.1 per cent. on the average amount of deposits. From these earnings all dividends, taxes, and expenses are paid. The amount of dividends paid depositors was \$2,096,927.82, an increase of \$32,464.65 over the previous year. The amount of savings-bank tax paid was \$381,208. The trust companies reported an increase of \$50,500 in capital stock, \$55,665.90 in surplus and undivided profits, \$310,254.90 in deposits, \$251,537.63 in loans and investments, and \$407,173 in the total assets. The aggregate of time deposits and certificates of deposit was \$2,706,898.57. The total amount of dividends paid to stockholders during the year was \$77,227.50. The total liabilities of the loan and building associations was reported at \$2,691,446.47; total resources, the same; number of shareholders, 8,226; dividends paid, \$163,966.35.

Insurance.—According to the report of the Insurance Commissioner the amount of fire insurance written in the State during 1896 was: Companies of other States and countries, \$110,273,315.44; Maine mutual companies, \$5,784,286.50; special brokers, \$307,075; total, \$116,364,676.94. This is the largest volume of fire insurance ever written in the State, and exceeds by more than \$8,000,000 the business of the preceding year. The premiums received by the companies amounted to \$1,642,427.50, and the losses paid to \$883,247.69. The marine insurance written in Maine during 1896 amounted to \$18,772,758, of which \$17,535,840 was written by domestic and \$1,236,918 by foreign companies. This shows a loss of \$136,300 compared with the amount written during 1895. The marine premiums on the business of 1896 amounted to \$264,462.14, and the losses paid during the year to \$215,924.67. The taxes paid the State by insurance companies on account of the business of 1896 were: Fire and marine companies, \$18,546.84; life companies, \$24,746.52; miscellaneous companies, \$1,376.16; total, \$44,669.52.

Railroads.—The total mileage of steam railroads in the State in 1896 was 1,726.02 miles, 91.78 miles having been constructed during the year. All excepting 148.92 miles of this mileage is standard gauge. The returns to June 30, 1896, show an increase in earnings over 1895 of \$500,380.22, being \$8,111,507.26, against \$7,611,127.22. The total number of passengers carried was 5,706,615, against 5,535,634 in 1895; total passenger train mileage in the State, 3,497,709, against 2,937,231 in 1895; number of tons of freight carried 5,229,084, against

5,003,834 in 1895; total freight-train mileage, 2,989,302, against 2,713,291 in 1895. There were 25,000 persons receiving entire support from railroad employment, or nearly 1 in 25 of the population of the State.

Industries.—The woolen industry was reported in an unsatisfactory condition. Eight mills showed a falling off in production of nearly 15 per cent., and 12 mills a falling off in wages paid of \$22,546 and a shortening of average running time. The cotton industry showed a healthier condition, 6 mills, with an output of \$5,044,494 in 1895, showing an increase in product of about 5½ per cent. The 6 establishments reported where agricultural implements are manufactured showed a falling off of about 5 per cent. in the output, also a decrease in time run and number of persons employed. Eleven shoe factories, with an output of \$2,299,668 in 1895, showed an increase of \$51,962, or a little over 2¼ per cent.; an increase of three days in average running time was noted, and about 1 per cent. in working force; the rate of wages showed a change of a small fraction of 1 per cent., increasing the wages of men 1 per cent. per week, and decreasing that of women 4 cents a week. The output of 3 brickyards, which in 1895 was \$51,490, showed an increase of 2¼ per cent. Four carriage manufactories, with an output of \$65,000 in 1895, showed an increase of 2 per cent. Chewing-gum establishments showed an increase of about 10 per cent., or a product valued at \$75,606. In cigar factories the decrease in value of product amounted to 3½ per cent., or a falling off from \$61,500 in 1895 to \$59,250 in 1896. Clothing manufactories reported a decrease in product of about 10 per cent.; confectioneries, 13 per cent.; door, sash, and blind factories, the product of which in 1895 was over \$500,000, about 3¼ per cent. In fish curing the falling off in the output was nearly 8 per cent. Leather-board establishments reported a decrease in product of nearly 15 per cent., and in working force over 12 per cent. Lumber mills, with an output in 1895 of \$321,423, showed a falling off of over 6 per cent. in product, and about the same in working force. Machinery establishments reported a decrease of 5 per cent. in value of products. Pulp and paper mills, with an output in 1895 of \$656,856, reported an increase in value of product of 19 per cent., without any corresponding increase in running time or working force. Silver-plate manufactories, which did a business of \$74,300 in 1895, reported a falling off in product of about 11 per cent. Soap factories doing a business of \$11,760 in 1895, showed a decline of 8½ per cent. in product. The value of the output of the tanneries of the State was given at an average of about \$70,000. The tanning and finishing of leather is one of Maine's important industries, and by the last census was exceeded only by cotton goods, lumber, boots and shoes, and woolen goods, in the order of the value of their product. All the various kinds of leather are produced, but the manufacture of sole leather is the most important. In one tanning establishment 1,000,000 sheepskins are tanned annually.

Education.—The Superintendent of Common Schools reported for the school year ending in 1896 as follows: Whole number of persons in the State between the ages of four and twenty-one, 209,798; whole number of different pupils attending school during the year, 134,140; average registered attendance per term for the year, 114,584; average daily attendance per term for the year, 94,912; average length of schools for the year, twenty-seven weeks and one day; number of schools, 4,391; graded schools, 1,094; ungraded schools, 3,297; number of schoolhouses in the State, 4,196; built during the year, 126, at a cost of \$189,605; estimated value of

all school property, \$3,738,506; number of male teachers spring and summer terms, 428; fall and winter terms, 979; female teachers spring and summer terms, 4,261; fall and winter terms, 3,698; different teachers employed during year, 6,786; average wages of male teachers per month, excluding board, \$34.39; wages of female teachers per month, excluding board, \$22.44; paid for teachers' services and board and janitors' services, \$1,107,818; amount expended for free text-books, \$76,549. The resources and expenditures were: Amounts available from town treasuries, \$852,982; from State treasury, \$515,742; derived from local funds, \$49,482; total current resources, \$1,418,206; total current expenditures, \$1,317,717; balance unexpended, net, \$100,489; school money voted by towns, \$757,163; excess above amount required by law, net, \$236,408.

Free high schools: Number of towns having free high schools, 262; supported by towns, 241; supported by districts, 21; aggregate number of weeks, 6,477; schools having more than one term, 199; number of pupils registered, 17,090; average attendance, 13,133; whole amount expended during the year, \$191,004; amount paid by towns and districts, \$145,876; paid from State treasury, \$45,128.

The State College in 1896 had 316 students and 31 instructors; the approximate income, including State appropriation, was \$68,000.

There are in the State 52 free libraries, having a total of 145,000 volumes; the associate libraries, numbering 54, have a total of 180,000 volumes.

Live Stock.—The State Assessor's report for 1896 gave the number and value of live stock as follow: Horses, 132,334, value \$6,828,340; three-year-old colts, 7,293, value, \$293,078; two-year-old colts, 5,985, value \$176,387; one-year-old colts, 3,657, value \$77,479; cows, 146,044, value \$3,025,053; oxen, 15,473, value \$621,754; three-year-old cattle, 20,034, value \$359,976; two-year-old cattle, 30,274, value \$378,639; yearlings, 42,424, value \$291,421; sheep, 276,386, value \$365,002; swine, 48,831, value \$278,976; total value, \$12,896,105.

Sea and Shore Fisheries.—The Commissioner of Sea and Shore Fisheries stated in his report for 1896 that the total value of this industry was \$4,326,692 for that year. Some of the chief items are: Sardines, \$1,928,546; lobsters, \$790,276; herring, \$251,165; smoked herring, \$106,697; clams, \$248,642; smelts, \$71,704; swordfish, \$39,524; alewives, \$16,204; salmon, \$12,288; mackerel, \$84,566; shad, \$30,727; salt fish, \$202,530; fresh fish, \$504,294. There are licensed in the customs districts of the State 512 fishing vessels, of 10,122 tons, being 75 more vessels than in the preceding year. The fisheries employ 14,690 persons. There are 60 sardine factories in the State, valued at \$353,700; they employ 5,785 hands, who earn \$760,427 a year. There were 123 boats employed in taking sardine herrings; these boats took 837,820 bushels, valued at \$134,399; from this catch 840,587 cases of sardines were put up. The number of vessels employed in mackerel catching was 14; men employed, 235; value of vessels, \$44,200. Swordfishing is a comparatively new industry for the State; number of vessels engaged, 32; men employed, 256; pounds of swordfish caught, 1,300,750. Number of men employed in lobster catching, 2,708; number of lobsters taken, 7,825,757. Number of persons employed in catching clams, 781; bushels of clams in shell, 282,961; value in shell, \$110,878; cases of clams packed, 40,674, value \$119,379; barrels of clams for bait, 4,053, value \$18,385.

Game.—The Commissioner of Inland Fisheries and Game reported that more moose had been killed in 1896 than in any previous year, notwithstanding the fact that no cow or calf moose can be legally

taken. The number of visiting hunters increases year by year, and they do not confine themselves to the close season. Referring to the increasing scarcity of moose bulls, the commissioners say: "Hundreds of hunters visit the haunts of the moose in August and September, and during the 'calling period' kill their game, hide it till October and then bring out the head alone, leaving the carcass to decay in the forest. . . . The rich poacher cares nothing for a fine so long as he can secure a good head, and August and September are very favorable months for his operations. Our forests are so vast that no system of wardenship could be arranged to stop summer killing. The caribou is also reported as fast disappearing, owing to summer and winter killing. It was estimated that at least 10,000 deer were killed in the State in 1896. Deer are found in each of the 16 counties of the State, and, notwithstanding the great number killed annually, it is said that there is no apparent decrease. Complaints are frequently made by farmers of the destruction of crops by deer. Trout, salmon, white perch, black bass, and other fish are largely cultivated inland.

Prohibition.—In his inaugural address the Governor said: "A large majority of the people of our State are thoroughly and conscientiously devoted to the principles and practice of temperance. . . . They believe that the restraining influence of our prohibitory legislation has had a marked effect in eradicating the evils resulting from the liquor traffic. Doubtless there has not been a full realization of what the most ardent and enthusiastic advocates of prohibition prophesied and hoped, but certainly great good has been accomplished. In most of our rural country towns the groggery is a thing of the past, and we are moving in the right direction throughout the State."

Legislative Assembly.—Following are titles of some of the acts passed in 1897:

To authorize towns and cities to establish sinking funds.

To permit inland game to be taken for park purposes in the State.

For the better protection of girls.

To create a lien on leather.

To regulate the taking of eels and whitefish.

To establish a bounty on wild cats.

Authorizing the establishment of free libraries in villages and branch libraries in towns and cities.

To establish bank holidays, and to abolish days of grace on commercial paper.

To prevent the reproduction of prize fights by photographs.

For the promotion of medical education.

To prohibit the manufacture of cigarettes, and the sale thereof to minors.

MANITOBA. Politics and Government.—The Legislature was opened on Feb. 18, 1897, by Lieut.-Gov. J. C. Patterson with a speech from the throne, from which the following passages are taken:

"The preceding year has been one of business depression throughout the world, but fortunately Manitoba has been but little affected by it, the late advance in prices of the products of the farm having improved the situation greatly. It can be safely stated that the feeling throughout the province is now one of the utmost confidence in the future. The prospects of an increased influx of immigrants during the coming season are most promising.

"Since the last session of the Legislature the question whether the public-school system of this province shall be superseded by Federal legislation, and the system existing before the passage of the act of 1890 be reimposed upon the province, has been settled by a harmonious conference between the Federal ministry and my advisers. The terms

of settlement have already been made public, and a bill to amend the school law in accordance therewith will immediately be laid before you. The law as amended will be administered by my Government in a spirit of conciliation and with the desire to make the provisions effective in extending the benefits of our educational system to every class in the community.

"The discovery of mineral regions with possibilities of valuable development within the boundaries of the province necessitates the enactment of a system of mining laws applicable to lands the property of the province. You will be also asked to consider a bill codifying and declaring the law relating to partners, a bill amending the married woman's act, and bills to amend the Queen's Bench, the executor's act, the Queen's Bench suitor's fund act, the insurance act, and other measures."

There was no material change in the political conditions during the session of 1897. Mr. Greenway held his Government well in hand, only one change occurring, when the Hon. Charles J. Mickle became a member in place of Mr. Sifton, who had joined the Dominion Government. Mr. Mickle was re-elected, and two other vacated seats returned ministerial members. One other constituency, however, Turtle Mountain, elected a Conservative, and thus gave that party the first provincial victory in a by-election during many years. An important political matter was the acceptance of the leadership of the Conservatives in provincial politics by the Hon. Hugh John Macdonald, late Dominion Minister of the Interior.

The chief subject discussed by the Legislature was the so-called settlement of the Manitoba school question. The Liberal governments at Ottawa and Winnipeg had arranged a basis for common action, and the situation was thoroughly reviewed in the following extract from a speech made by Hon. J. D. Cameron, Attorney-General in the Assembly (March 18), supporting a bill to regulate the schools under the terms of the new agreement:

"The bill," he said, "embodied in almost identical terms the settlement that had been arrived at by the local government and the Dominion Government in November last. He proposed to review the later events which had led up to the settlement. It had been referred to the Supreme Court, and afterward to the Judicial Committee of the British Privy Council to define the power of the Governor General in Council and the Dominion Parliament regarding the appellant clauses of the Manitoba act; and the Judicial Committee had found that, in their judgment, certain privileges had been taken away from the minority; and that there was jurisdiction on the part of the Governor General in Council and the Dominion Parliament to deal with the matter. The Dominion Cabinet and Parliament shortly afterward took the position that the decision commanded the restoration of separate schools as nearly as possible as in 1890. The Legislature adopted a series of resolutions to the effect that it could not accept the responsibility of carrying out the mandate of the Cabinet at Ottawa. Shortly afterward trouble ensued at Ottawa, and the local government received a copy of an order in Council as a communication, asking this Government to state upon what lines they would adopt amendments. It was not until Dec. 20, 1895, that an order in Council was passed, that this Government firmly adhered to the views expressed in July of last year. No other conclusion could be come to than that what was demanded was a state-aided separate-school system; and this Government declined and then and there positively and definitely rejected, once and for all time, the idea of a separate and sectarian school system. Parliament met at Ottawa shortly after-

ward; and after a month or so the remedial bill was introduced by the Minister of Justice. Three commissioners came from Ottawa to see if some way could not be found of avoiding the impending crisis. These were Sir Donald A. Smith, the Hon. Mr. Dickey, and Senator Desjardins. They submitted a memorandum to Hon. Mr. Sifton and himself (Hon. Mr. Cameron) which contemplated a very peculiar separate-school system applicable to cities and towns, but not to rural districts. It provided that, not at the request of parents or by action of municipal councils, but as soon as there should be a certain number of children, there must be separate school boards. He and Mr. Sifton contended that this was precisely what they could not consent to; that by resolutions of the House, and by statements before the electors they had committed themselves to the principle that there should not be separation of the children by religions; and that it was utterly impossible for them to assent to what was proposed. After prolonged debate the bill was killed by time, Parliament having expired. The question then became an issue between the two parties all over Canada; and the result was that on June 23 the administration so long in power at Ottawa was defeated. Almost immediately after that time it became the duty of the Hon. Mr. Laurier to open negotiations with the Manitoba Government. The result was the settlement published in November last."

Then follows a summary of the measure itself:

The first section gives authority for religious teaching in the schools, to take place, either if authorized by resolution of the majority of the trustees, or petition of the parents or guardians of 10 children of a rural district, or parents and guardians of 25 children in a city or town. The principle of local option remains; there is nothing compulsory. Section 2 fixes definitely the hour at which religious instruction shall take place; that is, only between 3.30 and 4 o'clock. This is the practice adopted in New South Wales and in New Zealand. Section 4 provides that in towns or cities where there is an average of 40 Roman Catholic children or upward in a school, or in rural districts where there is an average of 25 or upward, at least 1 Roman Catholic teacher shall be employed if required by petition of the parents or guardians. The object is that, if there is to be religious teaching, it be made effective. Section 7 provides that there shall be no separation by religious denominations during the secular school work. Section 9 provides that no pupil shall be permitted to be present at any religious teaching unless the parents or guardians of such children desire it. Section 10 provides that when 10 pupils in a school speak any language other than English as their native language the teaching of such shall be conducted in such other language and in English, upon the bilingual system.

The measure passed by a large majority, though it was followed by a vigorous protest from the Orangemen, on the ground that it conferred favors and a special status upon the Roman Catholics. Archbishop Langevin, of Winnipeg, denounced it strongly as making permanent the abolition of their separate schools. Then came the visit of a papal legate, his report to the Vatican, and a period of patient waiting by the Roman Catholics for the Pope's decision.

Finances.—The budget speech was delivered by the Hon. D. H. McMillan, Treasurer, on March 2. The estimated expenditure for 1896 had been \$780,583; the actual amount was \$769,857. The actual revenue received was only \$665,553. He showed that for agriculture the expenditure had been \$31,547.51; for immigration, \$16,492.16; for the dairy school, \$8,045.85. Last year the dairy school was opened in Winnipeg, and about 97 attended either

the professional or the farm dairy course, while quite a number passed good examinations and were able to take charge of creameries and cheese factories. In the Attorney-General's department, the cost of administration of justice was \$59,659.53, which was about \$3,000 less than that of 1895. In the Public Works Department the total expenditure was \$115,095.82. The largest expenditure was for maintenance of public institutions, \$78,695.75. The revenue was principally made up by the subsidy from the Dominion Government, \$460,308.27; this was less than was received last year, and \$29,925 was received last year, which should have been paid the year before. Other items of revenue from liquor-license fees, fines, etc., made up \$205,513.14.

The estimates for 1897 were as follow: Legislation, \$39,400; executive, \$4,500; Treasury Department, \$37,750; Provincial Secretary Department, \$8,275; public schools, \$183,600; Department of Agriculture and Immigration, \$103,769; Attorney-General's Department, \$127,655; provincial lands, \$4,750; Railway Commissioners, \$4,800; public works, \$196,131; sundries, \$1,700; total, \$712,330.

Education.—The report of the Department of Education for 1896 was presented to the Legislature by the Hon. Mr. Cameron. It contained much statistical information, in addition to the reports of inspectors and of the principals of the collegiate and normal schools. The following excerpts will be of some value: School population, 50,093; pupils registered under five years of age, 85; five to twenty-one, 37,701; over twenty-one, 201. The average attendance was 23,247. There were 1,143 teachers employed—male, 585; female, 558. There were 4 provincial normal teachers, and 9 local. Two long and 5 short sessions of the normal schools were held, the former being attended by 454 students, and the latter by 341. There are 985 organized school districts in the province, 1,032 schools in operation, and 854 schoolhouses. The highest salary paid was \$1,800; the average for the province was \$604.94; for cities and towns, \$750; for rural schools, \$411.85. The legislative grant was \$143,001.74, and the amount raised by municipal taxation \$472,039. The school assets of the provinces were: Taxes due from municipal councils, \$407,976; value of school sites, etc., \$1,164,569. The legislative grant was spent as follows: Payments to schools, \$130,130.10; inspection, \$9,806.75; examination of teachers, \$1,907.12; normal school, \$5,628.09; office, \$3,989.78. The grants to collegiate institutes amounted to \$8,871.64; the grants to intermediate schools, \$5,000; while the ordinary grants amounted to \$130,130.10. There was also a grant of \$3,500 to Manitoba University. The report showed that 361 schools closed with religious exercises and 327 with prayer. The Bible was read in 236, temperance instruction given in 437, the Ten Commandments taught in 196, and moral instruction given in 708.

Railways.—The Greenway Government was anxious to obtain enlarged railway communication with the United States, and increased competition with the Canadian Pacific. To this end, a line was projected from Winnipeg to Duluth, and a considerable subsidy was promised. The scheme was widely discussed from the national as well as the provincial standpoint, and it still remains unsettled. During the year the Lake Manitoba Railway was opened at Dauphin, greatly to the advantage of Portage la Prairie and other points. The company controlling this line has other railways, which make its total liabilities to the province \$1,041,812. The total Government expenditure during 1896 upon local railway account was \$101,951.

Agriculture.—According to the December crop bulletin issued by the provincial Agricultural De-

partment, the total cereal production in Manitoba in 1897 was 32,404,625 bushels, of which 18,261,950 were wheat, 10,629,513 oats, 3,183,602 barley, 247,836 flax, 48,344 rye, and 33,380 peas. The averages per acre were: Wheat, 14.14 bushels; oats, 22.7; barley, 20.77. The oat and barley crops were failures. Three and a quarter million bushels of potatoes and roots were also grown, potatoes averaging 149 bushels per acre, and roots 199. The estimated wheat yield of the August bulletin was not realized, owing to a blight that attacked the grain just before maturity.

The number of beef cattle exported from the province during the season was 15,000. Also, 16,500 stockers were shipped to the United States, as shown by the customs returns. The number of hogs shipped out of Manitoba, on foot or dressed, was 12,500. The number received by Winnipeg packers and butchers was 25,000. The poultry disposed of by farmers was as follow: Turkeys, 47,540; geese and ducks, 20,000; chickens, 184,055.

The season was favorable for all parties interested in the manufacture of butter and cheese. The products of creameries and cheese factories under the supervision of the Dairy Superintendent have been uniformly good. Home dairies have also kept well in line in the manufacture of good butter. There has been a ready sale of all dairy products at remunerative prices. The following is a summary of production and prices: Butter, creamery, 987,179 pounds, at 18 cents, value, \$177,692.22; dairy butter, 1,410,285 pounds, at 13½ cents, value \$188,625.62; cheese, factory, 987,007 pounds, at 8½ cents, value, \$83,895.59; total value of dairy products, \$450,213.43.

MARYLAND, a Middle Atlantic State, one of the original thirteen, ratified the Constitution April 28, 1788; area, 12,210 square miles. The population, according to each decennial census, was 317,728 in 1790; 341,548 in 1800; 380,546 in 1810; 407,350 in 1820; 447,040 in 1830; 470,019 in 1840; 583,034 in 1850; 687,049 in 1860; 780,894 in 1870; 934,945 in 1880; and 1,042,390 in 1890. Capital, Annapolis.

Government.—The following were the State officers during the year: Governor, Lloyd Lowndes, Republican; Secretary of State, Richard Dallam; Comptroller, Robert P. Graham; Treasurer, Thomas J. Shryock; Attorney-General, Harry M. Clabaugh; Insurance Commissioner, J. Albert Kurtz; Superintendent of Public Instruction, E. B. Prettyman; State Tax Commissioner, Thomas J. Keating—all Republicans, except Prettyman, Democrat. Chief Judge of the Court of Appeals, James McSherry; Associate Judges, David Fowler, A. Hunter Boyd, Henry Page, Charles B. Roberts, John P. Briscoe, William Shepard Bryan, and George M. Rumm; Clerk, J. Frank Ford—all Democrats, except Rumm, Republican.

Finances.—The total receipts into the treasury during the fiscal year ending Sept. 30, 1897, were \$2,772,055.40, which with the balance in the treasury proper on Sept. 30, 1896, \$916,042.76, and cash to the credit of the funds account of \$2,000, made the aggregate receipts \$3,690,098.16, as against \$3,863,443.83 for the previous year. There was received during the fiscal year 1896 from collectors of the State taxes \$844,620.35, and during 1897 the sum of \$1,019,631.76, or an increase of \$175,011.41, and a further increase from the tax on Baltimore city stock of \$3,447.72, aggregating \$178,459.13, this increase being largely attributable to an augmented taxable basis under the new assessment, as well as to extraordinary diligence in collecting the State's revenue. Nevertheless, the tax on incorporated institutions or stock companies produced \$746 less in 1897 than in 1896, or the sum of \$81,332.50. The total disbursements during the fiscal year aggre-

gated \$2,980,959.58, being \$35,558.51 in excess of 1896. The balance of \$916,042.76 for 1896 included the sums due the insane asylum and the Penitentiary loans, namely, \$412,019.20, afterward paid, which accounts for the large disbursements of 1897. The balance for 1897, after such payment, was in excess of that for the previous year by \$203,115.02. Of this balance, \$436,607.07 was to the credit of the public schools on Oct. 1, 1897, \$227,625 thereof being apportioned and distributed as of that date, while nearly the whole of the remainder was devoted to special purposes and to meet the demands of the State government and the charitable institutions. The total receipts of the sinking fund were \$627,404.18, all of which was invested, as during the previous year, in Maryland, 3.65s. There were sold during the year, from stocks and bonds belonging to the sinking fund, \$74,000 of Frederick City 4-per-cent. bonds, and \$161,000 of Baltimore city stocks, aggregating the par value of \$235,000, which, deducted from the par value of stocks purchased, left \$378,475 as the net par amount invested for the year. This sum exceeded that of the previous year by \$70,775. The sinking fund for the defense redemption loan aggregated \$3,494,245 as against \$3,204,770 for the previous year. The total State debt at the close of the fiscal year was \$9,234,986.24. Deducting the productive assets of the State, as well as stocks and bonds to the credit of the sinking fund, at their par value of \$6,385,908.11 left as the net debt of the State Sept. 30, 1897, \$2,949,078.13, against \$3,338,533.13 for the previous year, or a net reduction of \$389,475 for the year.

The assessed value of property for State purposes, under the new assessment, was \$607,965,272—an increase of \$67,503,525 over that of 1896. The increased basis produced a corresponding increase in the amount of levy, which was \$1,079,138.27. One of the provisions in the new assessment law is the levying of a tax of $\frac{1}{8}$ of 1 per cent. on the income of mortgages, three fourths of such tax going to the counties in which the mortgages are to be recorded, and the remainder to the State.

The school-tax receipts from all sources were: City of Baltimore, \$1,109,652.40; counties, \$1,230,965.21; total, \$2,340,617.61; decrease for year over 1896, \$8,723.44. Paid for teachers' salaries: City, \$955,340.60; counties, \$835,400.22; total, \$1,790,749.82; increase, \$61,058.38. For building, repairing, and furnishing schoolhouses: City, \$311,333.95; counties, \$95,308.61; total, \$406,642.56; increase, \$156,245.36. Paid for books and stationery: City, \$60,497.68; counties, \$47,768; increase, \$1,579.77. For rent, fuel, and incidentals: City, \$74,907.52; counties, \$74,927.16; increase, \$7,190.38. Total expenses for public-school purposes: City, \$1,419,300.38; counties, \$1,230,965.21; total, \$2,650,265.59; increase, \$261,984.26.

The receipts for the oyster fund were \$66,733.90, which, added to the balance of 1896, made the total receipts of the fiscal year on that account \$67,270.73. The increase of the oyster revenue in 1897 was attributed almost solely to receipts from dredging licenses, the receipts in 1897 being \$42,058.14, while in the year previous they were only \$25,284.33. The disbursements were \$66,761.97, leaving a balance of \$508.76.

The net revenue from insurance for the fiscal year was \$157,221. The gross receipts from tobacco inspection were \$78,541, and disbursements \$72,238.

Education.—The number of schools in operation was as follows: City, 185; counties, 2,204; increase, 56; pupils in city, 89,752; in counties, 129,610; increase, 14,618. Highest enrollment—city, 82,868; counties, 116,479; increase, 3,117. Average in daily attendance—city, 50,680; counties, 72,547; increase,

1,665. Number of teachers—city, 1,667; counties, 2,949; increase, 103. Number of months schools were open—city, 10; counties, 8.7. In his report, the secretary of the Board of Education says: "The most important advance in the cause of public education in this State during the last school year was made by the passage of laws by the General Assembly of 1896 . . . providing for furnishing the use of text-books free of cost to the pupils of the public schools of the State, and making the annual appropriation therefor of \$150,000. It is already apparent, from the reports from the school officers of the several counties on file in this office, that the beneficial effects claimed for these laws have been realized. The attendance of pupils has increased from 10 to 30 per cent., and the efficiency of the schools has been greatly increased."

Charitable Institutions.—During the year the State appropriated funds toward the support of 45 charitable institutions, the aggregate of appropriations being \$314,000. The following are among the items of appropriation: Asylum and Training School for Feeble-Minded, \$20,500; Deaf and Dumb Asylum of Frederick, \$30,000; House of Correction, \$25,000; House of Refuge, \$15,000; House of Reformation for Colored Children, \$10,000; Hospitals for the Insane, \$74,000; School for the Blind, \$29,000; Home for Confederate Mothers and Children, \$3,000. In the Maryland Hospital for the Insane the daily average of patients was 496, and the average cost for each was \$212.50 per annum. The receipts at the Penitentiary during the year were \$27,817 in excess of expenses—an increase of \$10,000 over 1896. The greatest number of prisoners confined in the Penitentiary at one time during the year was 855, and the lowest 770. In the House of Correction the number of cells provided is but 232, "while frequently more than 300 prisoners are confined in the institution and the separation of the inmates with regard to sex is not possible."

Fish.—The United States Fish Commission took from the waters of the State during the year more than 70,000,000 shad eggs; the number of shad hatched was estimated at 50,000,000. Young shad were distributed in the different waters as follow: Susquehanna river and Chesapeake Bay, 24,457,000; Juniata river, 400,000; Bush river, 3,150,000; Gunpowder river, 2,250,000; Brandywine river, 1,500,000; Nanticoke river, 2,250,000; Deep river, Connecticut, 2,250,000; Hudson river, 3,150,000; Tuckahoe river, 900,000; Wicomico river, 900,000; Chester river, 900,000; Delaware river, 3,000,000. There have been deposited 500,000 striped-bass fry; 26,700 trout have been distributed in the northern and western parts of the State.

Coal.—The coal shipments in 1896 amounted to 3,700,000 tons; in 1897 to about 3,900,000 tons. About 4,000 men were employed in the mines.

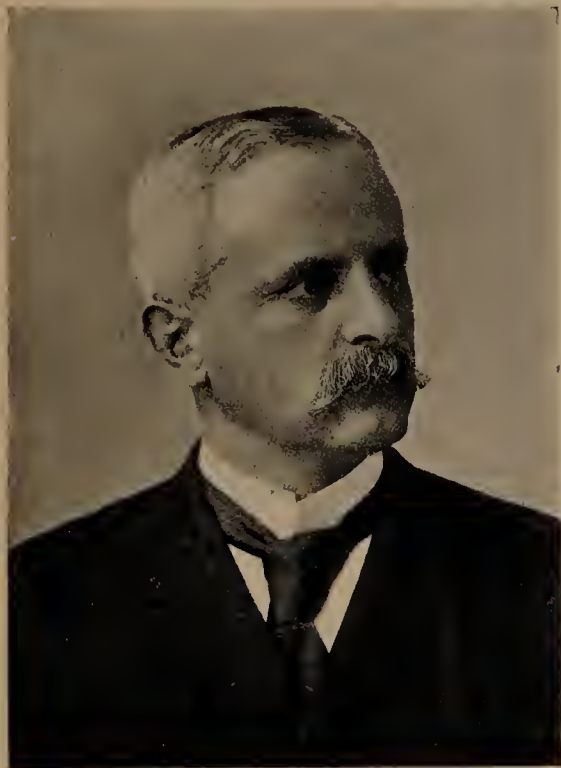
Grain.—The largest cargo of grain that ever left the port of Baltimore, and said to be the largest load that ever left any American port, went out in August, on the British steamer "Knight Bachelor." The cargo comprised 64,000 bushels of corn and 264,600 bushels of wheat. Reduced to pounds, the cargo amounted to 15,724,600. It required 21 railroad trains of 20 cars each, to convey the grain to the water front.

Pea Packing.—The pea picking and packing industry gives employment to about 5,000 persons in the State. The farms where the heaviest crops are picked are in Anne Arundel, Baltimore, and Hartford Counties, the principal packing houses being in Baltimore.

MASSACHUSETTS, a New England State, one of the original thirteen; ratified the Constitution Feb. 6, 1788; area, 8,315 square miles. The population, according to each decennial census, was

378,787 in 1790; 422,845 in 1800; 472,040 in 1810; 523,159 in 1820; 610,408 in 1830; 737,699 in 1840; 994,514 in 1850; 1,231,066 in 1860; 1,457,351 in 1870; 1,783,085 in 1880; and 2,238,943 in 1890. By the State census in 1895 it was 2,500,183. Capital, Boston.

Government.—The following were the State officers during the year: Governor, Roger Wolcott; Lieutenant-Governor, William M. Crane; Secretary of State, William M. Olin; Treasurer, Edward P. Shaw; Auditor, John W. Kimball; Attorney-General, Hosea M. Knowlton; Adjutant General, Samuel Dalton; Chairman of the Railroad Commission, John E. Sanford; Insurance Commissioner, G. S. Merrill, resigned in September, and succeeded by Frederick L. Cutting; Secretary of the Board of Education, Frank A. Hill; Secretary of the Board



ROGER WOLCOTT, GOVERNOR OF MASSACHUSETTS.

of Agriculture, W. R. Sessions—all Republicans; Chief Justice of the Supreme Court, Walbridge A. Field; Associate Justices, Charles Allen, Oliver W. Holmes, Marcus P. Knowlton, James M. Morton, John Lathrop, and James M. Barker; Clerk, Henry A. Clapp.

Finances.—The Treasurer's report at the beginning of the year showed that the gross funded debt of the State Dec. 31, 1896, was \$40,636,729; gross sinking funds, \$13,458,574; total debt, \$27,178,155. Of this gross funded debt, \$22,620,000 is contingent debt only; net funded debt, \$10,766,648. The total taxable property in the State was \$3,269,352,253, of which real estate was \$1,964,834,106 and personal property \$1,304,518,147. At the end of the year the real estate had increased \$77,687,993, and the personal \$3,751,100.

Militia.—The strength of the militia authorized by law is: Officers, 458; enlisted men, 5,896; the total number in service in December was 434 officers, 5,718 men. Returns from cities and towns show the number of enrolled militia 433,975, an increase of 11,944.

According to the report of the Adjutant General marked progress has been made in rifle practice. There was appropriated for that department \$15,000, of which \$14,969.23 was expended. The total

spent in armories in 1897 was \$19,666.41. The further sum of \$1,315.30 was spent in furnishing the Fall River armory in 1897 from the previous year's appropriation.

There was appropriated for armory-rent allowances \$37,000, and \$36,500 was spent; the sum of \$4,439.83 was spent for janitors from the \$7,000 appropriated; the maintenance of the United States steamship "Minnesota" for the naval brigade cost the State \$3,882.15 of the \$4,000 appropriated.

Education.—The increase in the number of public-school pupils in 1896 was about 11,000.

A new State normal-school building at Salem was dedicated in January. It is about 175 by 120 feet in area and three stories high. The cost of the entire plant was about \$250,000. The building was occupied during the school year, and nine young ladies were graduated in the midwinter class.

The trustees of the Agricultural College have established three separate courses, in order to carry out the purposes of the college. About one fourth of those who apply for entrance fail in the examinations.

The report of the Boston University shows that the land and the building for the law school, with its furnishings, have cost more than \$200,000, on which a debt of \$75,000 has been incurred. At the close of the fiscal year Aug. 31, 1896, the assets of the university were: Real estate above incumbrance, \$1,339,547.21; stocks, bonds, notes receivable, etc., \$167,037.42; sundries, including cash, \$80,359.30; total, \$1,586,943.93.

The report of Tufts College shows that the teaching force remains practically the same, numbering 85. The final registration of students is as follows: college of letters, 251; medical school, 180; divinity school, 35; Bromfield-Pearson School, 6; a total of 472. A radical change has been made in the system of requirements for admission. The results of coeducation, which has been tried for four years, have been good.

The Soldiers' Home.—The annual report of this institution shows that there were 241 men present on June 30, 1896; admitted during the year, 221; readmitted, 153; total, 615. At the close of the present fiscal year there were 187 in the home. The amount of pensions during the year was \$17,599; paid to pensioners and dependent relatives, \$9,866; retained by the home, \$7,733.

The State Prison.—The report of the Prison Commissioners for 1897 shows that the cost of support has been \$143,639. Deduct the net profits from the industries, amounting to \$21,224.03, and \$122,415.04 is the actual cost of the prison for the year ending Sept. 30, 1897. Compared with the preceding year, there is an increase of \$28,993.07. The cost *per capita* was reduced from \$181.61 in 1896 to \$174.53 in 1897. There was a constant increase in the population of the prison during the year. At the date of the last report there were 796 prisoners; at this date there were 826.

A life convict was shot while attempting to escape, Aug. 10. His brother, who was admitted to visit him, brought pistols, by the use of which they intended to force their way out—which involved the killing of three officers. A carriage was in waiting outside to take him away. Both brothers were shot and three officers were wounded, one very seriously.

Banks.—The annual report of the Savings Bank Commissioners on the co-operative banks of the State shows that during the year ending Oct. 31, 1896, the 122 banks in operation received \$5,782,949.24 for dues paid, \$1,240,182.31 for interest paid, \$60,346.56 for premiums paid, and \$42,513.22 for fines paid. During the same period the same banks returned to members \$2,493,695.95 for dues

on shares withdrawn, \$31,486.24 for dues on shares forfeited, \$1,174,901 for dues on shares retired, and \$262,507 for dues on shares matured—a total of \$3,962,590.19, which sum represents actual savings paid back to members. The same members received \$780,291.98 in profits returned. Four banks paid 7 per cent., and one only 4½. There were 81 which paid 6 per cent.

Insurance.—The report of the Insurance Commissioner shows that the income of the department for 1896 was \$59,176.20, an increase of \$1,984.34 over the previous year. The total expenditure was \$36,276.96, leaving a surplus revenue of \$22,889.24. The report shows that 13 mutual fire companies are in the hands of receivers.

Early in 1896 many policy holders of the Massachusetts Benefit Life Insurance Company appointed a committee to examine its affairs. As there was opposition to the examination on the part of the officers, the Legislature was appealed to, and a law was passed authorizing the appointment of a commission of the policy holders by the Governor, who should have full power to make such examination. The commission was appointed, and as a result all the officers and managers gave place to a new board and the by-laws were so changed that each policy holder has an equal right with every other policy holder in the ownership and management of the association.

Capital and Labor.—The report of a special committee appointed by the Arkwright Club to consider the matter of Southern competition with Northern cotton mills was presented in December, and another committee was appointed to devise methods of carrying out the recommendations contained in their report. Following are extracts from the report:

"The long hours run and the low prices paid, we believe, make the cost of labor in the South about 40 per cent. less than in the North. The working day in North Carolina is twelve hours, 24 per cent. longer than in Massachusetts, and the price paid per day for common labor in the mills is from 50 to 75 cents. So far as we could learn, there is no disposition to organize labor unions. The total cost of labor in several well-run mills was found to be under 4 cents per pound. We do not know of any mill in Massachusetts making similar goods in which the cost is less than 6 cents. It seems a duty to apply at once to the legislatures of the New England States to put us back upon a footing with the manufacturers in other parts of the country. It is particularly incumbent upon us to urge the Legislature of Massachusetts to repeal the legislation reducing the hours of labor to fifty-eight. Meanwhile, it is not possible for manufacturers to wait the slow action of legislatures, nor even to count upon it that their reasonable request will be granted."

The annual dividend list of the Fall River mills in December shows that the total capital represented, not including the Arkwright mills, which were organized this year, on which dividends are based, is \$22,933,000. The average per cent. of dividends paid on capital represented is 3.38. The average would be smaller were it not for the Bourne, which has paid a regular monthly dividend of 1 per cent. and an additional dividend of 6 per cent. in August. The mill is just across the State line in Rhode Island, and is subject to the labor laws of the latter State, though deriving all the benefit of the Fall River market.

At a general meeting of the Cotton Manufacturers' Association at Fall River, Dec. 8, it was voted unanimously to reduce all wages in the mills of the city.

At an operatives' conference, Dec. 8, at Fall River,

the following resolution was adopted, to be offered to the unions represented:

"*Resolved*, That we accept the reduction, as it would not be good business policy on our part to enter into a strike at the present time. But we inform our employers that as soon as we think there is a margin of profit sufficient for the restoration of the present scale we shall demand it, even if we have to go to the extremity of leaving our employment by going on strike."

A movement was made early in the year to curtail production, and many mills were idle in the summer.

It was found, in April, that several large corporations in New Bedford were insolvent, a large amount of their indebtedness having been left out of the reports submitted to the State. Receivers were appointed.

The report of the Chief of the Police Department for 1897 says that the evil of child labor in the State is growing less, and the reports of the inspectors show that the number of children employed in manufacturing, mechanical, and mercantile establishments and workshops is 13,324. Children employed between thirteen and fourteen years of age, 104; young persons employed between fourteen and sixteen years of age, 13,220.

Game and Fish.—The annual report of the Commissioners of Inland Fisheries and Game says that, despite all efforts to suppress the illegal traffic, a very large number of small lobsters are annually destroyed. During the last eight years the lobster fisheries have steadily decreased. In 1890 the catch of egg-bearing lobsters was 70,909; this year the returns, so far as received, indicate about 20,000, and of all others a decrease of 10 per cent. below last year and 45 per cent. below 1890.

The rearing and distribution of Mongolian pheasants during the past year has been fairly successful.

Cattle Commission.—The report of this commission for 1897 shows that the number of cattle paid for as tuberculous during the year was 5,275, and that the amount paid for them was \$179,867.52. Over \$5,500 was paid for 160 animals in which no lesions of the disease were found. Quarantine, killing and burial expenses, and arbitration brought the average amount paid for condemned cattle up to \$34.12 per head.

Commemorations.—New Bedford celebrated the fiftieth anniversary of its incorporation as a city, Oct. 11. An exhibition of the products of the city was opened, including those of about thirty lines of industry. Among other exercises of the day was a message of greeting from Bedford, England. Addresses were also made by the mayor, C. S. Ashley, the president of the day, W. W. Crapo, and George F. Tueker, the orator of the day.

On Dec. 17 a bronze tablet, set up at the birthplace of Gen. Israel Putnam, in Danvers, by the Daughters of the American Revolution, was dedicated.

A monument to Col. Robert G. Shaw, who was killed while leading the Fifty-fourth Massachusetts Regiment, the first negro regiment to serve in the civil war, in an assault on Fort Wagner, Charleston harbor, in 1863, was unveiled on Boston Common during the exercises of Memorial Day. (See article FINE ARTS.)

The one hundredth anniversary of the launching of the "Constitution" ("Old Ironsides") was celebrated at the Old South Church, Boston, Oct. 21. Maj. William H. Garland, who was a powder boy on the "Constitution" when she met the "Guerriere," was present. A poem which he had written, "Preserve the Ship," was read by Prof. Churchill, who also read Dr. Holmes's poem "Old Ironsides." Henry Cabot Lodge was the orator of the day.

The Bradford Manuscript.—The manuscript of Gov. William Bradford's "History of the Plymouth Plantation" was formally received at the Statehouse, May 26. An address was made by Senator Hoar, who mentioned the previous attempts to recover the document by John Sinclair in 1860 and by John Lothrop Motley in 1869. Nothing came of proposed attempts in 1877 and 1881. Then came the last and successful appeal started by the Senator himself.

This manuscript disappeared during the Revolution, and was supposed to have been taken by the British soldiers who occupied the Old South Church as a riding school, or to have been carried away by Gov. Hutchinson in 1774. It was discovered in the Fulham (England) Library, still bearing the bookplate of the New England Library.

Legislative Session.—The Legislature convened Jan. 7, and was in session till June 12. The new State government was inaugurated Jan. 7. Politically the Senate stood: Republicans, 33; Democrats, 7; and the House: Republicans, 181; Democrats, 58, and 1 Prohibitionist.

There was a contest before the Legislature in reference to the election of councilor in the Fourth District. The election commissioners declared the Republican candidate, Isaac B. Allen, to have been elected; but the Democratic candidate, John H. Sullivan, alleged that more than 340 ballots that should have been counted for him were improperly rejected because the mark which should have been placed in the square after his name was by mistake placed in the square opposite a vacant line just below his name, and these ballots were cast by persons who had voted for all other Democratic candidates. His opponent contended that the Legislature had no authority to go behind the returns. The legislative Committee on Election Returns decided that it was not necessary in this case to determine this important constitutional question, because the majority were of opinion that the ballots so marked should not be counted for the petitioner. The minority were of opinion that there should have been an examination. The majority report was accepted, and Mr. Allen was sworn into office.

Among the more important acts passed was that giving a charter to the Boston Elevated Railroad Company. The company promises to give five-cent fares and free transfers over all systems owned, leased, or operated by it, and if it pays dividends it will pay a franchise tax based upon the gross earnings of all such lines.

An act was passed which was intended to stop the killing of birds for ornamental purposes. As few Massachusetts birds are used in millinery, the act seems to have failed of its intent.

The Governor was authorized to appoint a special commission to investigate the subject of the relation between street railways and the municipalities of the State. He appointed Charles Francis Adams, William W. Crapo, and Elihu B. Hayes.

Among acts passed were these:

Providing a special penalty for theft of bicycles.

Providing for inspection of dairy products.

To incorporate the Roman Catholic archbishopric of Boston.

Relating to newspaper libel.

Increasing the aid given for school purposes to towns having low valuations.

Resolution relative to exercises in the public schools commemorative of the inauguration of the President of the United States.

An appropriation of \$250,000 was made for use in the extermination of tuberculosis in cattle.

The mill school-tax bill was to authorize a State tax of a dollar on a thousand for the support of public schools. This the Governor vetoed on

the grounds that it would not necessarily increase the sum to be expended for their support, for it contained no provision preventing the towns and cities which will receive money under the proposed tax from reducing their own appropriations for schools by an equal amount; that it would not tend to aid the weaker and overburdened communities in maintaining schools, since a large proportion would go to cities and towns.

Political.—There were five tickets in the field for the State election in November. They were:

Republican: For Governor, Roger Wolcott; Lieutenant Governor, Winthrop Murray Crane; Secretary of the Commonwealth, William M. Olin; Treasurer and Receiver General, Edward P. Shaw; Auditor, John W. Kimball; Attorney-General, Hosea M. Knowlton.

Democratic National: For Governor, Dr. William Everett; Lieutenant Governor, James E. Cotter; Secretary of the Commonwealth, Bernard M. Wolf; Treasurer and Receiver General, Horace P. Tobey; Auditor, Harry Douglas; Attorney-General, William W. McClench.

Democratic: For Governor, George Fred Williams; Lieutenant Governor, Christopher T. Callahan; Secretary of the Commonwealth, Charles D. Nash; Treasurer and Receiver General, Thomas A. Watson; Attorney-General, John A. O'Keefe.

Socialist-Labor: For Governor, Thomas C. Brophy; Lieutenant Governor, Edward A. Buckland; Secretary of the Commonwealth, Addison W. Barr; Treasurer and Receiver General, George A. Brown; Auditor, Joseph Ballam; Attorney-General, William Harrison.

Prohibition: For Governor, John Bascom; Lieutenant Governor, Willard O. Wylie; Secretary of the Commonwealth, Edwin Sawtell; Treasurer and Receiver General, Robert C. Habberley; Auditor, Herbert M. Small; Attorney-General, Wolcott Hamlin.

The People's party held a State convention Sept. 24, but put out no State ticket, although the "middle-of-the-road" section were opposed to fusion. The power to make nominations was given to the State Executive Committee, and it was instructed to confer with the Democratic party at its State convention. In accordance with these instructions fusion was effected, and one place on the Democratic ticket, that of Secretary of State, was given to the Populist candidate, Charles D. Nash.

At the Democratic convention, held in Worcester, Sept. 28, the Chicago platform was approved, and the proposal to substitute bank notes for national notes was condemned.

The resolutions favored legislation to encourage municipalities to establish their own systems of water supply, gas and electric lighting, heat and power distribution, street-railway service and other service of similar character; postal savings institutions; provisions to enforce the existing laws requiring returns of property for taxation; taxation of personal property at a uniform rate in all cities and towns; a tax on inheritance and successions; an income tax; abolition of irresponsible commissions; popular election of Senators; an eight-hour day for labor; more efficient inspection of factories, etc.; and amendment of the employers' liability act. They declared in favor of settlement of disputes between nations by arbitration, but were opposed to a treaty with one nation exclusively.

The National Democrats issued an address to the public in which they said:

"Our party is organized by those who believe that there ought to be a trustworthy political party pledged to establish a sounder and better system of banking and currency; to practice honesty and economy in expenditures: to use public office as a

public trust, and to eradicate the spoils system in both appointments and legislation; a party opposed, therefore, to protection, to paternalism, to fiat money, and to class legislation. It is an old party in its steadfast maintenance of the unchanging principles of justice and equal rights and in its disinterested devotion already fully proved; a new party in its clear and resolute aim to restore popular government in the United States to the purpose from which it is now diverted—the service of the American people.”

At the Republican convention, in Boston, Sept. 29, the principles of the party were reaffirmed and the national administration approved. The platform said further:

“The Republicans of Massachusetts maintain their fundamental belief in the unsectarian free public school. They dare insist upon a full enforcement of the liquor law. They believe that the frequent approval of loans outside the debt limit is against wise municipal economy.”

The election resulted in favor of the Republicans. The vote for Governor stood: Wolcott, Republican, 165,095; Williams, Democrat, 79,552; Everett, National Democrat, 13,879; Brophy, Socialist-Labor, 5,301; Bascom, Prohibition, 4,948.

At the city election in Boston, Dec. 22, Josiah Quincy, Democrat, was re-elected mayor by a plurality of 4,079.

At the town elections in March the most excitement was caused by the license vote. Of 85 towns reported, 13 voted “Yes,” against 12 in 1896. The vote was changed in seven or eight.

MECHANICS, JUNIOR ORDER OF UNITED AMERICAN. This organization is an outgrowth of the American Mechanics’ Union, established July 8, 1845, as a fraternal society, with headquarters in Philadelphia. This latter, afterward called the “Order of United American Mechanics,” was the practical result of a movement begun in 1843 to restrict immigration and in several other respects to secure for native Americans privileges in keeping with the spirit of the Constitution. The restriction of immigration was given the first place in a statement of principles and leading ideas entertained by the founders of the order. Following this came advocacy of the Bible as a reading book in public schools; complete separation of Church and state; selection of native Americans as legislators, administrators, and executors of the law. The parent order published at the time of its inception six declared objects: 1. To assist one another in obtaining employment. 2. To assist one another in business, by patronizing one another in preference to foreigners. 3. To assist the unfortunate in obtaining employment suitable to their afflictions. 4. To establish a cemetery for deceased members. 5. To establish a funeral fund. 6. To establish a fund for the relief of widows and orphans of deceased members. Chief among the men who were active in establishing the parent order were Luther Chapman and Richard G. Howell.

The Junior Order of United American Mechanics was instituted May 17, 1853, the first meeting being held in the Concord schoolhouse, Germantown, Pa., not far from the historic battlefield. Its motto is “Virtue, liberty, and patriotism.” Its watchword is “Patriotism.” The credit of bringing this order into existence is largely due to Gideon D. Harmer, Elliott Smith, and William M. Weckerly. The declaration of principles includes the following opinions and resolutions:

“That the constant landing upon our shores of the hordes of ignorant, vicious, and lawless criminals of the Old World should be viewed with alarm by the loyal and patriotic citizens of this country.

“We affirm a warm and hearty welcome to all

immigrants who desire to better their condition and become a part and parcel of our nationality; but we have not one square inch of room for the anarchist, the socialist, or the nihilist, or for any one who is



EDWARD S. DEEMER,
SECRETARY OF JUNIOR ORDER OF MECHANICS.

not willing to bow allegiance to that flag which is powerful enough to protect them as well as us in the exercise of all civil and religious liberty.

“We affirm our devotion to the public-school system of this country. We believe in compulsory education, and that all teaching in our schools should be in the English language, to the end that future generations may be able to take their place in the ranks of our country’s workers, educated in the history, customs, and manners of Americans.

“We guarantee to every man the liberty of worshipping God according to the dictates of his own conscience, and would give every assistance to protect all in the exercise of this liberty, but we object most strenuously to the interference of any Church, no matter under what name it may exist, in the temporal affairs of this country.

“We believe that the Bible should be read in our public schools; not to teach sectarianism, but to inculcate its teachings. It is the recognized standard of all moral and civil law; we therefore believe that our children should be educated in its teachings, but that no dogma or creed should be taught at the same time.

“We believe that patriotism and love of country should be instilled into the hearts of children, and that, with the sacred words of ‘mother,’ ‘home,’ and ‘heaven,’ our children should be taught that our flag is the symbol of all that makes a home for us. We would place a flag upon every public school in our land, and a Bible within, and the object lesson therein set forth should be a beacon light in every storm that threatens to engulf us.

“In the strictest sense we are a national political organization, but we oppose with unanimity the slightest taint of partisanship. ‘Our Country’ is our motto, and we keep this motto steadily before us.”

The qualifications for membership are these: A white male person, born in the United States of North America, or under the protection of its flag. Of good moral character. A believer in the existence of a Supreme Being as the Creator and Preserver of the universe. Opposed to union of Church and state. Favorable to free education and the American public-school system. Between sixteen and fifty years of age for beneficial membership; over fifty years, honorary membership.

The weekly dues are from 10 to 15 cents, and the minimum entrance fee for charter members is \$2. Sick benefits range from \$2 to \$5 a week. Funeral benefits are graded from \$20 to \$250. The following extract from an official statement recently issued gives the present condition of the organization, or rather its condition at the end of 1896. The figures for 1897 are not yet complete, as the work of the order extends over the entire country: The amount paid for sick and funeral benefits to Dec. 31, 1896, is \$3,500,000. The amount received by subordinate councils is \$9,000,000, and the amount paid out for all purposes is \$7,500,000. The report of the national secretary to the National Council shows that the year ending Dec. 31, 1896, notwithstanding the stress of the times, was an evidence of the progressiveness of the Junior Order. It is as follows: Number of councils Dec. 31, 1896, 2,237, a gain of 106. Membership Dec. 31, 1896, 177,732 (about 200,000 at this writing), a gain for the year ending Dec. 31, 1896, of 10,899. The receipts of subordinate councils for the year ending Dec. 31, 1896, were \$1,562,287.28, being a gain of \$284,943.51 for the year. The amount paid for benefits and relief during the year ending Dec. 31, 1896, was \$550,860.29. The amount in the treasuries of subordinate councils Dec. 31, 1896, was \$1,624,846.94, being a gain over the last year of \$192,210.42.

In addition to the foregoing, the National Council has established a National Orphans' Home at Tiffin, Ohio, for the care of needy orphans of deceased members. The home has been in operation about one year, and 38 little ones have found their way to it. The property and improvements are valued at \$50,000, and are clear of debt.

"Our various State legislative committees have secured the enactment of laws providing that the United States flag shall be displayed on all public schools; providing for compulsory education and for free text-books, and much other legislation for the protection and advancement of the public-school system.

"The National Legislative Committee is endeavoring to secure from Congress laws to restrict immigration, to amend our naturalization laws, to prevent sectarian appropriations, to prevent the desecration of our flag, and other laws that are truly American in their operation."

The word "junior" in the title has no relation to the age of members. It was adopted to distinguish the order from the Order of United American Mechanics, and has no other significance. The word "mechanic" is not construed literally; it embraces every pursuit.

The following detailed exhibit, compiled from the last official report, gives an idea of the strength of the order in the respective States and Territories: The actual membership, as reported up to and for Dec. 31, 1896, was: Maine, 542; New Hampshire, 645; Vermont, 955; Massachusetts, 1,468; Rhode Island, 569; Connecticut, 879; New York, 5,343; New Jersey, 26,676; Pennsylvania, 78,803; Delaware, 2,081; Maryland, 16,987; District of Columbia, 1,088; Virginia, 5,271; West Virginia, 7,044; Kentucky, 998; Tennessee, 1,178; North Carolina, 974; South Carolina, 569; Georgia, 274; Texas, 660; Ohio, 13,534; Indiana, 1,041; Illinois, 501;

Michigan, 249; Wisconsin, 225; Minnesota, 482; Iowa, 280; Missouri, 1,507; Nebraska, 186; Kansas, 322; Colorado, 2,112; Montana, 211; Washington, 355; Oregon, 488; California, 2,452.

The official head of the order, known as the national councilor, is Joseph Powell, of Denver, Col.; the secretary is Edward S. Deemer, of Philadelphia. The next meeting will be held in Louisville, Ky., June 21, 1898.

METALLURGY. Iron and Steel.—The past ten years was characterized by Mr. E. G. Spilsbury, in an address before the American Institute of Mining Engineers, as having been marked by many and varied improvements in all branches of mining and metallurgy, not so much in startling inventions as in the better adaptations of what was already in use. Among the improvements in mining are the adaptation of the steam shovel, the application of electrical power for mining, concentration, and conveyance, and improvements in wire-rope haulage and transportation. Radical and progressive changes have been made in furnace practice, by means of which increased production is obtained at lessened cost. Among the special improvements in the metallurgy of iron is the mixer of W. R. Jones, by means of which the products of one or more furnaces are tapped into a receiver and there so thoroughly agitated and mixed as to furnish an absolutely uniform metal for further treatment in the manufacture of steel. By allowing the fluid metal to remain a certain time in these mixers, or by the use of lime, the iron is thoroughly desulphurized. The silicon contents are lessened by casting the pig metal in chills, instead of into sand direct, and by Benjamin Talbot's process of pouring the metal as it is tapped from the furnace through a bath of molten oxide of iron. Improvements in the conversion of pig metal into steel have been made chiefly in the open-hearth processes and in the line of mechanical rather than of metallurgical adaptations. These have made it possible greatly to increase the size and output of open-hearth furnaces. Among these improvements are the mechanical charging machines of S. T. Wellman and the Wellman revolving furnaces. Improvements in basic hearths and linings made by Benjamin Talbot have greatly reduced the expense of parts of the process. The Bertrand-Thiel continuous open-hearth process has warm advocates in England. The Stockman process, by the use of nitrate of soda as a means of oxidizing the objectionable metalloids, does away with the necessity for all expensive blowing machinery. Mr. Edison's plant for mining, crushing, concentrating, and finally briquetting magnetic iron ore at the Ogden mine, New Jersey, is mentioned as a theoretical development and improvement of the very highest type, but its cost is very great.

Of two forms of iron of marked peculiarities, described by T. H. Norton, one, part of a mass taken from a deep crevice in the hearth of a blast furnace after the furnace was blown out, where the iron had been maintained in a liquid condition for more than a year, and had then cooled and solidified very slowly, was of a light, silvery color, and exhibited a very marked crystalline structure, with rectangular cleavage. It was, however, the reverse of brittle, and was highly malleable. The drill made but slight impression upon it. Portions were tempered, and attempts were made to pulverize them; a slight crumbling was manifested at first, but after a few strokes of the hammer the fragments became perfectly malleable. The piece could be split easily with a chisel, especially along the lines of cleavage. On analysis the only serious impurity in the metal was found to be phosphorus. The second specimen was the result of the prolonged action of the inner

part of a nonluminous Bunsen flame on ordinary steel; the steel having served to support the mantel of a Welsbach lamp which had been in steady use for two years, and having been exposed during that period to the combined action of a high temperature and the gases of the inner cone of the flame. As a result the steel had become so brittle that the upper half crumbled as easily as chalk. The lower part, less exposed to the flame, was covered with a brittle layer, while the central core was still pure steel. About six sevenths of the carbon seemed to have disappeared from the brittle part.

Hard, brittle white-iron castings may be softened and annealed, according to George Parker Royston, either by oxidizing the carbon—the older method, used and described by Reaumur in 1722—or by changing it from the combined to the free or graphite state. In the former method, the one most generally followed, the metal is heated in oxide of iron at a bright-red heat for a considerable period, the length of which is dependent on the thickness of the bar to be annealed. It may also be placed in lime, sand, or bone ash in lieu of oxide of iron, provided the atmosphere is used as the source of oxygen. The iron must be free from manganese and sulphur, or the elimination of the carbon will be delayed. The method by decomposing the carbide into graphite and free iron is effected by more or less continued heating between 850° and 650° C. Iron castings produced by this method are quite as soft as those obtained by the Reaumur method, but on account of the graphite present no bend can be obtained. There is no limit to the size of the castings that may be made, a large piece taking quite as short a time as pieces of smaller size. In another method of softening white iron discovered by the author the castings are carefully packed in some nonoxidizing material and heated to the temperature at which the iron would solidify after fusion—or about 35° C. below the melting point of the metal. As a result of this treatment the white iron becomes changed into a steel containing 1.5 per cent. of combined carbon, the remainder of the carbon being distributed through the metal in the form of finely divided graphite.

From his investigations of the contraction and deformations of iron castings in cooling from the fluid to the solid state, Mr. Francis Schumann deduces the conclusions that the deformation of prisms due to unequal contraction can be overcome by providing counter-deformation in the pattern, or by the addition of auxiliary parts that can be readily removed from the casting. In complex machinery castings the design should be so modified or chosen as to result in the least differences in the rate of cooling. Sudden changes in form cause severe initial stresses, if not fractures, and should be rigidly avoided. Imperfectly proportioned flanges, ribs, or gussets added to the main body of a casting for the purpose of increasing the strength of connections, may be sources of weakness. Hollow cylindrical columns, although cast of even thickness and left in the mold till cold, may become crooked by reason of the unequal rate of cooling between the upper and lower halves, due to the currents of air passing through the column and clinging to the under side of the upper half after the core arbor is removed, which is usually done shortly after pouring and while the casting is still red hot. This deformation is avoided by stopping the ends with sand immediately after the withdrawal of the core. Greater attention to the laws of cooling and correct forms and proportions of castings will result in increased strength and economy, besides the avoidance of annoying crooked castings and mysterious breakdowns.

The general advantages claimed to accrue from the addition of pure aluminum and ferro-aluminum to cast iron, as given in a paper by J. A. Steinmetz, are that it makes the iron more fluid, that it renders hard iron softer, that castings thus made are freed from hard spots and blowholes, that it lessens the tendency of the metal to chill, and increases the resistance of the metal to chemical action. It is also said that while good soft iron is made more fluid and benefited to some degree, yet the advantages of treating with aluminum are most evident with poor, hard white iron. It is an unquestionable fact, Mr. Steinmetz says, that the addition of aluminum very considerably affects the quality of the castings for the better. The general conclusion from tests made is that with white iron small additions of aluminum, such as would be used in ordinary foundry practice, increase slightly the fluidity; $\frac{1}{2}$ of 1 per cent. of aluminum and more decreases the fluidity. Gray iron is rendered decidedly less fluid by any addition of aluminum. Aluminum appears to reduce the shrinkage if enough is added. Perhaps one of the most striking results of the experiments is the increased time during which aluminum-treated iron will remain molten. This property of keeping fluid longer is of direct usefulness in a foundry where it is necessary to run a large number of small castings, when there is usually much trouble in keeping the ordinary metal fluid, unless it was very hot to start with. The general results prove that the molten bath of iron with aluminum will stay fluid twice as long as one without it. Another consideration is that cleaner, more solid, and softer castings are universally obtained, with a large reduction in the percentage of defective castings.

In a paper read by Prof. Gay before the American Society of Mechanical Engineers on the yield point of iron and steel, additional information is given regarding the increase of the ultimate strength and of the elastic limit of those metals. A test piece of iron, which under ordinary trial was shown to have a tensile strength of from 50,000 to 53,000 pounds per square inch, was tested just to the yield point, then allowed to rest free of stress for two weeks, and then tested again. The yield point was found to be considerably higher. The test was then repeated at times from one to three weeks apart till seven tests in all had been made, each showing a further increase in the yield point till it had been raised to 55,900 pounds per square inch, or considerably beyond the normal ultimate strength of the iron. The elongation in each test, except the last, was not carried beyond the yield point. In the last test it was continued to rupture without any increase in stress beyond the yield point, the total elongation of the piece being only 14.5 per cent., or one half of the elongation of the same iron when tested in the ordinary manner without resting. In a test of a bar of steel the elongation was carried to a point considerably beyond the yield point, rested seventeen hours, tested again when the yield point was found much higher, tested twice again with intervals of twenty-four hours, when a still higher yield point was given each time. The total strength of the bar was thus considerably increased over that of the bar tested in the usual way, but the elongation was reduced one half.

In his studies of the various aspects of the loss of strength in iron and steel by reason of use, Mr. Thomas Andrews has made exhaustive microscopic, chemical, and physical examination of rails of known age and condition of service on main lines of railway, and has obtained much valuable information on the subject. In a lecture upon it he

showed the difference between loss of strength from mechanical abrasion and the deterioration of the ultimate crystalline structure of the metal under the fatigue of stress consequent on the presence of internal micro-flaws. He also demonstrated the effect of low temperature in reducing the impact resistance of rails, the influences of corrosion, the manner in which vibratory stress induces microscopic internal growing flaws in rails, and the influence of various kinds of ballast on the permanent way.

Speaking on "Some Present Possibilities in the Analysis of Iron Steel," Mr. C. B. Dudley observes that few substances have received more study and few present chemical problems more difficult of solution than pig iron; and including the work that has been done upon the substances associated with it in manufacture and the substances derived from it, it is safe to say that the chemical work that has been done in connection with it has been greater than with any other substance in Nature. The complexity of pig iron is very great, and consequently the analytical problems presented are far from being easy of solution. Eighteen distinct substances besides iron are enumerated as having been found in analyses of it, 12 substances as alloyed with some form of iron or steel, and the 3 gases, oxygen, hydrogen, and nitrogen, as occurring in these metals and believed to have important influences on their physical properties. Having reviewed the present condition of the methods of analysis for five of these many substances—carbon, phosphorus, silicon, sulphur, and manganese—the author finds all the methods more or less imperfect and needing more work. "What," he asks, "will be our condition as chemists if, as seems probable, nickel, chromium, aluminum, tungsten, and the gases oxygen, hydrogen, and nitrogen, either free or combined, within the next few years come into prominence as constituents of iron and steel and are made elements in important commercial contracts? Still further, thus far our methods are concerned almost entirely with the total contents of the various constituents we are determining. We know very little about the compounds of the various constituents occurring in iron and steel, with the metal or with each other. Is the phosphorus present as phosphide or phosphate, or both? How besides as sulphide does the sulphur occur? Do the various carbides which are revealed by the microscope, and which are believed to be so closely dependent on the heat treatment which steel receives, and which are so intimately related to the value of the metal, differ from each other in carbon contents, or only in crystalline form? Who will be the first to isolate any of these carbides? Who will first give us a practicable, accurate, and sufficiently rapid method for determining oxides in steel? Who will first completely investigate the relation between the chemistry and the chilling properties of cast iron? And who will first give us a study on the form in which nitrogen occurs in this metal and a simple and accurate method for its determination?

The advantages to be derived from the formation of an international laboratory for investigating the methods of analyzing iron and steel were pointed out by Dr. H. Wedding in a paper read before the International Congress for the Unification of Methods of Testing. It was represented that the relations of buyers and sellers in the iron and steel trades would be put on a much safer basis if standard methods were appointed so that any chemist of ordinary skill could be trusted to carry them out. This could best be done at an international central laboratory, where the work done in various countries could be collected and reduced to a common standard. A competent director for such a labora-

tory had been found in Baron Jüptner von Jonstorff.

In a communication to the German Journal "Stahl und Eisen" concerning the microscopic examination of steel, Prof. Ledebur gives the results of experiments made by him upon the effects of service on steel rails. They show that old rails, as well as those that have been used for only a short time, have a surface layer of harder steel than the rest of the body. This layer, distinctly recognizable under a microscope, averages about $\frac{1}{100}$ inch in thickness, and when it is removed by filing the rail is brought to normal strength again. The effect of the continued use of a rail appears, therefore, to be to develop a thin layer of very hard nature at the wearing surface, which can be removed by reheating. Should the surface, however, show cracks the rail can not be restored to its original strength.

The Ellis-May steel process consists essentially of making the castings in a vacuum, thus precluding, it is claimed, the possibility of occluded air or gases in the metal. The system comprehends a closed casting chamber connected with other vacuum chambers by pipes and valves; these are exhausted by powerful vacuum pumps. When the metal is ready to be run into the mold the valves are opened, the air in the casting chamber is instantly drawn off, and, the casting taking place *in vacuo*, a flawless, homogeneous piece is claimed to be the result. It is represented, also, that the process entails a considerable saving in metal, since there is no waste in large castings like that which exists with the ordinary process. Some steel makers say, however, that the process is accompanied with considerable difficulty and the operation of the machinery is costly.

"Nickel steel," says Mr. William Beardmore, "has won its spurs, and proved itself worthy of the confidence placed in it by those to whom its remarkable qualities are best known." The results obtained by the author in the manufacture of this alloy for a large variety of purposes have been, he says, eminently satisfactory. It fulfills all the purposes of a metal that can be worked without any special care on the part of the artisan; which in shipbuilding will enable us to reduce the scantlings, take from the weight of the boilers, and add to the strength and reliability of the propeller shafts; and "which will give the same results to-day or tomorrow in China or Peru." It can be bent and punched as successfully as ordinary carbon steel. It has a higher elasticity by 31 per cent. than ordinary carbon steel, and the tensile strength is 31 per cent. greater, while ductility is not adversely affected. It suffers less from corrosion by sea water than ordinary mild steel or wrought iron; whence its fitness for use in propellers is evident. As a material for tires and axles it has many claims on our attention. It is well adapted as a material for shafting, and equally for railway axles, by the fact that a crack appearing in it will not develop as in carbon steel. As a material for castings much can be said in its favor. There are many other interesting points connected with nickel steel," but the facts already cited show that "it fulfills in a most satisfactory manner the conditions required of a material for shipbuilding and engineering purposes.

Experiments by E. D. Campbell and S. C. Babcock have brought out the fact that phosphorus, like carbon, is capable of existing in steel in at least two forms, and that the influence of phosphorus upon the physical properties of the steel in which it is contained is as much dependent upon the form of combination in which it exists as upon the quantity. This peculiarity of phosphorus, with the varying influence upon the brittleness of the steel ac-

cording to the form present, will, the authors think, account for many of the apparent inconsistencies in the statements usually made by metallurgists in regard to the behavior of this element.

The power of aluminum to reduce carbonic oxides at high temperatures has been used by Prof. J. O. Arnold and F. R. Knowles to measure the permeability to furnace gases of clay steel-melting crucibles. In the opening of their paper on this subject, the authors say that in passing pure carbonic oxide over white-hot aluminum the metal became coated with a mixture of alumina and carbon. Also, on blowing 40 gallons of carbonic oxide through molten mild steel containing about 4 per cent. of aluminum, the percentage of carbon was raised. The experiments in measuring permeability were carried out by melting ingots of Swedish iron containing 99.85 of iron with calculated quantities of aluminum. The ingots were broken up and remelted, and it was found that in each case the greater part of the aluminum had been oxidized and the carbon liberated had converted the iron into hard steel. The most important practical feature of the experiment was the fact shown that the walls of a crucible form little protection against the absorption of sulphur by the metal inside it.

A patent has been granted for the use of carborundum, or carbide of silicon, in the manufacture of steel. The finer grades of this substance are used as abrasives, while the coarser qualities are not valuable for this purpose, and may be sold cheaply. Carbide of silicon in molten steel splits up and gives both carbon and silicon to the metal.

A rule adopted by M. A. A. Cunningham from the calculations that have been made on the subject for finding the approximate tensile strength of steel is, to a base of 40,000 pounds per square inch, to add 1,000 pounds for every 0.01 per cent. of carbon, and 1,000 pounds for every 0.01 per cent. of phosphorus, neglecting all other elements in normal steels. Radical variations between calculated and actual strength indicate mixed steels, segregation, incorrect analyses, or unusual treatment in manufacture. The author has been taught by years of experience that carbon is the most desirable element for giving strength to steel, that definite results can be produced by varying its amount, and that the gain of strength due to its increase is accompanied with less loss of desirable properties than is the case with any other hardeners. All other elements occurring in carbon steels may be considered impurities or antidotes.

In a method which he has patented for casting armor plates, and at the same time hardening the face, Mr. William Beardmore forms a mold box of metal with the usual lining, into which the molten metal is run through a pipe terminating at the bottom of the mold till the level has been reached that will insure the required thickness of casting of the tempered face. Meanwhile an immense number of jets of cold air are playing on the thin bottom, whereby temper is given to the metal as it sets from the bottom up. When the first thickness of metal has become sufficiently cool, softer metal to form the back is poured through another jet discharging at several levels, so that any desired thickness of the black metal can be insured. The composite plate thus made has to be machined in the usual way, and is subjected also to the customary face hardening by chilling.

In an American apparatus worked by electrical power for charging Siemens furnaces, described by Mr. Jeremiah Head at the spring meeting of the Iron and Steel Institute, a powerful frame or gauntree is run up in front of the furnace, from which a massive arm is projected by means of an electric motor. This arm is provided with a grapple which

grasps by automatic means the boxes containing the furnace materials. The furnace door is opened and the arm carries the iron box, with its charge of pig iron or scrap, into the furnace; by another electric device the arm is rotated and deposits the materials into the fire, when the box is withdrawn by the arm. The operation is continued till the whole charge is in position on the hearth, when the apparatus is moved on to the next furnace.

The combined open-hearth process of Bertrand and Thiel embraces two open-hearth furnaces. The operations are divided into two stages, the metal being run when half treated through a header from the primary to a secondary furnace which has the nature of a finery. The perfect elimination of the phosphorus is not intended in the upper furnace, whence less lime may be added than would otherwise be necessary, and the quantity of slag to be melted is materially diminished. The plan of working adopted consists in charging nearly all the siliceous and phosphoric pig into the primary furnace, and nearly all the scrap into the finishing furnace, adding in each such quantities of ore, lime, etc., as are demanded. The advantages are claimed for the apparatus of an increased output and a material reduction in the consumption of lime and basic material for lining the furnace hearths.

The object of Mr. H. W. Hollis in designing his Weardale reheating furnace was to dispense with regenerating chambers, to obtain continuous working without reversing the course of the flame, to get rid of the disadvantages attendant upon frequent stoppages for clearing or renewal of brick checkerwork, and to introduce the flame in such a way as to obtain equal heating over the whole floor of the furnace chamber. This is accomplished by introducing a gas flame through a stratum of highly heated air in the roof of the furnace, the flame pouring down upon the slabs or piles to be heated and passing along the floor of the working chamber to an outlet port at each end.

A new process suggested for preventing rust in iron structures consists in treating the iron with a solution of ferro-cyanide. This forms a coating of cyanide of iron that is described as being uniform and impermeable, and of such a nature as effectively to protect the iron covered by it. The solution is mixed with a flaxseed varnish, to which a little turpentine or benzol has been added, so as to form a homogeneous emulsion which can be applied without difficulty. The evaporation of the alcohol leaves the flaxseed varnish, which forms a coat and protects the cyanide of iron deposited upon the metal. The iron requires no preparation for this treatment except cleaning from rust already formed.

In the Uehling casting process all heavy hand labor is supplanted by machinery, the sand in the pig iron is eliminated, and the large casting house, hitherto a considerable adjunct to the blast furnace, is dispensed with.

Precious Metals.—The treatment of the pyritic gold ores at Gibbonsville, Mont., consists, according to a detailed description by C. C. Burger, of amalgamation in the battery and saving of concentrates; roasting in twenty-four hours from 12 to 15 tons of concentrates with from 33 to 40 per cent. sulphur in a two-hearth Pearce turret furnace, supplemented by a small hand reverberatory furnace holding two 1½-ton charges to insure dead roasting without diminishing the capacity of the mechanical furnace; chlorination in a 1½-ton Thies barrel; filtering with compressed air in steel-lined cylinders swung on trunnions; settling any slimes that pass the filter cloth; and precipitating with ferrous sulphate. The cost of chlorination is less than \$5 per ton.

The ore is low grade, the gangue consists of quartz and magnesium slate, and the concentrates are mainly pyrites.

At the Mercier mine, Utah, where the cyanide process was first successfully carried out in this country, the gold occurs, according to the account of R. P. Rothwell, in limestone, and a high extraction is obtained with coarse ore. If the pulp shows in panning particles of gold as coarse as the mesh aperture, an exposure of a week to the action of potassium cyanide has been found necessary to effect a satisfactory extraction. The ore best suited for cyaniding is one that is neutral or slightly alkaline and free from copper or very low in it. Leaching telluride ores raw has not been satisfactory, as the results vary greatly without any apparent cause. The reason, Prof. Rothwell believes, is probably to be found in the different behavior of the tellurium minerals with potassium cyanide. At present tellurides are roasted before leaching. Roasting can be carried on without an appreciable loss of gold by volatilization, but the gold is liable to be left in the form of smooth globules not readily attacked by cyanide. Furthermore, the ore must be dead roasted, as neutralizing the ore with a wash of caustic soda has been found in many cases to reduce the extraction. In making laboratory experiments to serve as a basis for planning a mill, chemical tests ought to be supplemented by sizing tests to show the subdivision of the gold in the pulp, and by microscopical examination to show the form in which it is present.

Stamp-battery slimes, including the excessively finely crushed part of the battery tailings, are now successfully treated for the recovery of the gold at several works in South Africa. The slimes are agglomerated and precipitated by the addition of lime water from the water in which they are held in suspension, and are then treated by agitation with very dilute solutions of cyanide and washed by settling and decantation. The gold is deposited by electrolytic action under the Siemens-Halske system. The process is easy with the freshly formed slimes in course of treatment at the works; but in the accumulated slimes, in which oxidation of the pyrites has taken place, the presence of finely divided ferrous sulphide and hydrate by withdrawing the free oxygen from the solution prevents the dissolution of the gold. This difficulty is overcome by supplying oxygen artificially, for which purpose jets of air or potassium permanganate may be used.

The ore atomic process for gold, which is said to be in successful operation in West Australia, consists in first crushing the gold-bearing quartz to lumps of a convenient size, which are then in a closed chamber from which the air is excluded submitted to the heat of a furnace and to the action of water and hydrogen gas. The sulphur in the ore is thereby eliminated, being driven off as sulphureted hydrogen, and any oxide is reduced to the metallic state. After being thoroughly heated the material is suddenly quenched by the injection of cold water. This operation is repeated several times until the quartz is so softened as to be easily crumbled into powder by the fingers. The contents are then thrown into a tank and the gold is separated by washing. It is claimed that in this process no loss is incurred by "float gold" or by oxidation, but that all the gold in the ore is recovered.

Recent progress in the chlorination process for the extraction of gold from its ores lies mainly in the direction of improvements in the mechanical appliances which are used. The repeated efforts to prevent the oxidizing action exerted by chlorine on the unwashed sulphides in ores by adding salts such as niter to the mixture have now apparently been abandoned. Among the recent mechanical im-

provements has been the enlarging of the lead-lined steel barrels used in the Western American works. As now made, these barrels take a charge of 10 tons of ore, instead of 5. The filter inside of the barrel is retained, but the expensive asbestos cloth, which lasted for only a few charges, is replaced by a cheap sand filter, which, it is claimed, is not shifted by the rotation of the barrel, and does not become clogged until after it has been used for about a hundred charges. The Australians have at the same time abandoned the barrel, and the vats have been re-introduced at the Mount Morgan mine, greatly enlarged.

For the determination or extraction of gold, E. Servent introduces into the ground ore, in proportions calculated according to the percentage of gold, a mixture of sodium chloride and nitrate with sulphuric acid. When the reaction is completed the gold chloride is dissolved out by the addition of water and the gold is precipitated by ferrous sulphate.

In view of the theory that gold nuggets are built up of concentric layers deposited round a central nucleus, A. Liversidge has examined a large number of specimens from various sources. The nuggets were ground down or sliced through, to obtain sections, and these were polished and etched by suitable solvents. They all possessed a well-marked crystalline structure, and usually inclosed foreign substances. The crystalline structure is not incompatible with an aqueous origin, and the author suggests that the gold has been slowly deposited from solutions, either at ordinary or at high temperatures.

The peculiar feature of a new process by P. Langhammer for saving gold consists in drying, sizing, and stirring the ore, which, it is claimed, detaches the films of gold and makes them amenable to the solvent—potassium cyanide—which is to be applied separately to each size.

In the Beam process for roasting and converting gold ore, the furnace consists of a series of brick-built air-tight muffles, each 6 feet square, and capable of roasting half a ton of ore at a charge. The ore is crushed to a 40-mesh consistence, and then roasted at a low heat, whereby the sulphides are converted into sulphates, and the gold is left free. For the first half hour the ore is roasted without the admission of air, and it is during this time that the conversion is said to take place. A blast of hot air is then introduced on to the charge through pipes and valves. It is claimed that before the introduction of the hot air the product is in a condition that precludes loss by volatilization, and that for this reason the roasted product usually shows values in excess of those indicated by assays of the raw material. The product is ground after roasting, and in this condition the ore is ready for amalgamation.

While lead and silver in the ore are generally treated together—so that when one is missing, it is obtained and mixed with the other—there are cases, as where fuel is not procurable and the distance to a smelting center is too great for the silver value of an ore to bear transplanting to it; then its treatment by itself becomes necessary. Very marked improvements have been made in this work during the past ten years, especially in the line of more rapid means for roasting and chloridizing the ores for after-treatment. They consist chiefly in better construction, clearer knowledge of the chemical requirements for the constitution of ore charges, greater care in the choice and preparation of the fuel, and more perfect arrangements for the collection of flue products.

M. A. Granger has found that reduced silver kept in an atmosphere of phosphorus at 400° C. is slowly transformed into a definite phosphide, AgP_2 , which

is decomposed again at 500° C. So that silver, like gold, has the peculiar property of absorbing phosphorus at 400°, giving it up at 500°, and retaining it again at 900°.

Aluminum.—Almost the entire metallurgy of aluminum as it is practiced to-day, says Mr. E. G. Spilsbury, is the development of the last ten or twelve years. Previous to the introduction of the Cowles electric process in 1885 the aluminum of commerce was practically all supplied from France, where it was manufactured by the Deville process of reducing aluminum chloride by the aid of metallic sodium, and was sold here for nearly \$1 per ounce troy. The introduction of Castner's improved process for the manufacture of sodium made a reduction of price to \$7 a pound possible; in 1887 the Mabery and Cowles process of reduction in the electric furnace had advanced so far that aluminum was produced in the United States cheaply enough to drive out foreign competition. The manufacture of the metal has reached its present high development in this country by the aid of the process of Charles M. Hall, in which the alumina, being held in solution in a bath of molten fluoride, is reduced by electrolysis without decomposition of the bath, so as to allow practically of a continuous process, by which a nearly pure product is furnished. While the use of aluminum has extended very rapidly during the past few years, some disappointment is felt at the results of the more thorough knowledge of its characteristics that has been gained. As a metal by itself aluminum is probably never destined to supplant iron and steel in structural work. Its comparatively low tensile strength, with the extremely narrow limits of heat between which it must be worked to insure homogeneous structure, will always make it too treacherous for such purpose. On the other hand, the results obtained with alloys of aluminum point to wonderful possibilities in the future. So far the alloy that seems to give the best present results and the greatest promise is that with nickel. The addition of a few per cent. only of nickel to aluminum greatly enhances the strength and toughness of the metal and adds to its brilliancy without adding materially to its weight.

A. T. Stanton finds cadmium iodide a convenient solder for aluminum. If it be fused on an aluminum plate decomposition of the salt occurs long before the melting point of aluminum is reached. The result is generally the violent evolution of iodine vapor and formation of an alloy of aluminum and cadmium on the surface of the metal. The decomposition of the cadmium iodide is, however, too rapid to be convenient, and the pulverulent white residue is in the way. These defects are obviated by adding zinc chloride. The result, when the salts are completely fused together, is a flux which readily enables tin or other soldering alloy to fuse perfectly with aluminum.

In the Crecelius process for casting light aluminum articles an iron mold with an ascensional feed is used. Before casting the molds are heated to a temperature above the melting point of the metal that is to be poured into them. The melted metal is poured into a gate at the top of the mold, which follows up the shrinkage of the casting, and the whole is placed in a cooling chamber through which compressed air is driven, whereby the temperature is reduced very rapidly.

The authorities differing greatly as to whether aluminum is acted upon by nitric acid, special experiments were made by Prof. Thomas B. Stillman to determine the question. His results showed that aluminum in the form of coarse turnings is readily acted upon by this acid, hot or cold, the solution of the metal being more rapid in nitric acid of specific gravity 1.15 than with the stronger acid of specific

gravity 1.45. If the metal is in thick plates the action of the nitric acid is much retarded. An experiment made in view of Menschutkin's statement that a layer of nitric oxide is formed, protecting the metal from further action, showed that while aluminum in thin foil or coarse turnings is easily dissolved in either the hot or the cold acid solution is materially retarded in the hot acid if the aluminum is present in thick plates, and under the same circumstances does not take place in the cold acid.

Copper.—In the mining, smelting, and refining of copper, Mr. E. G. Spilsbury observes, no less progress has been made in the past ten years than in the working of iron; mines which had been abandoned are now worked at a profit; and the cost of the metal has been considerably reduced. It is hard for a person not actively engaged in the metallurgy of copper to single out any one special invention or improvement which has more than another contributed to these results. In the native copper districts the improvements have taken the direction of handling enormous quantities of material with the least possible labor. In the Western copper regions of Montana and Arizona, in addition to these problems, the complex and refractory character of the ores has had to be taken into account. The successful matting of these complex ores, subsequent enriching by the Bessemerizing process, and finally parting and depositing the copper by the several electrolytic processes, have all come into general use during the decade.

Under a new process mentioned in "Industries and Iron," by which copper is cast pure, it is said that the metal acquires an additional tensile strength of 33½ per cent., and possesses a conductivity of 95 per cent. when compared with the best rolled copper. The new metal appears to carry the same current with only one third the weight ordinarily used. The change, which is represented as being effected in the molecular structure of the metal, may be accounted for by the theory that the shape of the crystals has been altered so that their lines are parallel, and that the molecules are consequently brought closer together and into more intimate contact with each other.

As the distribution of the precious metals and impurities in copper is very uneven and irregular, ordinary methods of sampling bars and pigs give unsatisfactory results. What is required, Mr. E. Keller says, is a form of sample bar in which the distribution shall be even. In pouring the ladle must be hot enough to prevent any scumming, as the liquid part is sure to show a different percentage of metal from that which solidifies on the ladle. A sample bar (or plate) the thickness of which is small in comparison with the length and width, has the desired form, as the concentration from side to center can not go farther than a distance equal to the thickness of the plate, because at that moment the entire plate will have solidified. The border of the plate for a distance equal to the thickness of it will show an irregular distribution, concentration having taken place in one direction only. A correct sample will result if the plate be punched or drilled through. Tests were made on plates 15 inches square and one inch thick. Seeking an explanation of the irregular distribution of impurities, the author ascertained by experiment that a charge of molten copper remained uniform in composition when it had once been made so by thorough agitation and mixing. The different elements show different degrees of concentration, which correspond generally, except in the case of sulphur, with their melting points. The more readily fusible the metal the greater is the unevenness of distribution. Atomic weight and specific gravity do not appear to have any special bearing upon the subject, but if

the concentration is compared with the atomic volumes of the elements a correspondence appears, the concentration being largest where the difference in atomic volumes is greatest.

The stream of emerald-colored water that used to flow from the Anaconda and St. Lawrence mines in Montana and go to waste is now made a source for the recovery of the copper. In the process for precipitating the metal, which is very simple, several acres of ground are covered with wooden vats filled with old scrap iron, upon which the water is run. After the precipitation is effected the water is drawn off and the copper slime is transferred to another tank, where further drainage takes place. These vats hold about 15 tons of the copper, which now has the appearance of a clayish substance. This is packed up and sent to the smelters. The product carries an average of 86 per cent. pure copper.

Compressed air, says a writer in the "*Chemiker Zeitung*," is used, following the systems of C. and H. Berghers and Siemens and Halske, in the electrolytic refining of copper. The air is introduced under pressure through lead pipes terminating in glass jets near the bottom of the vats. By this means arsenic and iron are precipitated as arseniate of iron, the liquid is circulated, and the current density may be safely increased from 20 to 100 amperes. When the electrolyte is saturated with bismuth and antimony taken up from the anode, it should be removed and treated with copper oxide and salt. After filtration and acidification the liquid can be used again.

A new process for separating nickel and copper, which has been tested by R. P. Rothwell, consists in smelting nickel-copper matte with oxide of manganese and cooling, when the mixture will separate into two parts, the "top" containing most of the copper and manganese sulphide, and the bottom most of the nickel sulphide. By repeating the operation the separation becomes perfect. The manganese, the author says, can be used over again, or a manganese bronze can be made of the top.

Alloys.—The report of M. Charpy, of the Commission des Alliages of the French Société d'Encouragement, concludes, respecting the copper-zinc alloys, that "the tenacity of the brasses is greatly increased by working; and annealing these alloys is effective at lower temperatures than has hitherto been supposed. Annealing may, in fact, begin at so low a temperature as 430° C. (or 800° F.), and is very efficacious at 500° C. (or 900° F.). Heating brasses at 900° C. (or 1,650° F.) causes a rapid diminution in the extensibility of the alloy; and in the commercial alloys, which contain 0.15 per cent. of tin and 0.2 per cent. of lead, this effect, which is technically known as "burning," is produced at a temperature below 800° C. (or 1,450° F.). If attention be limited to the copper-zinc alloys which admit of industrial application—namely, such a range as from copper alloyed with a minute proportion of zinc to copper alloyed with 50 per cent. of zinc—it will be found that the limit of elasticity, the resistance to penetration, and the hardness increase continuously with the proportion of zinc. The extensibility also increases with the percentage of zinc, is greatest in the alloy containing 30 per cent. of zinc, and then decreases rapidly. The compressibility and the reduction of sectional area increase with the percentage of zinc, reaching a maximum with 30 per cent. of zinc, after which they decrease. The tenacity increases with the proportion of zinc, attains a maximum with about 45 per cent., and then decreases rapidly. The alloys become fragile when they contain 50 per cent. of zinc.

M. Charpy represents that he has obtained impor-

tant light on the constitution of alloys by microscopic examination. He learns from it that solidification of these substances takes place like that of saline solutions, and that binary alloys are generally formed of two constituents only, whatever may be the number of definite compounds formed by the two alloyed metals. The type of normal constitution presents crystals of a simple metal or of a definite compound enveloped in a second constituent, which is usually a eutectic mixture formed by the juxtaposition of two very finely divided elements, one of which is the same that forms the crystals. The composition of the eutectic mixture continues constant, and the proportion of isolated crystals varies with the percentage composition of the alloy.

Prof. W. C. Roberts-Austen's report of the Alloys Research Committee of the British Association gives an illustration of the value of the principle of the assimilation of two constituents of a fluid alloy which do not naturally mix, through the intervention of a third metallic solvent in the case of the estimation of ingots of South African gold. These ingots as imported are often alloyed with base metals to an extent which has hitherto been rarely met with in metallurgical industry. The base metals associated with the gold are usually lead and zinc, and their presence has given rise to unexpected difficulties in estimating the value of the ingots—difficulties arising from the peculiar distribution of the precious and the base metals, which renders it impossible to estimate the value of the ingots by taking, in any of the well-known methods now in use, the pieces of metal required for assay. Investigation of the subject by Col. E. Matthey showed that the distribution of gold in the mass was mainly determined by gravity. An ordinary cooling curve taken on such an alloy disclosed the existence of several subordinate freezing points, one of which was probably due to the zinc eutectic of the series. The alloy contained 8.1 per cent. of silver. After remelting it with the addition of silver, so as to increase the proportion to 15 per cent., a cooling curve was obtained in which the subsidiary zinc eutectic point could no longer be found, the mass proved to be practically uniform in composition, and no difficulty was met in determining its value by an assay piece cut in the ordinary way.

The term "eutectic alloy" was introduced by Guthrie to denote the most fusible alloy of two or more metals, comparing it to the mother liquor of a salt solution, which remains fluid after the bulk of the salt has crystallized out. The recording pyrometer, according to the report of the Alloys Research Committee, shows that the case is really far more complicated as regards alloys. Many alloys consist, when fluid, of more than one solution; and each of the several solutions leaves, on cooling, a solid deposit and a fluid mother liquor. These mother liquors, however, do not usually unite with one another; and a complicated series of conditions is established when the temperature has fallen sufficiently low for the whole mass to become solid. Each of these metallic mother liquors is a eutectic alloy, and may be included in the definition of eutectia actually given by Guthrie. Some alloys are of a simple character, and when fluid have only one eutectic alloy, that is, the deposits fall out from a single mother liquor. All the alloys which are used for the sake of their strength appear to be highly complicated. Thus in the alloys of copper and zinc there are four eutectic alloys, and in the copper-tin series there are at least six. The upper point on a cooling curve, at which the metal in excess begins to crystallize, has usually been termed the "melting" or "freezing" point; and difficulty has naturally been experienced in deciding what part of

the long range of temperature during which solidification takes place should be called the true melting or freezing point of the alloy. In the previous reports alloys with more than one freezing point have been referred to. The temperature at which one constituent begins to crystallize out was called the higher freezing point, and the temperature at which the eutectic alloy solidifies was called the lower freezing point. It may appear at first sight as though these points must be the beginning and ending of one continuous process of solidification; but as in the majority of cooling curves, the initial and eutectic freezing points are indicated by separate and distinct evolutions of heat, they may rightly claim to be separate, and not merely stages in a single operation. The fact that the lead-tin series has more than one freezing point is of industrial importance, for on it depends the facility with which an artificer can "wipe a joint" with plumber's solder. The latter contains 66 per cent. of lead, and its pasty condition when used is due to the fact that it has two widely separated points of solidification, the alloy consisting of granules of solid lead in a fluid mother liquor.

In the zinc-copper series of alloys, the upper eutectic probably consists of a mixture of copper with the compound CuZn . The mixture of these soft and hard substances produces great strength, as is evident from the fact that the strongest alloy of this series consists almost entirely of this eutectic; but the presence of a eutectic naturally diminishes the extensibility of a mass which contains more than a small amount of it. Both the annealing and the working of cast brass materially increase its strength; and this fact is of industrial importance, as it suggests that for certain purposes a brass containing nearly 50 per cent. of the cheaper metal may by suitable treatment be endued with properties which render it as useful as one richer in copper; its extensibility, however, would be small. Although brass containing from 60 to 70 per cent. of zinc is extremely weak, further additions of zinc are accompanied by a partial return of strength, which appears in some way to be connected with the presence of free zinc. Each apex of a curve representing mechanical properties seems to be in some way connected with a point on the freezing-point curve where the points of solidification tend to unite. In the copper-zinc series the connection is complicated by the simultaneous presence of more than one eutectic; but in the lead-tin series the maximum strength is possessed by the eutectic alloy of the series. In the copper-tin series the connection between a maximum strength and the union of the constituents of a given alloy in a single point, though generally clear, is sometimes masked by the wide range through which the eutectics extend.

As one fact which has been made more and more prominent in the alloys researches of later years, Dr. Étard, of the École Polytechnique, France, mentions the influence of very small quantities, the microplasms or chimions of some kind. A persistent study of steel has enabled the chimionic influence of such quantities of carbon, silicon, or phosphorus as might be expressed in atomic weights, for carbon and iron, by the formula Fe_{1000}C to be recognized; and whatever may be thought of this inadmissible formula, the relation of 1 atom of carbon to 1,000 atoms of iron remains a fact. Such quantities are actually employed in metallurgy when varieties of steel possessing certain properties are required. An attempt has been made to ascertain how far the properties of metallic masses are dependent on atomic movement and molecular grouping. The mechanical properties of alloys of definite series of metals have therefore assumed less prominence than the principles which affect

alloys generally. While the practical bearing of the investigation may have seemed to be somewhat remote, the establishing of the analogy between alloys and saline solutions has been eminently fruitful of practical results; for it has enabled the mechanical properties of alloys to be explained, and even to be predicted. The property of liquation possessed by saline solutions while freezing—which consists in rejecting a certain quantity, often very minute, of a fluid portion of the mass, and distributing or relegating it to a definite position in relation either to the mass as a whole or to individual crystals—is now recognized as being of fundamental importance in determining the mechanical properties of iron and steel, and of alloys generally. Attacking the problem of the constitution of alloys from the atomic point of view has enabled the influence exercised by the relative atomic volumes of the alloyed metals upon the mechanical properties of the mass of metal to be clearly revealed. It may now be accepted as proved that the influence exerted by an element added to a mass bears a direct relation to its atomic volume. The original problem proposed for consideration by the Alloys Research Committee, "Are the mechanical properties of metals and their alloys connected with their atomic volumes?" has been definitely answered in the affirmative by this and by researches on the European Continent and in America. The evidence which has been gathered that there is a constant and active molecular movement in solids can hardly fail to be of importance in all industries in which metallic alloys are employed.

In the manufacture of phosphor bronze as described by Max A. Wickhorst the phosphorus added to deoxidize the metal may be introduced as phosphorus or as a high phosphorus alloy, called "hardener." This contains 6 per cent. of phosphorus, with copper and tin in the ratio of 8 to 1, and is made by melting 90 pounds of copper and adding 11 pounds of tin. Seven pounds of phosphorus are put into a dilute solution of blue vitriol, and kept there till they are coated with metallic copper. This protects the phosphorus when it is dried in the air. After drying, the sticks of copper-plated phosphorus are introduced into the melted bronze, two or three at a time, and held to the surface of the metal by a cup-shaped tool. The phosphorus melts and combines with the metal at once, to form the "hardener." Phosphorus has the effect of hardening bronze, while it also makes it more fluid. The important property of phosphorus is, however, to deoxidize the metal, and it does this effectively.

In much of the manganese bronze used by foundrymen the manganese is added in the shape of ferro-manganese, which necessarily introduces considerable iron into the bronze. This iron is regarded by Mr. F. J. Davis as injurious, and the bronze so made as more readily corroded and not nearly so strong, tough, and ductile as bronze that does not contain iron. By using a rich alloy of manganese and copper, containing no iron, or other impurities, which is now offered, a pure manganese bronze of any desired grade can be procured. One of the best and cheapest bronzes—a very strong, tough metal—can be made of copper, 53 per cent.; zinc, 42 per cent.; manganese, 3.75 per cent.; and aluminum, 1.25 per cent. The presence of aluminum is essential to getting solid castings. For rolling into sheets, in which form manganese bronze is used for mining screens, a mixture is used containing more copper and manganese and less zinc. A substitute for German silver, composed of copper, 67.25 per cent.; manganese, 18.50 per cent.; zinc, 13 per cent.; and aluminum, 1.25 per cent., is of good color, resembling German silver closely, is strong, has superior casting qualities, does not corrode readily,

and has four times the electrical resistance of German silver.

The useful alloys of aluminum are divided, in a report published in the "Aluminum World," into two groups—the one of aluminum with not more than 15 per cent. of other metals, and the other of metals containing not more than 15 per cent. of aluminum. In the one case the metals impart hardness and other useful qualities to the aluminum, and in the other the aluminum gives useful qualities to the metal with which it is alloyed. More or less useful alloys have been made of aluminum with copper, chromium, tungsten, titanium, molybdenum, zinc, bismuth, nickel, cadmium, magnesium, manganese, and tin—these alloys all being harder than pure aluminum. It is, however, by combination of these metals, with perhaps additions of lead and antimony, that alloys of most value have been discovered. Some of them have been formed by the addition of only 1 or 2 per cent. of aluminum.

Experimenting upon the strength of alloys of aluminum and zinc in various proportions, Prof. W. F. Durand found the best results to be with mixtures not far from the proportion of two thirds aluminum and one third zinc. Comparative experiments with like bars of this alloy and cast iron indicated that the alloy is the equal of good cast iron in strength, and superior to it in the location of the elastic limit. The alloy is white, takes a fine smooth finish, does not readily oxidize, melts at a dull-red heat or slightly below, is very fluid, running freely to the extremities of the mold, does not burn the sand into the casting, coming out clean, and in good condition to work; is rather softer and more easily worked than ordinary brass, while it is not as liable to clog a file; and is brittle, and hence is not suited to pieces that require the toughness of brass.

Brass is understood to be a metal of good cutting qualities, and is used in the arts for purposes demanding a free working material of moderate strength. Its cutting qualities vary much according to its composition. As a rule, the lower the brass the more difficult it is to cut; and as the composition approaches pure copper, it becomes one of the most troublesome substances worked in the machines. These refractory qualities are good for such classes of material as spinning or cartridge brass, but are detrimental to such classes as clock brass or screw rod, for which purpose an alloy should be produced which can be worked free at a high speed. The method in most general use for producing such brass is by the addition of lead. The material produced thereby is known to the trade as "leaded brass," of which "clock brass" and "screw" or "drill rod" are two of the most common and largely used varieties. Mr. Edwin S. Sperry, who has experimented to determine the effect of lead in varying quantities in such metal, finds that for the best quality of screw-rod or clock brass the content of copper should not be below 60 per cent. or above 70 per cent., and the lead should not vary more than 0.20 per cent. from 2 per cent. Spelter should form the remainder. The alloy should be free from tin, or at least should not contain more than 0.10 per cent. of tin. Brass containing lead tarnishes more readily than the pure material, and it is also claimed that such an alloy is better suited for ships' sheathing than brass containing no lead. The alloy patented by Muntz for sheathing ships contains 56 parts of copper, 40½ parts of zinc, and 3¼ parts of lead. The inventor claims that the lead plays a very important part in the alloy by giving it the property of oxidizing with sufficient rapidity to keep the ship's bottom clean. Experiments to determine whether lead has a tendency to combine with brass in any particular proportion did not give a definite result; but "it is

evident that lead forms a homogeneous mixture with brass if not a definite alloy." No brass is made now that does not contain more or less lead.

Heating a mixture of glucina, charcoal, and oxide of copper in the electric furnace, M. Moissan has obtained alloys of glucinum and copper. They are golden yellow, have properties similar to those of aluminum bronze, and are specially remarkable for their extremely sonorous qualities.

Miscellaneous.—The whole tendency of modern work, Prof. Roberts-Austen observed in an address delivered at the Toronto meeting of the British Association, has been to break down the supposed distinction between the metals and the elements styled nonmetallic. It has been further proved that the three states of matter, solid, liquid, and gaseous, merge imperceptibly into one another, and that even in a solid some molecules are present that retain the freedom of motion characteristic of gaseous molecules. It was shown that the behavior of a solid metal may closely resemble that of a fluid one, and that a fluid metal in turn shares the properties of an ordinary nonmetallic fluid. Water, flowing in a vertical stream through a narrow orifice breaks away into characteristic drops and droplets. The author had pictured such water drops by instantaneous photography, and had done the same with a fluid stream of pure metallic gold, when he found that the drops and droplets of metallic gold were identical with those of water. Again, a sphere falling from a height of a foot or two into water produced a remarkable splash, which within the tenth of a second changed from a coronet-shaped splash into a columnar one, about 2 inches high. Having photographed the splashes made by bullets of pure gold when they fell into a pool of molten gold, he found that the gold splash and the splash of water and milk were identical. When a solid projectile of steel was urged against a steel armor plate with a velocity of 1,600 feet per second, the projectile produced within one three thousandth of a second a splash of the solid steel plate, which in turn bore a strange resemblance to the fluid solid splash. Hence it was evident that the solid steel really behaved like a more or less viscous fluid. It is shown by experiments that metals will diffuse into each other, even when solid, just as gases diffuse into one another, but less rapidly. These facts teach that metals, even when solid, are not the inert things they have been supposed to be, but are really vibrating masses of great complexity.

The Engineer of the Melbourne Victoria Water Supply Board reports concerning the relative merit of wrought-iron and steel water mains, that it is established by his observations that the life of a pipe depends largely upon proper protection against corrosion. Tests of cast-iron pipes by breaking weight have shown that a new pipe gave 4.07 tons breaking weight, while similar pipes which had been in the ground from thirteen to twenty-nine years gave averages of 2.45 and 2 tons respectively, showing a deterioration of 50 per cent. by corrosion in twenty-nine years. The average life of cast-iron pipes is thirty years. Pipes taken up after about forty years' use have proved valueless even for scraps. Some wrought-iron pipes laid by the engineer of the San Francisco water works were found after twenty years' service to be as sound as when laid, owing to their having been coated with asphaltum. Steel pipes have been used in connection with the Melbourne water supply since 1886 with satisfactory results, and it is the opinion of the engineer to the board that, with asphaltum coating properly applied and pipes carefully handled, steel pipes would last as long as cast iron, and be more economical.

To remove the iron from the water supplied to

the city of Kiel—spring water of good quality except for the small proportion of iron it contains, which deposits in the distribution system and imparts a bad taste through the development of polyphosphates—the water is made to traverse a system of metallic channels and cascades, of which the channels are undulating and perforated. The water is then passed through a bed of coke, ten feet thick, which is divided into eight equal compartments and rests upon a perforated bed of iron. From this bed it falls slowly into receiving basins connected with two covered reservoirs. The iron deposited on the rough surface of the coke is washed off once a week by isolating one of the compartments at a time. Before use, however, the water, now containing only from one sixth to one seventh of the original quantity of iron, is passed through filters of coarse and fine stone and fine sand arranged in layers, whence it passes into covered reservoirs. The sand filter is cleaned by removing a thin upper layer of the sand and replacing it with clean sand. The treatment is said to have proved completely successful.

Difficulty is liable to occur in electric smelting of ores from the slags being usually poor conductors and liable when present in the furnace to cause breaking of the current and stoppage of the operation. A slag has been secured by M. Heibling of good conducting power by using a flux consisting of a mixture of lime and carbon—the mixture used for calcic carbide. Under the action of the arc part of the carbon takes up the oxygen in the ore under treatment, while another part combines with the lime, forming carbides which are fusible and good conductors. The fused carbides take up and hold the infusible portions of the ore in suspension, while the metal settles at the bottom of the surface. The slag remaining consists of a very impure carbide of calcium, which is, however, susceptible of being given a certain commercial value.

The researches of Ad. Carnot and M. Goutal into the state in which elements other than carbon are found in castings of steels led them to the conclusions that manganese, nickel, copper, and titanium seem to be simply dissolved in the steels; a portion of manganese may be in the state of sulphide or silicide in the cast metals. Chromium forms complex and perhaps multiple compounds with iron and carbon. Tungsten and molybdenum are in the state of definite combinations with iron which may be represented by the formulas Fe_3W and Fe_3Mo_2 . These elements, generally considered metals, behave therefore in steel like nonmetals, while arsenic plays a part analogous to that of the true metals.

A novel method of obtaining reproduction of articles in low relief, such as medals, has been devised by Joseph Rieder, of Thalkirchen, Bavaria. The inventor takes a plaster-of-Paris cast of the article about an inch in height, which is placed in an ebonite sleeve, so that only its face and back are exposed. It is then placed face upward in a vessel containing an electrolyte, so that the face of the cast is above the level of the liquid and is moistened by absorption only. A steel plate is placed on the face of the cast and is made the anode of the cell, while the cathode is a spiral wire placed in the liquid. The steel rests on the projections of the cast, through which a current flows that gradually dissolves the steel. The dissolution proceeds until the entire surface of the steel has been brought into contact with the cast, and a copy is produced.

One hundred and sixty-eight specimens of ores and minerals, comprising oxides, carbonates, and sulphides, were examined by W. N. Hartley and Hugh Ramage with reference to the dissemination of some of the rarer elements and the mode of their association in common ores and minerals. Among

these gallium occurred in 68 specimens, indium in 30, and thallium in 17. Rubidium occurred probably in 70, but unquestionably in 13. All the carbonates of iron and all the tin ores contained indium. With a single exception, all the bauxites contain gallium. Silver, copper, calcium, potassium, and sodium are very widely disseminated through all ores and minerals. The authors draw deductions as to the formation of beds and lodes of ore from the following facts, which they claim to have established: First, that certain groups of ores and minerals are pervaded by small quantities of the same metals as common impurities; second, the rare metals, more particularly rubidium, gallium, indium, and thallium, are associated with the same groups of minerals and also with allied groups. It is easy to trace the association of similarly constituted compounds to their connection with elements related to each other, as determined by the periodic system of classification. These compounds have certain properties in common, distinctive of the groups of elements and compounds to which they belong; hence in a given course of chemical changes similar compounds are formed and thrown together by precipitation or otherwise. All the minerals mentioned have undoubtedly had an aqueous origin. The presence of the alkali metals in all the specimens, but in variable proportions, has a special significance. In the analysis of many different precipitates, obtained both in neutral and even strongly acid solutions, the alkali metals have been found in combination with the precipitated substance. It has long been known that manganese, aluminum, and iron in the state of hydroxides combine with more or less of the alkalies, but in a great measure such combinations have been disregarded.

METEOROLOGY. Temperature.—In a paper on the mean monthly temperature of the British Isles, F. Gaster and R. H. Scott deal with the means of the daily minimum, average, and maximum temperatures for the various months in the twenty-five years 1871–'95. They point out that there is a great difference between the extent of range of temperatures at the coast stations and that recorded inland. The range between January and July amounts to about 16° at coast stations, but to more than 23° at the inland stations. The contrast between the temperature of the air at inland and at coast stations at different times of the year is due to the following causes: The constant tendency of the sun to heat the surface of the earth; the equally constant tendency of the earth to radiate its heat into space. Both of these influences are modified greatly by the aqueous vapor and the clouds suspended in the atmosphere. The third cause is found in the fact that the solid portions of the earth absorb and reflect heat much more readily than the water; and the fourth in the fact that while the ocean to the westward of the British Isles is of enormous size and great depth, the sea to the eastward is, comparatively speaking, limited in area and shallow, with the shores of Continental Europe only a short distance away.

From a study of the relation of meteorological conditions and the occurrence of sunstroke made during the extraordinary heat wave of August, 1896, and published in the "Monthly Weather Review," Dr. W. F. R. Phillips concludes that the number of sunstrokes follows more closely the excess of temperature above the normal than it does any other meteorological condition; that the number of sunstrokes does not appear to sustain any definite relation to the general humidity; that, although the absolute humidity was greatest during the maximum of sunstrokes, it does not appear that the variations influenced the number of cases; and that the liability to sunstroke increases in propor-

tion as the mean temperature of the day approaches the normal maximum temperature for that day.

In a table published in "Symond's Meteorological Magazine" showing the chief climatological elements at eighteen stations in different quarters of the earth for 1896, the highest shade temperature, 111.2° , is given as having occurred at Adelaide, South Australia, in January. A temperature of 104.8° was recorded at Malta, which appears to be unprecedented. Winnipeg, Manitoba, as is usually the case, excels all the other points in minimum shade temperatures and in daily and yearly range. The least daily and yearly ranges were recorded at Grenada. The highest mean temperature always occurs in Ceylon, and for 1896 was 81.5° . The average for fifteen years at Bombay was less than a degree below that in Ceylon. The station having the lowest relative humidity has for many years been Adelaide, and the dampest station Esquimaux. The highest temperature in the sun, 177° , was at Trinidad, and the lowest on grass was -23.5° at Toronto, the radiation temperature not being registered at Winnipeg. The greatest rainfall, 101.06 inches, was at Colombo, Ceylon, and the least 15.17 inches, much below the average, at Adelaide. The greatest amount of cloud was at Esquimaux, slightly exceeding that in London. The clearest day was at Grenada.

It was pointed out in the British Association by Dr. Van Rijkevessel that the curves of daily temperature for the different meteorological stations of Europe indicate a possible division of the continent into two regions with marked difference of climate: The eastern region includes Russia and adjacent countries, while the rest of the continent is in the western region. Small irregularities, such as secondary maxima and minima, are reproduced in all the curves for places in the same region, and serve to show that the temperatures are determined by external causes operating over the whole area.

In a new form of constant-volume air thermometer which shows the total pressure directly and may be graduated in degrees of temperature, employed by Mr. J. Erskine Murray, an arrangement is provided whereby the pressure of the atmosphere is eliminated by the adjustment of an auxiliary reservoir of mercury. The total pressure of the air, and hence the temperature, are measured directly by the height of a column of mercury. A barometer tube with a vacuum at the top is connected with the bent stem of the air tube and the stem is continued in flexible form to the mercury reservoir. The barometer tube is graduated in absolute degrees of temperature by fixing one point—the pressure for the temperature of melting ice—and dividing the tube mechanically. To make an observation of temperature the mercury is adjusted to a mark fixed on the bulb stem by raising or lowering the mercury reservoir, and the pressure of the inclosed air is given by the height of the mercury in the barometer tube over the mark in the stem of the air bulb. By closing a stopcock between the pressure gauge and the reservoir the bulb and the gauge may be completely cut off from external pressure.

The belief is general that anticyclonic conditions during the winter are likely to be accompanied by exceptional cold; but the observations of Mr. W. H. Dines have led him, so far as England is concerned, to the opposite conclusion, and he always expects a frost to break up as soon as the barometer gets much above 30 inches. A comparison of the tabulated barometer heights for all the cold periods during the three winter months of the fifty years 1841-'90 went to confirm this view.

Clouds.—Four methods of measuring the heights of clouds are in use at Blue Hill Observatory, Mass.

One is by synchronous theodolite observations of identical points, which when repeated at definite intervals enable the velocity of the cloud to be calculated. In another method, by the shadows of low clouds, the angle of the cloud from the observatory is measured, the angle of the sun with the horizon is found from tables, and the distance of the shadow on the landscape is ascertained from a map. These elements of a triangle enable the cloud height to be calculated, and its velocity may be determined from the time of passage of its shadows over low points. A third method—the only one by which certain high and uniform cloud strata can be measured—is by means of the light reflected upon them at night from cities. The angle which the center of the illumination makes with the horizon is measured, and, having the distance from the city, the right-angled triangle may be solved. An accurate method for low and uniform clouds is by sending up kites into and through the clouds. The length of line and its angle when the kites disappear give the height of the lower surface, and the records of barograph and hygrograph, which are carried by the kites, determine the upper limit of the cloud, and therefore its thickness. Still another method for very low stratus or nimbus is to note the height of the base on the sides of Blue Hill. The mean height of the cirrus cloud is determined to be about 29,000 feet, though it is sometimes found as high as 40,000 feet. The mean height of the cumulus is 4,600 feet, or a little less than a mile, but the tops of the cumulo-nimbus, or thundershower clouds, penetrate into the cirrus region. The average height of the nimbus, or rain cloud, is only 2,300 feet, and it often sinks below the top of Blue Hill. The average velocity of the cirrus clouds is 89 miles an hour, but in winter they sometimes have the enormous velocity of 230 miles an hour. The observations show that the entire atmosphere, from the lowest to the highest level, moves twice as fast in winter as in summer, and that between the heights of 2 and 9 miles there is an almost continuous westerly current of great velocity, the increase of velocity from the lowest to the highest clouds being a linear factor of the height. Whenever clouds are visible, therefore, it is possible to ascertain the direction and velocity of the currents at the levels at which they float.

Precipitation.—In no district in the world is navigation so endangered by a combination of fog and icebergs as off the banks of Newfoundland. Maps showing the distribution of fog by months, compiled by Dr. G. Schott, for the routes of steam vessels between New York and 40° west longitude, show that the period of most copious fogs is from April to August, inclusive; that a sudden and considerable decrease takes place in September; and that the least amount is in April. Two regions of greatest frequency of fog are south of Nova Scotia and the eastern part of the Grand Newfoundland Bank. On the bank itself, especially on the western side, the frequency of fog is much less, because the water is considerably warmer there than on the eastern side, and because the sudden changes of the sea temperature do not occur there to the same extent as on the eastern side, where the two currents come into contact. Dr. Schott has also made studies of the currents of the banks, and finds the fact confirmed that the Gulf Stream does not exist as a warm current east of 40° west, and has no rapid movement east of 60° west; that the Labrador current does not anywhere touch the United States seaboard, and has nothing to do with the "cold wall"; that on the Grand Bank itself there is practically no current; and that the positions of the warm and cold streams are irregular movements difficult to account for.

Mr. R. C. Mossman has found from the examination of the principal meteorological registers and weather records kept in London between 1813 and 1896 for notices of thunderstorms, lightning without thunder, fog, snow, hail, and gales, that the average number of thunderstorms during the period was 9.7 per annum, the maximum occurring in July and the minimum in September. The average number of fogs was 24.4, and "of dense fogs" 5.8 per annum. Ten-yearly means show that a steady and uninterrupted increase of fog has taken place since 1841. The average number of days with snow was 13.6 per annum. The snowiest winter was that of 1887-'88, with forty-three days of snow, while not an instance of snowfall was recorded in the winter of 1862-'63. The mean date of the first snowfall was Nov. 9, and of the last March 30. Hail appears as essentially a spring phenomenon, reaching a maximum in March and April. The minimum was in July and August. The average number of days with hail was 5.9 per annum.

Sir John Evans, in the British Association, illustrated the extent of the local variations in weather even in a country so small as England, by citing the difference in the amount of rainfall on the east and west coasts, which gives the almost absurd ratio of 1 to 8.

The phenomenon of rain gushes in thunderstorms has been considered by Prof. Cleveland Abbe in the "Monthly Weather Review." Several plausible explanations of it have been put forward from time to time, but have been rejected as erroneous. It is an open question whether the rain gushes bring about the formation of lightning or are provoked by it. The author makes several suggestions to serve as bases for experiments.

The question of the influence of forests on rainfall was reviewed by Prof. H. A. Hazen at the annual meeting of the American Forestry Association. Both the historical and the experimental evidence were found to be indecisive so far as they were cited to show that forests promote increase of precipitation to any marked degree. "It has been well established," the author says, "that forests have a most important bearing upon the conservation of rainfall; that the forest floor permits a seepage of water to the sources of springs, and thus maintains their steady flow; that woods hold back the precipitation that falls, especially in the form of snow, thus preventing or ameliorating the effects of dangerous freshets. There is not the slightest doubt of their importance to the welfare of man, but all these facts do not affect the question of their influence upon precipitation. The historical argument, depending on the contrast between the former fertility and present desolation of certain regions, is met by the answer that there is no evidence of any essential change in the absolute quantity of rainfall; but formerly, with large populations and high civilization, the water supply was taken care of in those countries and applied to irrigation, of which the remains of immense works are in evidence, while now it is all wasted. The coincidence of our dense forests with the greatest precipitation is probably the result of normal abundance of precipitation. Meteorologists are agreed that there has been practically no change in the climate of the world since the earliest mention of such climates." The "early and the latter rains" are experienced in Palestine now just as they were four thousand years ago. Jordan "overflows all its banks" to-day in February precisely as it did in Joshua's day. Comparative gauge measurements of precipitation in forests and the open have afforded no satisfactory results. What is probably the amplest record of such observations, that of Prof. H. A. Blanford, in India, showed a possible difference of 2 per cent. in favor

of the forest. This is "practically inappreciable." There is, however, a class of visual observations which seem to show effect upon rainfall of forests. "Probably many have seen heavy clouds passing over a plain, but which precipitated only as they passed over a forest. Also in a hilly region it is a frequent phenomenon that fog and low-lying cloud hover near a forest, and not over an open plain. One also notes very often, in passing into a forest on a damp day, that the trees drip moisture, possibly condensed from moisture evaporated from the damp earth underneath. Observations of this nature, however, can not ordinarily be checked by instrumental means, but show in a general way that the forest tends to conserve vapor and moisture, which in the case of the open field would be diffused into the atmosphere.

The director of the observatory at Odessa, Russia, has recently published a work on the distribution of rain and thunderstorms over the globe, in which he assumes that there exists on either side of the equator a zone of electrical activity exactly corresponding with the region of greatest rains. Throughout this region the thunderstorms exceed 100 a year; beyond it, up to 20° or 25° of latitude in both hemispheres, thunderstorms are of rarer occurrence; and in temperate climates they do not much exceed 30 a year. The most curious observations in the book relate to countries where thunderstorms are not known, and even where it is said never to rain. Such countries are Finland, Iceland, northern Siberia, eastern Turkestan, Nova Zembla, and all the arctic regions.

Winds.—From his investigations respecting wind velocity Prof. G. Hellmann has deduced the yearly period for all stations for which he could find a series of ten years' observations and for all parts of the world. His general conclusions are that the velocity increases with latitude and decreases from the coast inland; that in the yearly period the maximum in higher latitudes and exposed coasts occurs during the cold season, while in the interior of the continents it occurs between March and July; that the period of maximum velocity generally corresponds with that of the stormy season; that the minimum velocity generally occurs in August or September at those inland stations that have a spring maximum, while at coast stations which have a winter maximum the minimum takes place in June or July; that the amplitude of the yearly period is greater on the coast than inland, but greatest in districts subject to strong periodical winds and monsoons.

A summary of the conclusions reached by M. Maximilian Plessner from a study of the economies of wind as a source of power is given by M. Henry de Varigny in a paper on "Air and Life," published by the Smithsonian Institution. The irregularity of the wind forms the chief objection to placing reliance upon it, but much depends upon localities. There are places and large regions where it is fairly regular. It seldom fails at the seashore, and the trade winds are nearly constant; while in most parts of the globe it becomes more regular as the altitude increases. Hence, upon the whole, a considerable part of the world is well suited for investigations upon the best methods of deriving power from the winds. The first requisites of a wind-power machine are some sort of a motor driven by the wind, and an accumulator to store the energy and yield it at the required moment. Dismissing the old windmill and the æolian wheel as not fully coming up to the mark, M. Plessner turns to sails as affording a possible solution of the problem. "The utilization of the power of the winds," he writes, "and its transformation into mechanical work are only possible by means of sailing vehicles,

driven by wind upon a circular railway, the power generated by such rotation being transmitted to an axle and thence to machinery." On this railway a circular train, made of small cars coupled together, each carrying a mast and two sails at right angles with each other, is driven by the wind. The sails are automatically trimmed, and automatically also they expand or contract, or rather take in the wind or withdraw from it. As long as the wind blows the train continues rotating, and if it is connected with a central axle the latter may work dynamos and charge electrical accumulators. A similar apparatus might be arranged in water, boats taking the place of the cars, and, since the wind power is transformed into electricity, the latter may be stored and kept in reserve, or transferred to a distance to perform 10, 20, or 50 miles away any work that may be required.

In a paper on "Some Climatic Features of the Arid Regions of the United States," prepared by the chief of the Weather Bureau and presented to the National Irrigation Congress at Phoenix, Arizona, in December, 1896, the probable availability of the wind as a motive power and sensible or wet-bulb temperatures are discussed. Comparative charts of actual and sensible temperatures show that the greatest difference between the wet-bulb and the dry-bulb temperatures prevails in the regions of the West and South, where the relative humidity is low, while in the East and Northeast, where the relative humidity is much higher, the two temperatures most nearly agree. Effective winds appear to be abundant through the year on the plains east of the Rocky mountains, but to decrease as the mountains are approached.

Miscellaneous.—The first instrument, recording continuously and graphically, lifted by kites, was a thermograph made of light materials, constructed by S. P. Fergusson, which was raised at Blue Hill Observatory, Massachusetts, August, 1894, to 1,430 feet above the hill. By its use simultaneous observations could be obtained in the free air and on the ground. This method has been since then in regular use at the Blue Hill Observatory. In the present practice at Blue Hill, Eddy's Malay tailless kites, presenting a convex surface to the wind, are used, or Hargraves's cellular kites, consisting of two pairs of superposed planes, with side planes connecting each pair. The line holding the kites is a steel music wire, 0.033 of an inch in diameter, having a tensile strength of 300 pounds, and weighing 15 pounds per mile. Subsidiary kites are attached by independent cords to various points of the line. The meteorographs, recording pressure wind velocity, and air temperature, are composed mostly of aluminum, and weigh less than three pounds each. The wire is coiled upon the drum of a windlass, which may be turned by two men; a measuring device registers the length of wire uncoiled, while the angular elevation of the meteorograph, when it is not hidden by clouds, is observed from time to time. From these data, or from the barometric record, the altitude of the meteorograph is calculated. Kites may be flown in all kinds of weather. In his paper read at the British Association Mr. A. Lawrence Rotch, Director of the Blue Hill Observatory, gave as the greatest elevation to which kites had lifted a meteorograph 8,740 feet above Blue Hill, Oct. 8, 1896, when nine kites were used. The meteorograph remained during several hours higher than a mile, and good records of the atmospheric pressure, temperature, and hygrometer were brought down. More than one hundred records of atmospheric pressure, temperature, and relative humidity or wind velocity at intermediate heights up to 8,740 feet had been obtained when Mr. Rotch made his report to the American

Academy of Arts and Sciences, May, 1897. After this, on Sept. 19, 1897, a meteorograph sustained by 7 kites was raised to a height of 9,255 feet above Blue Hill, or 9,885 feet above the sea; and on Oct. 15, to upward of 11,000 feet above the observatory. A few of the general conclusions mentioned by Mr. Rotch as having been deduced from his observations with kites are that at the height of about a mile the diurnal changes of temperature in the free air nearly disappear, although in fair weather the days are damper than the nights. "Cold and warm waves" begin in the upper air, as is proved by the temperature decreasing faster than normal, or even increasing abruptly with altitude, before the fall or rise of temperature begins at the earth's surface. Several ascents through clouds have shown the air above them to be usually warmer and drier than the air below. Kites furnish a ready and accurate method of measuring the heights of certain low and uniform clouds, which could not be easily measured otherwise in the daytime. Changes of wind direction in the different air strata are determined from the azimuths of the kites; these changes sometimes amount to 180°. The wind velocity usually increases with altitude, and vertical currents commonly prevail near cumulus clouds. During high flights the wire is strongly charged with electricity, but no measurements of the kind or potential had lately been attempted.

The experiments of the United States Weather Bureau with kites flown at distances of from one to two miles from the earth's surface have shown that the shifting of the wind occurs at the height of a mile from twelve to sixteen hours before the same change of direction on the surface; and the bureau hopes soon to be able to construct a telegraphic synchronous chart based on conditions of the atmosphere a mile above the surface of the earth.

Describing in the British Association the diversities of climate in Canada, Mr. R. F. Stupart spoke of the climate of the Pacific coast between the ocean and the mountain ranges as moist and temperate; while on the east side of the Rocky mountains, on the high-level plateaus of the Northwest Territories, and in Manitoba, large extremes of temperature prevail, but the atmosphere is bright, dry, bracing, and healthy. In the valleys of the St. Lawrence and Ottawa rivers a cold, bright, bracing winter is followed by a long, warm summer, while the maritime provinces have a climate that has been highly extolled. Among the marked climatological features of the mountain districts are the rapid changes of temperature that frequently occur in short intervals of time, the great variability in different years of the mean winter temperature and of the summer rainfall, and the warmth of the summer in the great Mackenzie basin, just under the arctic circle. The author further discussed the local features of the climate of Ontario and Quebec. The annual precipitation of the province of Ontario is between 30 and 40 inches, and is fairly evenly distributed throughout the year. In summer, however, the rain generally falls in thundershowers, and cloudy and wet days are rare. The Great Lakes never freeze over, but usually most of the harbors are closed by ice about the middle of December, and remain frozen over till the end of March or the beginning of April. The average date of the closing of navigation on the St. Lawrence is in December, and of the opening April 21. Harbors on the Gulf of St. Lawrence are likewise closed by ice during the winter months, but on the Bay of Fundy and the coast of Nova Scotia they are open all the year round.

A method has been suggested by Prof. E. C. Pickering for determining the distance and direction of one vessel from another in a fog by means

of a calculation based on the velocity of sound. "If, for instance," says R. De C. Ward, explaining the method in "Science," "two fog horns, A and B, are placed one east and one west of a given point in a north-and-south channel, and each two miles from the point, and these horns are blown simultaneously and automatically at regular intervals of about a minute, a captain who is trying to work his ship through the channel can readily get his bearings. Supposing that one horn has a higher pitch than the other, and that a vessel is one mile east of the channel between the two horns, the captain of the vessel will hear the high-toned whistle A five seconds after it is blown, because it is only one mile distant, but B will not be heard for fifteen seconds, because it is three miles off. If both horns are heard together, the vessel is in the middle of the channel. Another application of the same method of determining positions of vessels is suggested in the case of one vessel attempting to pass another in a fog, or in the case of the calculation of a ship's distance from the shore when the ship's time is within a second or two of that on shore, and when a whistle on shore is blown at the exact beginning of each minute. The determination of the velocity of the wind is also noted as being a useful application of this same method, especially in the case of very high winds, which are apt to injure anemometers.

A physical theory of the electrical phenomena of the higher atmosphere is suggested by M. Marcel Brillouin. Any metallic body charged negatively loses its charge when exposed to ultra-violet light, and it is shown by experiments that dry ice under similar conditions behaves likewise. But when the ice has a film of water upon it the loss is extremely small. As cirrus clouds consist of ice needles and receive ultra-violet radiations from the sun, negative electrification may pass from the needles into the surrounding air, leaving the cloud particles charged positively. Hence the author concludes that atmospheric electricity is produced by the action of ultra-violet solar radiations upon the ice needles in cirrus clouds, and that the initial electrical field is produced by the movements of the higher regions of the atmosphere relatively to the earth's magnetic field.

The centers of action of the atmosphere, or regions at which the mean barometric maxima and minima are situated, have been studied by D. H. H. Hildebrandsson. The monthly differences of the pressure of the air from the mean, as being the principal meteorological element, were calculated for the years 1875 to 1884 at 68 stations, distributed as widely as possible over the surface of the globe; the mean differences were then plotted upon monthly charts. The results obtained from the lines of equal difference show that the differences are greater in winter than in summer and increase from the equator toward the polar regions, and also that the barometrical variations at certain localities—for example, at the Azores and in the vicinity of Iceland—are almost always opposite in sign, especially when the figures are large; and that the greatest differences are found in January and July in the vicinity of Greenland and Iceland, on the one hand, and to the north of Russia, between the White Sea and St. Petersburg, on the other. The discussion seems to establish the fact that a kind of oscillation exists at all places in the pressure of the air between a center of high pressure and another adjacent center of low pressure. The author hopes to derive practical results from a closer study of these relations for the prediction of weather for long periods.

METHODISTS. I. Methodist Episcopal Church.—The statistical tables published in the

"Methodist Yearbook" for 1898 give as the total numbers in the 124 annual conferences, 10 mission conferences, and 12 missions of this Church—in all, 146 organizations—17,468 itinerant ministers, 1,756 of whom are on trial; 14,505 local preachers; 2,851,525 members, of whom 2,556,875 are "full members" and 294,650 are "probationers"; 31,355 Sunday schools, with 348,491 officers and teachers and 2,630,740 pupils; 26,114 churches, valued at \$110,646,885; 10,263 parsonages, valued at \$17,344,700; and 85,159 baptisms of children and 106,265 of adults during the year.

The receipts of the Tract Society for the year ending Nov. 30, 1896, were \$22,065, and the expenditures \$16,141. Grants of tracts were made during 1896 to all the mission fields of the Church, and tracts were distributed throughout the United States, and specially to pastors in their regular work, to immigrants, to the inmates of hospitals, prisons, and asylums, and to soldiers, the whole amount consisting of 10,065,168 pages, and 8,318,464 pages of the periodical "Good Tidings."

The total receipts for the year of the Board of Education were \$93,322, showing an increase of \$6,889. The whole number of students in 203 educational institutions connected with the Church was 47,830, or 4,508 more than in the previous year. The value of property and endowments, exclusive of debts, was \$28,526,869, having been increased \$344,190; the total value of the income of the schools was \$1,958,169, an increase of \$227,168, and the largest sum ever received on that account; and the total value of gifts received was \$597,639, an increase of \$229,044. Seventeen hundred and fifty-four students of 24 different nationalities had been aided from the funds of the society. Two hundred and eighty-three of the beneficiaries were women, and more than two thirds of the whole number were preparing for the ministry.

The total receipts of the Sunday school Union for the year ending Nov. 30, 1896, were \$21,949, and the expenditures were \$19,447. The number of Sunday schools reported was: In the United States 31,121, with 360,633 officers and teachers and 2,620,010 pupils; of schools in foreign lands, 3,739, with 9,317 officers and teachers and 163,899 pupils. The reports showed increase during the year in the United States of 862 schools, 8,006 officers and teachers and 34,832 pupils. Of the officers and teachers 312,682, and of the pupils 854,114 were church members or probationers. Two hundred and thirty-seven new schools had been organized during the year by means of the Rindge fund.

Church Extension.—The annual meeting of the Board of Church Extension was held at Pittsburgh, Pa., Nov. 4. The treasurer's reports showed that the total receipts for the year had been \$241,497, of which \$158,863 were on the general fund, and \$82,634 on the Loan fund. The increase in total receipts from the previous year was \$14,744. Five hundred applications had been considered, asking for donations of \$117,420 and loans of \$123,869, of which 439 were granted, in donations of \$57,325 and loans of \$79,200. The frontier churches procured by special gifts of \$250 each from generous friends, administered under the regular methods, represented the best part of the work. These gifts were often accompanied by loans of like amounts, and were applied by preference in new and growing frontier communities. The minimum cost of the churches was \$1,250, but the average of actual cost at the time of dedication was found to be more than \$2,000. Ten of these churches had been added during the year, making the whole number 605, accommodating 23,260

church members and 38,212 Sunday-school children, amid populations, at the dates of the dedications, of 482,000. Under the Mountain fund plan, new churches in destitute communities, costing from \$400 to \$800, were procured by special gifts of \$100, the people interested providing the remainder, as was done with frontier churches. Five such churches had been procured during the year, making the whole number 80. The whole number of churches aided from the beginning was 10,482. The subject of introducing the use of chapel cars was commended to the general secretaries to investigate and report upon it at the next meeting of the General Committee. The sum of \$305,225 was asked from the annual conferences for the work of the ensuing year.

Freedmen's Aid.—The annual meeting of the General Committee of the Freedmen's Aid and Southern Education Society was held in Brooklyn, N. Y., Nov. 8 and 9. The treasurer's report showed that the total receipts of the society for the year had been \$261,562, or \$47,491 more than in the previous year, and the expenditures \$292,438. The report of the Board of Managers showed an increase of 7,831 in the number of church members in the Southern conferences, and of \$238,328 in the value of church property. The 47 schools returned 9,213 students enrolled. Of these schools, 22, with 333 teachers and 4,995 students, were among the colored people, and 25 schools, with 171 teachers and 4,218 students, among the whites. The industrial-training departments had been attended by 2,022 young men and women, who had been taught agriculture, printing, painting, masonry, shoemaking, tinning, carpentry, cabinetmaking, blacksmithing, laundry work, baking, housekeeping, sewing, cooking, dress-making, and nursing. The schools among colored people consist of 1 theological seminary, 11 collegiate and 9 academic institutions, and those among the whites of 2 collegiate and 18 academic institutions.

General Missionary Committee.—The annual meeting of the General Missionary Committee was held in Philadelphia, Pa., beginning Nov. 10. The treasurer reported that the receipts of the society for the year ending Oct. 31 had been \$1,131,940, and the expenditures \$1,130,169. The total debt of the treasury was \$276,149, being \$14,805 less than at the close of the previous year. Appropriations were made for carrying on the missionary work during the ensuing year, as follow: I. *Foreign missions.*—Germany, \$36,264; Switzerland, \$7,395; Norway, \$12,581; Sweden, \$16,490; Denmark, \$7,483; Finland and St. Petersburg, \$4,585; Bulgaria, \$9,000; Italy, \$40,438; South America, \$71,248; Mexico, \$48,015; Africa, \$14,250; China, \$110,590; Japan, \$47,000; Korea, \$13,975; India, \$129,066; Malaysia, \$9,100; total for foreign missions, \$577,480. II. *Missions in the United States*, including work among English-speaking populations, white and colored, among Welsh, Swedish, Norwegian and Danish, German, French, Spanish, Chinese, Japanese, Bohemian and Hungarian, Italian, Portuguese and Hebrew populations, and the American Indians (\$7,411), \$442,430. III. *Miscellaneous appropriations*, \$110,000. Total of appropriations, \$1,129,910. Conditional appropriations were further made, contingent upon the amounts being paid into the treasury for those purposes, of \$7,000 in all, for an orphanage, a school building, and a school in the Chinese and Malaysian missions.

Resolutions were adopted: "That the General Committee expects our missionaries in all our fields to maintain uncompromisingly the views taught by our Church of the inspiration and authority of the Bible, and of the divine origin of the evangelical doctrines which were preached by the founders of Methodism with the Holy Ghost and with power.

"That we urge our missionaries in foreign lands to teach both inquirers and students of our schools of every grade, and in our colleges and theological seminaries only these things which are most assuredly believed among us, avoiding doubtful hypotheses and all questions liable to perplex upon nonessentials those newly coming to the faith or to diminish their reverence for the Bible as the only sufficient rule of faith and practice.

"That we request the corresponding secretaries in their communications and the bishops in their visitations to direct the attention of all teachers, preachers, and evangelists to these resolutions."

Woman's Societies.—The receipts of the Woman's Home Missionary Society for 1897 were \$182,216, of which \$147,721 were entered as cash receipts, and \$14,495 as derived from self-help in schools. During the last four years a debt of nearly \$50,000 had been reduced to less than \$30,000, while no missionaries had been withdrawn, three important buildings for industrial schools had been erected, many additions and improvements had been provided, and the deaconess work had been extended. The society had 86 distinct missions in the South and West and in cities, including deaconess homes. With the deaconesses it had more than 300 workers in the field, and hundreds of practical missionaries were doing service who had been trained in its schools. Since 1892 the value of the property owned by the society for its mission purposes had increased from \$225,000 to \$531,100. Of this sum, \$158,800 were in the South, \$48,000 in the West, and \$324,000 in deaconess homes and city missions. Among the special features of the general work are industrial schools and model homes in the South for the benefit of both races; labors in the West, among Mormons, Spanish Americans, Indians, Chinese, Japanese, and unchristianized populations, native and foreign; in cities missions for the neglected and needy; and provision of Christian welcome and safe protection for immigrant girls on their arrival.

The year's receipts of the Woman's Foreign Missionary Society were \$313,938, or \$28,114 more than the receipts of the previous year. The society supported in foreign fields (China, India, Japan, Mexico, South America, Bulgaria, and Korea) 175 missionaries, 24 of whom were medical, with 800 Bible readers, assistants, and teachers, and maintained 400 day schools, with about 12,000 pupils; 50 boarding schools, with about 4,000 pupils; 11 orphanages, with 450 orphans; 10 training schools, with 200 pupils; and 14 hospitals and dispensaries, administering to about 60,000 women annually.

Epworth League.—The third International Convention of the Epworth League was held in Toronto, Ontario, July 15 to 18. About 20,000 delegates were present, representing every State and Territory of the United States, all the provinces of Canada, Japan, China, and India. The programme assigned service to 236 persons as speakers, leaders of discussions, etc. The first day of the convention was occupied with welcoming addresses, mass meetings, addresses on league work, and lectures by Bishops Fowler and Newman. The second day was devoted to departmental conferences and mass meetings. On the third day denominational rallies were held, followed by an open-air patriotic service and mass meetings on temperance and civic righteousness. On the fourth day, Sunday, the members attended religious services, and a Junior League rally and farewell services were held. The resolutions pledged devotion to temperance and total abstinence; insisted on the exertion of personal influence for the maintenance of the Christian Sabbath; declared it a Christian duty to participate in matters that concern the national, State, and municipal government, and entreated all young

people, without regard to political affiliations, to ally themselves with all movements for civic reform and social righteousness; expressed a hope for perpetual peace between the United States and Great Britain and for the settlement of all international difficulties by arbitration; and declared concerning the position of the organization: "We make no apology for our existence as a denominational society, and deprecate the uncharitable utterances of those who by their words deny us the right of such organization. We express again our wish to co-operate with the young people of all denominations in all practical Christian work, and our willingness for federation with them." Three bodies were represented in this convention—the Epworth League of the Methodist Episcopal Church, the Epworth League of the Methodist Episcopal Church, South, and the Epworth League of the Methodist Church of Canada.

American University.—The enterprise of the American University at Washington, D. C., is advancing gradually. Payment for the site, a tract of 90 acres, was completed in 1895; the plans for locating the buildings and laying out the grounds have been drawn up; ground was broken for the building of the College of History, 176 feet in length, in March, and the corner stone was laid Oct. 1, 1896; and the marble walls and the roof of the structure were completed in June, 1897. The property of the institution, represented by the real estate, building funds on hand and pledged, endowment in bonds, securities, etc., and endowment pledged, was valued at the end of 1897 at \$1,100,000.

Church Congress.—The first Methodist Episcopal Church Congress was held in Pittsburg, Pa., Nov. 21 to 26. The topics discussed concerned denominational progress and the Church in its relations to literature, science, art, education, society, and the Church and its credentials. The opening address was by Bishop J. H. Vincent, D. D., who had first suggested the holding of the congress, upon "Service," and was followed by an address by the Rev. C. H. Payne, secretary of the Board of Education, on "The Young Life of the Church." Other addresses were on the scriptural ideal of godliness, the revival, the new psychology, evolution, modern research and criticism and their contribution to the science of interpretation, "The Catholic Spirit in Methodism" (a symposium in which, besides the general treatment of the topic, special presentations were made of it from the point of view of the negro, the German, and the Scandinavian), "The Vitalizing of Other Faiths by Contact with Christianity," church music, church architecture and decoration, the ideal worship, the state of sociological science, "The Institutional Church," "Present Religious and Literary Tendencies," "Ethical Legislation by the Church," the claim of the Christian faith upon the consideration of the theological student, and the higher literary culture of the ministry.

Methodist Church in Germany.—The union of the Methodist Episcopal Church in Germany and the Wesleyan Methodist Church in that country, which had been agreed upon by the British Wesleyan Conference and by the American General Conference of 1896, was accomplished at the sessions of the conferences of the two churches in Germany in 1897. By this union the 31 ministers and 23,000 members of the German Wesleyan churches were added to the Methodist Episcopal Church, together with church property valued at \$200,000.

II. Methodist Episcopal Church, South.—The statistics of this Church for 1897 give it 5,000 ministers, 13,800 churches, and 1,482,665 communicants, showing gains during the year of 63 ministers, 75 churches, and 40,000 communicants.

At the annual meeting of the Book Committee, May 5, the amount of business done during the year in all the departments was returned at \$320,528, while the profits were \$41,030, the liabilities \$14,954, and the amount of cash on hand April 1 \$51,529.

The year's receipts of the Board of Church Extension from collections on the assessments, special appeals, and miscellaneous sources were \$29,863; from collections on loans, \$19,292; while \$5,505 had been contributed to the loan funds; making a total of \$54,670. The capital of the loan funds was \$135,140, which it was expected would soon be increased by the proceeds of two bequests not yet paid over to \$160,000. The General and Conference Boards had given aid to 404 churches in the amount of \$61,672. Including a few unpaid grants coming over from the previous year, the board made appropriations to 117 churches in the form of \$23,200 in donations and \$25,000 in loans. A rule was adopted by the board at its annual meeting requiring the Conference Boards of Church Extension or their Executive Committees to meet annually in March, and decide upon the relative importance and urgencies of the places within their respective jurisdictions seeking aid. A report was prepared stating the objections to the practice of making appeals to the public in behalf of local and special building enterprises.

The Sunday-School Board met at Nashville, Tenn., May 4, and appropriated \$2,650 to the foreign-mission fields. The subjects were considered of preparing a Sunday-school directory, of the disposition to be made of the moneys collected on Children's Day, and of appointing a missionary rally day. The quality of the Sunday-school literature was commended, and still further improvement and enlargement of it were advised.

The fifty-first annual meeting of the Board of Missions was held in Nashville, Tenn., May 5. The secretaries reported that the receipts for foreign missions had been \$244,463, an increase from the previous year of \$7,105, and for domestic missions \$133,948; while \$81,916 had been collected by the Woman's Foreign Mission Board and \$18,000 by the Woman's Parsonage and Home Mission Society, making the total receipts \$478,327. Appropriations were made for the ensuing year of \$198,376, and assessments were made upon the Church at large for \$350,000. From the 4 foreign-mission fields were returned 105 missionaries (including wives), 113 native traveling preachers, 155 native helpers, 8,756 members, showing an increase for the year of 906; 71 day and boarding schools, with 2,081 pupils; 247 Sunday schools, with 6,862 pupils; 19 Epworth Leagues, with 587 members; and 1 hospital, 3 dispensaries, and 12,015 patients treated in 1895. The property of the missions was valued at \$458,406.

III. Methodist Protestant Church.—The official statistical tables of this Church, published in December, 1897, give it 1,611 ministers, 1,105 preachers, 174,756 members, 5,111 probationers, 2,294 churches, and 512 parsonages; 2,193 Sunday schools, with 19,363 officers and teachers and 126,562 pupils; 731 societies of Christian Endeavor, with 23,881 active and 4,743 associate members, and 135 junior societies with 3,303 members; and \$4,813,809 of church property. The statistics of societies of Christian Endeavor are incomplete, some conferences not making any report of them. The educational institutions of the Church include Western Maryland College, Westminster, Maryland; Adrian College, Michigan; Kansas City University, Missouri (including 7 schools); Westminster Theological Seminary, Maryland; Yadkin College, North Carolina; and Westminster College, Texas. The

foreign mission is in Japan, where an annual conference has been organized, and has 14 stations and circuits, with 13 ministers and 17 other laborers, 31 appointments, 290 members and 38 probationers, 20 Sunday schools returning 932 pupils, a college, a seminary, 2 other schools, and churches, parsonages, and other buildings, having a total value of \$25,000. The Woman's Foreign Missionary Board returns 4 missionaries, besides native workers in the field in Japan, and 2 schools. Its income in 1896 was \$5,942. The Board of Home Missions, organized in 1888, supports and aids churches, of which the latest numbers are not given, and the Woman's Board of Home Missions, formed in 1893, co-operates with it. The Board of Ministerial Education has an invested fund of about \$6,000, and has aided more than a hundred young men, most of whom are in the ministry of the Church, and had 81 young men under its charge during the four years ending with 1896. The permanent literature of the Church has grown into a considerable library, and includes books by 39 authors. A Home for the Aged is sustained at Westminster, Md.

IV. American Wesleyan Church.—The Book Committee, constituting the Board of Managers for all the connectional societies, reported in August that the receipts of the past year from the business had been \$18,251, and that the net assets on June 1, 1897, were \$67,702, showing an increase of \$247,75. The receipts for home missions had been \$1,480, and the assets of the Home-Mission fund were \$3,453, while \$3,115 were invested in church buildings. The receipts for foreign missions had been \$3,818. The Educational Society had received \$2,540, showing a gain of \$282.59. The Besse fund stood at \$41,404, yielding an income of \$4,648; the Jackson fund at \$3,100; and the Superannuation fund at \$955. The receipts by the Education Society of \$2,000 from the estate of Grace Elmer was recorded. The missionary work in Africa was represented as being in excellent condition.

V. Free Methodist Church.—The statistical reports of this Church for 1897 give it 24,512 full members, 3,623 probationers, 1,024 Sunday schools, with 6,353 officers and teachers and 34,327 pupils. The figures show a gain over the previous year of 793 full members, 52 probationers, 25 Sunday schools, 95 officers and teachers, and 1,029 pupils. The number of local preachers and evangelists is, however, 70 less than in 1896. The financial reports give \$176,679 raised for preachers, \$25,643 for district elders, \$4,650 for evangelists, \$12,636 for Sunday-school expenses, \$6,374 for the Superannuation fund, \$1,508 for Church extension, \$2,780 for home missions, \$2,702 for general missions, \$5,543 for foreign missions, \$27,443 for Church incidentals, and \$1,192,266 as the value of church and parsonage property. The total amount of money raised for all purposes in 1897 was \$9,683 more than in 1896; the valuation of church and parsonage property is \$39,763 greater.

At the meetings of the Free Methodist Boards held in Chicago in October the Board of Publication reported all departments of the business in better condition than in 1896. The sales of books had aggregated more than \$6,000. The Committee on the Publication of Sunday-School Literature had purchased the publications of the Rev. T. B. Arnold, and reported an increase in the subscriptions to the periodicals since then. The property of Orleans College, which had been purchased by members of the Methodist Episcopal Church, had reverted through the failure of the buyers to meet their payments, and was to be sold again—this time to Free Methodists. A Committee on the Publication of Tracts reported the purchase of a lot of plates and the publication of 235,000 copies of 60 tracts. The

Board of Missions returned a very encouraging increase of \$7,078 in the offerings for foreign missions, including what was given for the India relief fund. The whole amount contributed was \$13,279, of which \$2,079 were for the relief fund and \$6,207 were raised by the women's societies. A legacy of \$2,000 had also been received. Four missionaries were about to sail for India; and the directors were advised to send out three additional missionaries during the year, provided the funds should admit and the desired workers were available.

VI. African Methodist Episcopal Church.—This Church returns for 1897 4,825 ministers, 4,950 churches, and 630,550 communicants. The increase from the previous year is 145 ministers, 100 churches, and 14,696 communicants.

The cash receipts for missions for the year were \$11,050, and the expenditures \$7,417. The statistical returns from the mission fields of this Church give it: In the Sierra Leone Conference, 7 ministers, 2 teachers; in the Liberia Conference, 358 members, 5 exhorters, 15 local preachers, 50 probationers, 5 new points organized, 6 Sunday schools with 22 teachers and 100 pupils, 15 adults and 20 infants baptized, 13 itinerant preachers, and property valued at \$4,050; Haytian Conference, 5 itinerant preachers; Ontario Conference, 4 itinerant preachers and 7 mission schools. An urgent request was mentioned for the organization of a school in Monrovia, Liberia. A good report was made of Sisson High School, Indian Territory.

VII. Wesleyan Methodist Church (British).—A condensed view of the present condition of this Church at home and abroad is presented in the following table:

COUNTRIES.	Members.	On trial.	Ministers.	On probation.	Superannu-meraries.
In Great Britain.....	438,969	31,876	1,647	175	306
In Ireland and Irish missions.....	27,164	810	169	33	35
In foreign missions....	44,573	9,695	251	106	14
French Conference...	1,766	158	29	2	7
South African Conference.....	47,872	21,448	146	26	19
West Indian conferences.....	46,746	3,317	84	20	3
Totals.....	607,090	67,304	2,326	362	384

The numbers of ministers and members in the Australasian Wesleyan Methodist Church and in the Methodist Church of Canada are not included in this showing, but are given in the published minutes of their respective conferences. The totals for Great Britain also do not include the 73,367 young persons who are associated with junior-society classes.

The fifty-seventh report of the Committee of Education gives the number of school departments as 759, with 162,609 enrolled pupils and an average attendance of 128,985. The total income of the schools for the year was £245,458, being a decrease of £4,853, and the total expenditure £251,634, a decrease of £5,573. The income of the Education fund had been £5,881 and the expenditure £6,445. The deficit on current account was £1,173. Legacies amounting to £1,450 had been received. Statistics furnished by the Government Education Department showed that the total amount spent on school buildings since 1870 had been £604,625; and Government returns showed that in addition to this expenditure, the voluntary contributions, including endowments toward Wesleyan day schools, since 1870 amounted to £460,672. The amount spent on provision, as distinguished from maintenance, in the past twenty-five years aggregated £1,065,297.

The report of the Wesleyan Missionary Society gave the total home income on current account as

£127,858, and the expenditure as £128,693. The deficiency carried to the present account was £834. The extra income for payment of debt and on special plant account was £37,729. Gifts amounting to £919 had been received on account of the Indian Methodist Famine fund. The Woman's Auxiliary had expended £12,067. The financial prospects of the society had been greatly improved during the past twelve months. The increase in the contributions from the district auxiliaries had been £1,852, and the increase from all sources £2,698. Special reference was made to the condition of the missions in France and Italy, where the difficulties were very great; Germany, where it had been decided to grant the request of the district synod to be transferred to the Methodist Episcopal Church; China; Western Africa, "an important field of operations"; and the Transvaal and Swaziland district, where progress was being made in every department. In the missions under the immediate direction of the society, a church membership was returned of 44,573, being an increase of 1,935, with 9,695 on trial, an increase of 285.

The Conference met at Leeds, July 20. The Rev. William L. Watkinson was chosen president. Concerning home missions the reports represented that the annual income had been well maintained, although there was still a diminution in the yearly collection; but the present return showed an increase of £300 on the year. The mission cars were proving a successful evangelizing agency. Favorable reports were made of army and navy work, and of the Joyful News mission. In the Chapel Committee 380 new cases—an unusually large number—had been recently sanctioned, involving an estimated outlay of £290,738, and providing 19,559 additional sittings. Four special gifts had been received. One hundred and eighteen young men and 109 young women were attending the training schools Westminster and Southlands. The day-school departments numbered 747, with 150,307 pupils. The total income had been £245,593—an increase of £1,955. A report of a special Committee on the Order of the Conference Sessions was considered, upon which the Conference decided that as the pastoral session had not yet had an opportunity of voting on the subject, it was desirable to reconsider the whole question, and especially to consider whether the necessities of the case may not be met by rearrangement of the course of Conference proceedings. A new committee was appointed upon the subject. The subject of removal of the headquarters of the Home Mission Department from London to some other large city was referred to the Home Mission Committee for consideration. A proposal for the creation of a new representative body, or provincial synod, for Wales, to be called the Welsh Methodist Assembly of Wales, was provisionally agreed to. Concerning the extension of the term of ministerial appointment to a circuit, the pastoral session decided that the matter be dropped so far as it was concerned; and the representative session, that in view of the existing divided state of public opinion it was not desirable to proceed any further in the matter. The Wesley Guild, which had been sanctioned by the previous Conference, was represented to have 615 branches in Great Britain and 34,017 members. Besides these, several guilds were returned from foreign-mission stations, and affiliated conferences—as in the West Indies and South Africa—had given a welcome to the organization. The President of the Conference was given the discretion to appoint a probationary minister to assist the secretaries of the guild. The magazines published by the Book Room had reached an aggregate circulation of 1,700,000 copies.

Several important matters affecting the civil and

religious rites of Wesleyans and Free Churchmen generally were referred to the Committee of Privilege. Among these are the nonconformist marriage bill, the place of worship (sites) bill, and the places of worship enfranchisement bill; also the extension to the entire country of the act for the regulation of metropolitan suburban race courses and the question of the formal recognition of Wesleyan ministers as chaplains in workhouses and jails. The committee was further instructed to consider during the year the electoral disadvantages to which Wesleyan Methodist ministers are subject in consequence of the itinerancy and to take such legal action as may be advisable in order to their removal. A special committee was appointed to deal with the proposals of any important measure concerning elementary education which may be introduced into Parliament; also a special committee to take charge of all legislative matters in reference to secondary education. A large committee was appointed to deal with Methodist aggression in London.

VIII. Primitive Methodist Church.—The Connectional reports made to the Conference in June gave the number of church members as 197,847, showing an increase of 1,219 during the year, with 10,550 class leaders, 1,125 ministers, 16,698 local preachers, 5,827 chapels and preaching places valued at £3,807,129, 619,393 hearers, and 4,410 Sunday schools with 61,745 teachers and 467,836 pupils.

The Jubilee Thanksgiving fund had received £7,311 during the year, making the whole amount £33,538. It is proposed to raise £50,000 for this fund.

The reports of the Connectional fund, Book Depot, Superannuated Ministers' and Widows' and Orphans' funds, Chapel Aid Association, and other interests, all showed increase. The General Missionary Committee had been successful at home and abroad.

The Conference met in Manchester, June 16. The Rev. James Jackson was chosen president. The report of the joint committee of this Church and the Bible Christians favoring union of the two connections was adopted by a very large majority, and is to be referred to the district meetings for their judgment, and a fraternal deputation was appointed to attend the Bible Christian Conference. The Committee on Union was reappointed. The principle of a sustentation fund, under which all ministers will be assured at least a minimum salary, was unanimously approved. The formation of circuit and district libraries for local preachers was approved. Changes were made in the mode of inviting probationers to circuits, with a view of enlarging the liberty of both circuits and ministers. Regret was expressed at the way in which the Armenian and Cretan questions had been treated by the Government. Resolutions were adopted protesting against recent educational legislation and opposing the re-enactment in any form of the contagious diseases acts. The district committees were empowered to deal with all educational questions, and it was provided that they should be affiliated with a central executive, to be appointed by the Conference. A proposition was considered for raising a fund of £25,000 for the aid of local preachers and other officers in old age and poverty. A deputation was received from the Eastern Primitive Methodist Conference in the United States, but the Conference was not able to grant a request that a deputation be sent to that body in the fall. It was also found impracticable to send a deputation to the Australian colonies. The village evangelists appointed to act under the control of the General Missionary Committee had done good work.

The question of the continued employment of them was referred to the Quarterly Missionary Committee. A permanent evangelist was, however, appointed to work under the authority of the General Missionary Committee.

IX. Methodist New Connection.—The meeting of the Methodist New Connection Conference for 1897 was noteworthy as marking the centenary of the denomination. It begun at Sheffield, June 14. The Rev. John Innocent, missionary to China, was chosen president. The Centenary Committee reported that the subscriptions to the Centenary fund, which it was originally intended to make one of £60,000, had risen during the year from £88,000 to £100,000. Of this sum £8,000 were for Connectional institutions. The statistical reports showed a net gain of 12 members. The income for missions had slightly diminished, but an increase of 11 chapels, 200 members, and 149 candidates were returned from China, and 2 new chapels had been built in Ireland. The Conference decided to send an additional missionary to China. Fraternal deputations representing the nonconformist churches and the several Methodist churches were received, and an afternoon and an evening session were given to the several Methodist deputations, in which the different bodies were represented by the presidents of their respective conferences, or other representative men coming in the place of these.

A special celebration of the centenary of the Connection was held in the City Road Wesleyan Chapel, London, May 25, when a sermon was preached by the Rev. Joseph Parker, D. D., and a meeting was held, at which addresses were made by several persons, among them the Rev. Marshall Randles, D. D., President of the Wesleyan Conference.

X. United Methodist Free Churches.—The statistical reports of this association, presented to the annual Assembly in July, showed an increase of 1,324 in the membership. The number of ministers was 331; of local preachers, 3,054; of members, 70,602; of members on trial, 6,842; of Sunday schools, 1,216, with 24,476 teachers and 192,495 pupils. The Book Room had suffered a small financial decrease. An endowment fund of £20,000, yielding an income of £600 a year, had been secured for the Theological Institute. The missionary income had been £14,028, of which £8,402 had been raised at home. Resolutions were adopted in the annual Assembly looking to the institution of measures for increasing the scale of missionary contributions. Reports were made in the Assembly of the Chapel Relief, Loan, and Beneficent and Superannuation funds, and the fire Insurance Association, describing the work done in each department.

The anniversary of the home and foreign missions was held in London, April 26. The work of the home missions had been hindered by the lack of funds. The expenditure on foreign missions had been £22,922, leaving a deficiency of £382. Reports of encouraging progress were received from Jamaica, West and East Africa, and China. The number of members abroad was given as 10,614; of members on trial, 2,893; of missionaries, 68; of local preachers, 382; of leaders, 552; of chapels and preaching rooms, 312; of teachers, 605; and of pupils, 9,886. The committee was considering a scheme for a chain of missionary stations on the Tana river.

The annual Assembly met in Nottingham, July 13. The Rev. R. Swallow, M. D., missionary to China, was chosen moderator. Resolutions adopted on the relation of the Church to amusements, deprecated the present widespread and passionate love of amusements as likely to impair earnestness of character and life; but the need of physical culture

when subordinated to mental and spiritual improvement was recognized. The resolutions affirmed that it was not primarily the work of the Church to provide such amusements, and advised that no entertainments should take place on church premises without official supervision. Dramatic entertainments were included in the amusements thus deprecated. A resolution to discontinue the use of official designations, abbreviations of titles and initials in connection with the names of persons proposed for committees, except when it was necessary to distinguish between ministers and laymen, was referred to the Connectional Committee for consideration, with directions to report to the next Assembly.

XI. Bible Christians.—The Conference met at Exeter, July 28. The Rev. A. Trengove was chosen president. A Miss Edwards, who had successfully passed the examination and had done acceptable mission work, was, on the recommendation of the Examination Committee, received as a minister in full connection. A plan for the education of candidates which had been worked out by a committee appointed for that purpose was adopted. The question of union with the Primitive Methodist Church was earnestly debated, and the report of the joint committee of the two bodies on the subject was adopted. This report recommended the union, described the constitution of the courts of the united Church, proposed the adoption of equal representation as between ministers and laymen, made the chairmen of all meetings elective, and suggested as the name of the united body "The Primitive Methodist and Bible Christian Church." Seven ministers and seven laymen were appointed to represent the Bible Christian Church in a new joint committee. A course of study and plan of examinations for local preachers were adopted as an essential qualification to the placing of candidates on the approved list, and, in addition to this, an optional course, extending over three years, with examinations and prizes, was approved. The public recognition of local preachers was provided for. A course of reading for young people was added. The income for missions at home had been £5,471. The total expenditure had been £5,761, leaving a deficit of £390. It was desired to clear this off and have an additional sum of £1,000 for extension. A net increase of 130 was returned in the membership of the home-mission stations.

The report of the Missionary Society showed that it has, at home and abroad, 134 missionaries, 747 local preachers, 398 chapels, 103 preaching places, 11,868 full members, 418 members on trial, 403 juvenile members, 2,856 teachers, and 24,054 pupils. An increase is shown in nearly every department.

XII. Australasian Western Methodist Church.—The General Conference met in Auckland, New Zealand, Nov. 10. It was opened with an address by the retiring president, Rev. W. Morley, who represented that since the last General Conference, three years before, there had been a net increase of 6,847 church members, 4,096 catechumens, and 30,499 members of congregations, while 204 additional churches had been erected. The decline in the population of Fiji had been necessarily accompanied by a decrease in the number of hearers, but this had been more than twice made up for by the increase in New Britain and New Guinea, and the Tongan district showed an advance of 20 per cent. The speaker referred to the possibility of doing something to arrest the decline of native Polynesian tribes by teaching in the schools or elsewhere the elements of sanitation and the general laws of health, as worthy of the attention of the Church. Union, according to the plan which was under consideration in all the Methodist churches in the colonies, had been con-

summed in New Zealand between the Wesleyan, Bible Christian, and United Methodist Free Churches. The plan of union was under various stages of consideration in the other colonies, with hopeful prospects. The Rev. H. T. Burgess, of South Australia, was chosen president of the General Conference. The General Secretary of Foreign Missions reported that the total receipts for that cause for the four years 1893, 1894, 1895, and 1896 had been £32,356, and the expenditures £57,250, leaving a deficiency of £4,894. The action of the Conference was in favor of continuing the missionary work in New Guinea, New Britain, and the other islands on its present scale and with its present efficiency, and of beginning work in continental Asia and Japan, and among the Chinese in northern Queensland whenever the means shall be forthcoming. Much interest had been felt by the ministers and members in the subject of intercolonial exchanges of ministers, or transfers from one conference to another, but no general action was taken by the Conference, which confined itself to authorizing certain particular transfers. It was directed that active members of Christian Endeavor Societies should be recognized as if meeting in class, and thus qualified for church membership. Recommendations of various constitutional changes were brought to the attention of the Conference, among them one providing for the direct representation of members in quarterly meetings, but the consideration of them was deferred, the general view of the members of the Conference being that in the near prospect of the union of all the Methodist Churches such measures should be postponed till that was accomplished and they could be decided upon by the united body. The formation of a new conference in Western Australia was decided upon, to be effected in the year 1900. It was resolved that a central institution for training candidates for the ministry should be founded in connection with Queen's College, Melbourne. Resolutions were passed condemning the holding of lotteries or games of chance for religious or charitable purposes, commending proportionate giving to the cause of God, and expressing solicitude for the welfare of the young and a desire to shield them from prevalent evils.

The Australasian Wesleyan Missionary Society, which has charge of the Wesleyan missions in Australasia and Polynesia, reports a deficiency on the past year's operations of \$7,990, the receipts having been \$67,195 and the expenditures \$75,185. The excess of expenditures was occasioned by the re-creation of buildings destroyed or injured by the hurricane in Fiji. The general expenditure was smaller than for some previous years, and even than it was thirty years ago. No white missionaries in active work died during the year, but the service lost two native laborers. Among the additions to the missionary force are a German missionary and his wife, sent to New Britain in order to make intercourse concerning missionary affairs more convenient with the German authorities there. The report defines the situation in Samoa as hopeful, in Fiji as "both sunshine and shadow," and in New Britain as "full of joy"; while steadily rapid progress has been made in New Guinea.

XIII. Wesleyan Methodist Church in South Africa.—The Wesleyan Methodist Conference in South Africa was constituted as an independent body in 1882, when it had 309 churches, 824 places of worship, 177 ministers, 1,313 local preachers, 3,146 English and 17,596 native members, making a total of 20,742 members, 87 junior members, and 14,710 pupils in day schools and 17,683 pupils in Sunday schools. For 1896 it returned 633 churches, 1,798 places of worship, 191 ministers, 171 evangelists,

2,941 local preachers, 3,714 class leaders, 5,585 English and 42,287 native members—making a total of 47,872 regular members, 10,692 junior members, and 21,448 on trial, making a total of regular members, "juniors," and members on trial of 80,012; 470 day schools, with 29,256 pupils; and 2,377 teachers and 29,701 pupils in Sunday schools. An increase in fourteen years of 27,130 regular members was shown. The missionary income for 1896 was £6,964 (£3,175 contributed by English and £3,789 by natives); circuit income, £35,036; "properties" income, £32,558; total income, £106,593; besides which the Church received grants from England of £4,389. These figures do not include the whole of South African Methodism, for the churches in the Transvaal, Swaziland, Bechuanaland, and Rhodesia are still under the Missionary Committee in London, and connected with the British Conference.

MEXICO, a federal republic in North America. The legislative power is vested in a Senate of 56 members, 2 from each State, elected for four years by indirect suffrage, and a House of Representatives of 227 members, elected for two years by universal suffrage. The President, whose term of office is four years, is Gen. D. Porfirio Diaz, who was elected for his fourth term and for the third consecutive time on July 15, 1896. The Cabinet was composed in 1897 of the following members: Secretary of Foreign Affairs, I. Mariscal; Secretary of the Interior, Gen. M. Gonzalez Cosio; Secretary of Finance and Commerce, J. I. Limantour; Secretary of Justice and Public Instruction, J. Baranda; Secretary of Fomento, M. Fernandez-Leal; Secretary of Communications and Public Works, Gen. F. Z. Mena; Secretary of War and Marine, Gen. F. B. Berriozabal; State Treasurer, F. Espinosa.

Finances.—The budget for the year ending June 30, 1898, makes the revenue of the Federal Government \$50,325,900, of which \$23,747,400 are derived from customs, \$20,738,500 from stamps, \$2,520,000 from direct taxes, \$1,720,000 from posts and telegraphs, \$200,000 from succession duties, and \$1,400,000 from various sources. The total expenditure is estimated at \$50,410,312, of which \$24,765,419 is allocated to finance, \$11,430,427 to war and marine, \$5,449,227 to communications and public works, \$3,673,038 to the interior, \$2,288,053 to justice and public instruction, \$531,742 to foreign affairs, \$436,821 to the Supreme Court, \$742,973 to the Department of Fomento, or public weal, and \$80,969 to the Executive.

In the budget for 1899 the revenue is estimated at \$52,109,500 and expenditure at \$52,089,485. The customs revenue is expected to amount to \$23,847,000 and the yield from internal taxes to \$23,092,500. The accounts for 1897 closed with a surplus of \$7,784,975. The receipts amounted to \$51,500,000, an increase of \$1,000,000 over the preceding year. The fall in the exchange value of the dollar to 23¢. raised the estimate of the amount required for the external debt to \$14,792,240 in 1898, being \$1,162,177 more than the service of the debt in the financial year 1897. The public debt on June 30, 1896, amounted to \$183,206,679, consisting of a loan of \$51,091,600 raised in 1888, one of \$29,598,200 raised in 1890, and the 1893 loan of \$14,897,700, all bearing 6 per cent. interest, the Tehuantepec Railroad bonds for \$13,500,000 issued in 1889, paying 5 per cent., \$72,576,725 of internal interest-bearing debt, and \$1,542,454 paying no interest.

The Army and Navy.—The military forces consist of the active army, auxiliary troops, the reserve of the active army, and the general reserve. The strength of the active army on the peace footing in 1897 was 1,314 officers and 21,291 men in the infantry, 188 officers and 2,101 men in the artillery, and

566 officers and 6,683 men in the cavalry; total, 2,068 officers and 30,075 men. Including the auxiliary troops the peace effective is estimated at 60 generals, 3,300 officers, and 34,000 men, with 8,000 horses and mules. The war effective is about 3,500 officers and 120,000 infantry, 20,000 cavalry, and 6,000 artillery, making a total of 146,000 men.

The naval forces consist of 2 dispatch vessels, 2 gunboats, and 1 school ship, having a total tonnage of 2,100 and an armament of 18 guns. There are 5 torpedo boats of the first class now building, and the acquisition of 1 armor clad, 1 cruiser, 4 gunboats, and 2 transports is contemplated. The navy is manned by 84 officers and 425 men.

Commerce and Production.—The imports in 1896 were valued at \$42,253,938. The total value of the exports was \$105,016,902, of which \$40,178,306 represent merchandise and \$64,838,596 precious metals. The values of the chief merchandise exports were as follow: Coffee, \$8,103,302; henequen, \$6,768,821; timber, \$4,206,880; animals, \$3,546,770; lead, \$2,532,000; hides and skins, \$2,422,000; gum, \$1,527,838; vanilla, \$1,428,675; tobacco, \$1,461,090; zacaton root, \$616,492. Of the exports of precious metals \$26,345,160 consisted of silver bullion, \$20,377,663 of silver coin, \$10,885,479 of silver ore, \$5,246,418 of gold, and \$3,909,000 of copper. The commerce with the principal nations in 1896 is shown in the following table:

COUNTRIES.	Imports.	Exports.
United States	\$20,145,763	\$79,651,695
Great Britain	7,905,016	15,467,149
France.....	6,099,183	2,080,802
Germany.....	4,363,229	2,968,792
Spain	2,174,298	813,162
Other countries	1,566,449	4,035,302
Total.....	\$42,253,938	\$105,016,902

The exports of live animals consist of cattle reared in the northern States of Mexico for the United States. Corn, rice, barley, wheat, and beans are the chief agricultural food products. Henequen fiber, of which 148,000,000 pounds were exported in 1895, is grown in Yucatan. In 1894 there were 16,247 tons of coffee exported, and of tobacco 356 tons were manufactured in Mexico and 1,596 tons exported. The cultivation of these products and of cacao is increasing rapidly. Other products are cotton, cane sugar, indigo, and rubber. The Government has assisted in introducing vines, olives, and other fruits, and all kinds of vegetables, and also silkworms, which have been distributed gratuitously among the country people. Mexico is exceedingly rich in minerals, the exploitation of which has been rapidly developed in recent years. Besides gold, silver, lead, copper, and iron, tin, quicksilver, cobalt, zinc, antimony, sulphur, coal, and petroleum are found. There are 4 mints and 7 Federal assay offices, and any producer can have bullion coined, paying 4.62 per cent. for gold and 4.41 per cent. for silver. The internal commerce of the country was greatly stimulated by the total abolition of interstate duties on July 1, 1896. Public companies demarcate lands for sale and occupation, receiving a third of the area surveyed and prepared for colonization. There were 10,985 colonists settled on the lands in 1892. In February, 1897, the Government entered into a contract with agents of the Japanese Government for the establishment in the fertile coast lands of the State of Chiapas of a colony of 5,000 Japanese, who are expected to introduce the culture of the tea plant, in return for which they will be exempted from taxation for many years. The number of mining enterprises in the country in 1894 was 3,167, of which two thirds belonged to Mexicans or Mexican companies and one third to foreigners.

The number of factories in 1893 was 3,844. The fall in silver, while acting as a check upon imports, has stimulated production and exportation and attracted the investment of foreign capital, which is further encouraged by the protective duties. In the four years ending with 1897 about \$1,000,000,000 of foreign capital was invested in Mexico, \$345,310,000 by American, \$213,302,225 by English, and \$441,387,775 by French and German capitalists. A large number of new undertakings indicate the additional investment of immense capital by foreigners.

Navigation.—During the year 1895-'96 there were 10,194 vessels, of 3,695,488 tons, entered and 10,234, of 3,633,476 tons, cleared at Mexican ports. The number of steamers entered was 4,471, of 3,300,444 tons, and cleared 4,378, of 3,242,711 tons. The mercantile marine of Mexico consists of 274 vessels, of which 52 are steamers.

Communications.—There were 7,430 miles of railroad in operation in 1897. The telegraphs have a total length of 40,990 miles, of which the Federal Government owns and operates 28,000 miles, while the rest belong mostly to the States. The number of letters and postal cards sent in the internal service in 1897 was 24,584,000, and in the international service 5,301,648. The receipts of the post office were \$1,246,880, and the expenses \$1,566,212.

Political Affairs.—Congress was opened on April 1. In his annual message President Diaz dwelt on the improvement in the finances of the republic, on the extension of Government telegraph lines and railroads, on contracts that had been signed for two new steamship lines for the Gulf of Mexico and two for the Pacific, and on the harbor improvements being carried out at Vera Cruz and the drainage and sanitation works begun in the city of Mexico. The international commission for the settlement of all controversies with the United States arising out of the changes in the beds of the Bravo del Norte and Colorado rivers had completed its studies relating to the distribution of the waters of the Bravo and the construction of an international dam near Ciudad Juarez, and had erected monuments to mark the boundary line on the so-called island of San Elizaria. In the 454 schools maintained by the Federal Government the staff of teachers had been enlarged, their salaries raised, and the buildings, furniture, and equipment improved, while seven new superior schools had been established in the Federal District and the Territories. A new educational law went into force on Dec. 19, 1896, the object of which is to provide a uniform system of education to serve as a preparation, not so much for professional careers, as for the social duties of life, on which youth ought not to enter until they have been trained in such a manner as to enable them to exercise a full control over their intellect and will. A new banking law was expected to lead to the foundation of banks of emission, mortgage banks, and banks for the promotion of agriculture, trade, and manufactures. A new law modifying the taxes on gold and silver was designed to remove obstacles to the circulation and exportation of the precious metals. The customs law also was modified in order to put an end to disputes between importers and the Government and to adjust the duties on certain classes of imports to their value and necessity. At the opening of the new congressional session on Sept. 16 the President said in his message that the excessive and sharp fall in silver had influenced the economic situation of the country, but the Government was taking prudential measures; there was no serious reason for alarm, because the nation would overcome the difficulty as it had some years earlier. On this day, the anniversary of Mexican independence, President Diaz was assailed with murderous intent by one Joaquin Arnolfo Arroyo just

as he was entering the Alameda. Gen. Mena turned aside the dagger, and the assailant was seized by members of the suite, who got orders from the President that the man was not to be hurt. On the following day a mob broke into the jail by battering down the doors, overpowered the warders, and killed Arroyo with knives. For the lynching 21 persons were arrested, and Eduardo Velazquez, the inspector-general of police, Lieut. Cabreera, of the detective service, and Commandant Mauro Salchez were placed under arrest for neglect of duty. The lynchers were detectives and policemen led by Col. Antonio Villavicino, an inspector of police, and Col. Velazquez confessed that he had planned the assassination of the prisoner. He said that he thought thereby to do a service to the country. Though closely guarded, Velazquez managed to obtain a pistol and shot himself, and his warden, Col. Campuzano, was in turn taken into custody and charged with negligence. The killing of Arroyo before he could be interrogated by the judge and the subsequent self-murder of the officer who had him put out of the way indicated that there was a plot in the attempt on Gen. Diaz's life, but left no clew by which the mystery could be solved.

End of the Yaqui War.—The insurrection of the Yaqui Indians, who have always been governed by their own laws and have refused to pay taxes and kept all intruders out of their domain, resisting all attempts to reduce them to subjection from the time of the Spanish conquest, was ended in June, 1897, by a treaty of peace. Having failed to subjugate them by force of arms, President Diaz adopted a policy of conciliation and concluded an arrangement advantageous alike to the Indians and to the republic. Jettiabale, the chief of the Yaquis, met a Mexican peace commissioner at a conference near the town of Guaymas, the one escorted by 800 warriors, the other by a regiment of cavalry. Just as formerly President Diaz put an end to brigandage by hiring the brigands with good pay as armed guardians of the public peace, so now he enrolled the Yaquis as citizens of Mexico into a militia for the State of Sonora and appointed their chief commander of the militia with the rank and salary of a Mexican officer.

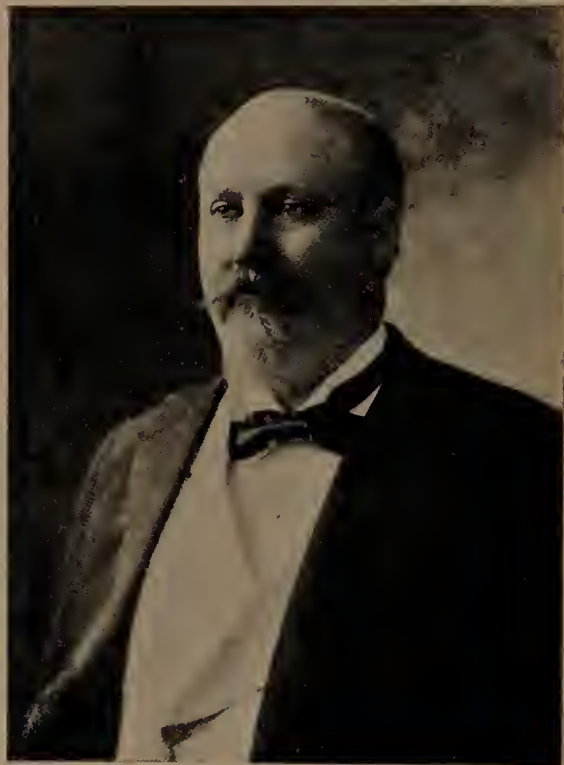
MICHIGAN, a Western State, admitted to the Union Jan. 26, 1837; area, 58,915 square miles. The population, according to each decennial census since admission, was 212,267 in 1840; 397,654 in 1850; 749,113 in 1860; 1,184,059 in 1870; 1,636,937 in 1880; and 2,093,889 in 1890. By the State census of 1894 it was 2,241,641. Capital, Lansing.

Government.—The following were the State officers during the year: Governor, Hazen S. Pingree; Lieutenant Governor, Thomas B. Dunstan; Secretary of State, Washington Gardner; Treasurer, George A. Steel; Auditor, Roscoe D. Dix; Attorney-General, Fred. A. Maynard; Superintendent of Public Instruction, Jason E. Hammond; Land Commissioner, William A. French; Bank Commissioner, D. B. Ainger, succeeded by Commissioner Just; Railroad Commissioner, Sybrant Wesselius; Insurance Commissioner, Theron F. Giddings, succeeded by Milo D. Campbell; Labor Commissioner, C. H. Morse, succeeded by Joseph L. Cox; Adjutant General, E. M. Irish; Food Commissioner, E. O. Grosvenor; Oil Inspector, Thomas R. Smith; Chief Justice of the Supreme Court, Charles D. Long; Associate Justices, Claudius R. Grant, Robert M. Montgomery, Frank A. Hooker, and Joseph B. Moore; Clerk, C. C. Hopkins—all Republicans.

Finances.—The report of the Treasurer for the year ending June 30 was submitted in August. The balance on hand at the beginning of the year was \$912,422.43, and the total receipts for the year

were \$3,603,129.57. The disbursements were \$3,731,663.96. The outstanding bonds of the State are: Past due part-paid \$5,000,000 loan bonds, \$19,000, adjustable at \$578.57 per \$1,000 (not bearing interest) \$10,992.83. The trust-fund debt is as follows: Agricultural College fund, \$569,951.82; Normal School fund, \$65,945.12; Primary School fund, (7 per cent.), \$3,815,457.69; Primary School fund, (5 per cent.), \$829,069.38; University fund, \$529,621.59.

Outside of the tax department the largest sum turned into the treasury was from franchise fees, which amounted to \$32,715.43. Peddlers' licenses



HAZEN S. PINGREE, GOVERNOR OF MICHIGAN.

brought in \$2,513.06; deer licenses, \$296.50; fees for examining banks, \$8,794.21; fees from notaries public, \$2,707; fees for inspection of oil, \$11,625.50.

The total tax as computed for 1897 was \$2,379,907.23, and for 1898, \$2,012,227.02.

Some of the larger items that go to make up the aggregate for 1897 are as follow: University, \$207,183.33; normal schools, \$90,650; Michigan College of Mines, \$45,000; Agricultural College, \$16,700; Industrial School for Boys, \$66,500; for girls, \$46,750; Home for Feeble-Minded, \$76,788; Soldiers' Home, \$88,000; School for the Blind, \$28,000; School for the Deaf, \$82,050; Michigan National Guard, \$89,665.64; relief for Ontonagon fire sufferers, \$25,000; asylums for the insane, for improvements, \$49,575; repairs at prison and House of Correction, \$27,900; State Public School, \$33,767; Fish Commission, \$16,500; Dairy and Food Commission, \$18,000.

A decision in regard to tax titles, rendered in December, makes illegal a practice that has been in vogue for years. It was decided by the Supreme Court that, according to the correct rendering of the statutes, land once sold by the State for delinquent taxes can not again be taken by the State to enforce its lien for taxes of subsequent years until after the State has disposed of its title acquired at the former sale.

Education.—The school population is 697,689. The apportionment of the interest fund gives \$1.44

per capita. The enrollment in graded and ungraded schools is about 476,700.

The State University has more than 3,000 students.

The enrollment of the Mining School at the beginning of the year was 116.

The forty-first year of the Agricultural College opened in September. The attendance is larger than ever before. The whole number in 1896-'97 was 425, of whom 44 were young ladies. Statistics have been gathered showing that 41 per cent. of the graduates have become farmers or are engaged in the dairy, fruit, or other occupations in close connection with that of the farmer.

The street-railway line has been extended into the grounds, to accommodate the many students who board in the city, the dormitories being too small for the attendance.

A four weeks' dairy course was begun in November. The chemical department is working on methods of sugar-beet culture, the best variety of beets, and the kind of soil adapted to it.

Prisons.—The following statistics are from the report of the Labor Commissioner:

There are 58 employees at Jackson prison. The number of convicts in the prison Oct. 31, 1896, was 820. It costs a little over 9 cents a day to feed and clothe the convicts.

There are 55 employees at the State House of Correction at Ionia. The total number of convicts Oct. 31, 1896, was 518. It costs $8\frac{1}{2}$ cents a day to feed and clothe the convicts.

The branch prison at Marquette has 44 employees. The number of convicts in the prison Oct. 31, 1896, was 205. At this prison no convicts are employed on contract work, and none on work for the account of the State. Cost per day for feeding and clothing convicts, $12\frac{1}{4}$ cents.

At the Detroit House of Correction there are 45 employees. The average number of convicts was 477 during the past year. It costs about 8 cents a day *per capita* to feed the prisoners.

At the Industrial School for Boys there are 50 employees. Number of inmates Oct. 31, 1896, 564; received during the year, 330; released on parole, 268; died, 2.

At the Industrial Home for Girls, at Adrian, there are 36 employees. Number of inmates Oct. 31, 1896, 304; received during the year, 108; on leave of absence, 12; out on contract, 157.

Banks.—The October report of the Bank Commissioner showed, from the abstract of reports of 175 State banks and 3 trust companies, that the resources had increased materially since the opening of the year. The loans and discounts, Dec. 17, 1896, were \$36,942,440.70, and the stocks, bonds, and mortgages \$28,451,447.71. Oct. 5, 1897, these two items were \$69,733,667.26. The savings deposits at the former date were \$42,055,852.60, and at the latter \$47,200,360.37. The commercial deposits subject to check increased from \$15,274,265.98 to \$17,985,788.97.

The affairs of the People's Bank have been in the courts through the year. The receiver brought suits against stockholders to compel them to pay their assessments for the benefit of depositors, and a decision in his favor was given in December. The receiver testified that the bank must have been insolvent for a year or more before it closed its doors, July 11, 1896. The opinion of the judge, reviewing the evidence, shows that the statements of the officers in regard to capital stock condition, etc., have been grossly misleading.

In proceedings brought to compel the receivers of insolvent banks to pay taxes upon the stock of the banks which were assessed before the failure, the court held that the receiver was not liable, that

these "taxes are strictly private, personal liabilities of the shareholders."

The State bank of Fenton was placed in charge of the Bank Commissioner in June, and the People's Savings Bank of Mount Pleasant failed in August.

Railroads.—About 260 miles of road were built this year. The new lines are the Lima Northern, from Tecumseh to Detroit; the Detroit and Mackinaw, 26 miles westward to Onway; the St. Joe Valley, from Benton Harbor to Napanee, Ind.; and the Chicago and West Michigan, from Van Buren 34 miles eastward in the direction of Grayling. The South Haven and South Eastern has been changed from a narrow to a standard gauge railroad, with connections at Paw Paw and Lawton with other roads.

A legislative report on the railroads of the State says: "The 7,600 miles of Michigan railroads represent a cost of \$300,000,000, employ 25,000 people, which means support to 100,000 persons, carry 30,000,000 tons annually, and in 1895 paid \$24,000,000 on account of expenses for the management of lines. The earnings from Jan. 1 to Sept. 1 were \$17,974,681, a decrease of \$1,182,150.24 from 1896.

Insurance.—The report of fire insurance companies, given in February, shows that the total number of fire and fire and marine insurance companies doing business in the State is 129, of which 124 are stock, and 4 mutual companies. The stock companies did the following amount of business in Michigan last year: Fire risks written, \$284,158,820; inland marine risks, \$11,491,994; fire premiums received, \$4,262,872; inland marine premiums, \$166,404; losses incurred, fire, \$2,921,898; inland marine, \$162,385. Compared with 1895 the number of risks written shows a decrease. The report of life companies shows that the business of the 41 companies, including "industrial," compared with that of the previous year, was as follows: Policies issued, \$23,891,136, a decrease of \$611,712; insurance in force at close of year, \$129,925,280, an increase of \$2,074,915; premiums received, \$4,351,979, a decrease of \$5,736; losses incurred, \$1,583,188, a decrease of \$1,577. The receipts of the department for the year were \$213,451.21 and the disbursements \$10,285.63, leaving net earnings of \$208,169.63 to be turned into the State treasury.

Products and Industries.—The December crop report, issued by the Secretary of State, said the average condition of wheat in the State Dec. 1 was 88 per cent. of condition in average years. The total number of bushels of wheat reported marketed by farmers in the four months August, September, October, and November was 7,662,316. This is 2,966,642 bushels more than reported marketed in the same months last year.

Gold was discovered in the summer at Michipieotten, in the upper peninsula.

The game and fish wardens have had difficulty in enforcing the new law. Its constitutionality was assailed, but it was sustained by the Supreme Court.

The Dairy and Food Commissioner has been busy trying to enforce the oleomargarine law since it went into effect in September. In a case where a police justice refused to entertain a complaint against a dealer, the commissioner applied to the circuit court for a mandamus to compel him to issue a warrant. The court decided that the law is constitutional, and sustained the commissioner.

Mayor and Governor.—After the election of H. S. Pingree to be Governor of the State the question arose whether he could hold that office and at the same time continue to be mayor of Detroit. The case came before the Supreme Court, and it was decided that the two offices could not be held by one person at the same time.

Lansing.—The fiftieth anniversary of the locating of the State Capitol at Lansing was celebrated March 16, and at the same time the admission of Michigan to the Union, which took place Jan. 26, 1837.

Trials of State Officers.—Several former State officers—A. A. Ellis, J. W. Jochim, J. F. Hambitzer, and others—were charged with making false returns on the election of April, 1893, reporting that a constitutional amendment to raise the salaries of State officers was carried when it was really defeated. Two of the cases have been tried, and the jury disagreed each time. The cases were all *nolle prossed* in January at the request of the prosecuting attorney, who said that he believed no conviction could be had, since he was informed and believed that all the Republicans on the jury were for conviction, while the Democrats and Populists were for acquittal.

Court Decisions.—Several employees on the Grand Rapids "Democrat," in an editorial and reportorial capacity, and E. S. Toots, the mailing clerk, brought suit against the receiver of the concern for back salaries. In the lower court they won their case, but the Supreme Court reversed the judgment. The opinion says: "The labor performed by the petitioners, with one exception, was intellectual rather than manual. It was the work of professional men rather than the work of laborers (giving the word its ordinary acceptation), and is not such work as is intended to be covered by the statute. The exception mentioned is the work performed by Mr. Toots. His labor was manual, and is clearly within the terms of the statute."

A decision against the Michigan Land and Lumber Company settles a large number of similar cases. It involved the question whether the United States land patents, even when based upon erroneous survey records, had precedence over other grants made under corrected surveys and subsequent legislation. The United States Supreme Court decided that the Federal Government has full power to prescribe rules and regulations governing the sale and disposal of public lands, and that the State has no power to interpose new rules or obstructions to such disposition.

In the suit in which it was sought to have the Michigan assets of the Granite State Association paid to its Michigan creditors, the United States circuit court held that the law giving State investors a first lien on the Michigan assets of foreign building and loan associations is unconstitutional, because its object is not set forth in its title.

Legislative Session.—The thirty-ninth session lasted from Jan. 6 to May 28. The Lieutenant Governor presided over the Senate, with Senator Preston as President *pro tem*. W. D. Gordon was re-elected Speaker of the House and O. B. Fuller was Speaker *pro tem*.

The message of the retiring Governor recommended some radical changes, especially in the tax laws. He recommended also amendment of the franchise law so as to reach foreign corporations more effectually, and annual examinations of building and loan associations.

Gov. Pingree's message recommended that the caucus laws be so amended as to abolish party conventions, which he regards as the great agent of political corruption. He favored changes in tax laws for the purpose of making corporations bear their proper share of the burden. Other recommendations were: Making railroad passenger fares two cents a mile; referring important acts to popular vote; control of trusts; increase of liability of stockholders; repeal of the mortgage-tax law; change in the tax-title law; amendments to the laws permitting the granting of franchises to pub-

lic corporations; use of State products in State institutions; inheritance and income taxes; stricter supervision of banks; and a penalty for corporations exerting undue influence on elections.

In all 1,840 bills and joint resolutions were introduced, of which 504 passed. Railroad measures took up a very large proportion of the time of the session. A committee was appointed to investigate the railroads in the matter of freight rates. Their report did not show that any very serious cases of overcharge and discrimination had been established; but several recommendations were made. The Governor sent a special message urging higher taxation of railroads.

Of the railroad bills that passed, the important one was the Merriman bill, which was introduced early in February, but was not passed until near the close of the session. It provides for an increase in the specific tax of less than \$200,000. The State was receiving from that source about \$824,000. It provides that the roads shall pay to the Auditor a specific tax upon their business, computed on the gross income as by former laws, and graduated in like manner; but the percentages of tax are raised.

Other bills that passed affecting railroads were: Providing that railroads in the State shall issue 1,000-mile interchangeable books; compelling the placing of alarm bells at crossings; providing for the carrying of bicycles as baggage. An attempt to reduce all passenger fares in the lower peninsula to two cents a mile and in the upper peninsula to three cents was defeated.

An act of great interest to farmers provides for a bounty on beet sugar, stipulating that should the National Government at any time pay a bounty this Michigan bounty shall cease. The act makes an appropriation of \$10,000, and provides that if this is not enough to pay the one-cent-a-pound bounty, enough more shall be taken from the general fund to pay in 1897 and 1898.

Another bill benefiting farmers was the so-called anti-oleomargarine bill, to prevent deception in the manufacture or sale of imitation butter.

The game laws were amended in many particulars, as were also the insurance and school laws. It was provided that the national flag must be displayed on school buildings, and the truancy law was amended. A law that will go into operation Jan. 1, 1899, provides for uniformity in school textbooks throughout the State.

Some changes were made in the divorce law. One act defined what testimony of husband and wife shall be admissible in divorce suits. Another provided for the collection and publication of statistics of divorces.

The franchise fees for corporations were increased.

There were many bills amending the election laws, the general purpose of which was to prevent fraud.

Among the joint resolutions those of general interest were: Restoring Fort Mackinac to the United States, and making the apple blossom the State flower.

The appropriations aggregated about \$500,000 less than those of the preceding Legislature. For 1897 the sum of \$1,373,326.21 was appropriated, and for 1898 \$1,178,125.

An act to regulate and license the business of hawkers and peddlers was decided to be unconstitutional by the Supreme Court in December.

Other enactments were:

Extending the corporate life of life insurance companies.

Protecting hotel keepers.

Defining the duties and liabilities of hotel keepers.

Incorporating companies to insure bicycles.
 Providing life imprisonment for persons wrecking or attempting to wreck or rob trains.

Providing for incorporation of labor associations.
 Authorizing the use of any thoroughly tested voting machine.

Providing for inspection of elevators in factories and for dressing rooms for women where they are employed.

Providing for punishment of persons fraudulently connecting, using, or obtaining water, electricity, or gas.

Preventing corporations from issuing scrip for wages.

Defining an agricultural course in public schools.

Amending the divorce law, providing for alimony for education of minor children.

Permitting foreign railroad companies to own lands in the State.

Providing a penalty for threatening or blackmail.

Providing for stamping of boots and shoes made wholly or partly of imitation leather.

Limiting liabilities of sureties on bonds.

Providing for guardians for habitual drunkards.

To prefer ex-soldiers for public employment.

Prohibiting using indecent, immoral, obscene, or insulting language in the presence of women and children.

Permitting street railways to carry freight during certain hours.

To prevent spread of fruit-tree diseases.

To prevent destruction of prairie chickens.

Providing for police matrons in certain cities.

Providing that where estates are sold instead of distributed the widow shall receive a greater interest.

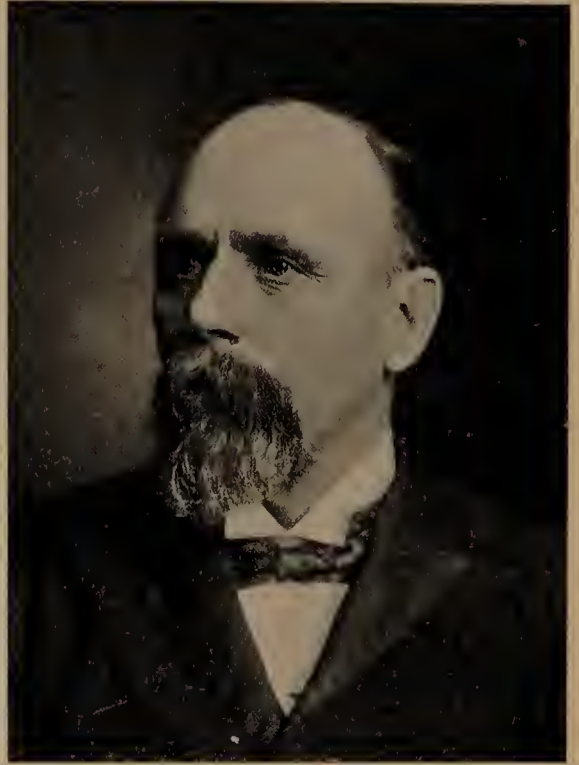
Prohibiting the employment of females as bar-keepers.

Political.—An election was held April 5 to fill the offices of Justice of the Supreme Court and Regents of the University, also to decide on two proposed amendments to the Constitution—one to increase the salary of the Attorney-General to \$3,500, and one to provide a board of auditors for Kent County. The Republican nominations were: For Justice of the Supreme Court, Charles D. Long, renominated; for Regents, W. J. Cocker, renominated, and Charles G. Lawton. The candidates of the united Silver forces were: For Justice, George L. Yapple; for Regents, Stanley E. Parkhill and Thorne Rubert. The Prohibitionists nominated Noah W. Cheever for Justice, and William W. Tracy and Robert N. Mulholland for Regents. The People's party ticket had John O. Zabel for Justice, and Myron O. Graves and D. J. Porter for Regents. The candidates of the Democrats were: For Justice, D. P. Foote; for Regents, Levi L. Barbour and Edwin F. Sweet. The Republican candidates were elected, and the two proposed amendments were defeated. Following is the vote for Justice: Long, 210,721; Yapple, 139,307; Foote, 30,729; Cheever, 7,936; Zabel, 3,906; Lester H. Chappell, 2,166.

MINNESOTA, a Western State, admitted to the Union May 11, 1858; area, 83,365 square miles. The population, according to each decennial census since admission, was 172,023 in 1860; 439,706 in 1870; 780,773 in 1880; and 1,301,826 in 1890. By the State census of 1895 it was 1,573,350. Capital, St. Paul.

Government.—The following were the State officers during the year: Governor, David M. Clough; Lieutenant Governor, John L. Gibbs; Secretary of State, Albert Berg; Treasurer, A. T. Koerner; Auditor, R. C. Dunn; Attorney-General, H. U. Childs; Adjutant General, H. Muehlberg; Superintendent of Education, W. W. Prendergast; Com-

missioner of Insurance, E. H. Dearth; Labor Commissioner, L. Y. Powers—all Republicans; Chief Justice of the Supreme Court, Charles M. Start; Associate Justices, William Mitchell, Daniel Buck,



DAVID M. CLOUGH, GOVERNOR OF MINNESOTA.

Thomas Canty, and L. W. Collins. Justices Start and Collins are Republicans, the others are Democrats; Clerk, Darius F. Reese, Republican.

Finances.—The estimated receipts for the years 1898-'99, made on the basis of a tax levy of 1½ mill, were \$2,454,000 for 1898 and \$2,543,000 for 1899. The disbursements were estimated at \$2,165,000 and \$2,425,000 for the two years, respectively.

Education.—At the last biennial report 359,189 pupils were enrolled in the public schools, and the average attendance was 135,702.

Prisons.—The ninth biennial report of the managers of the State Prison shows that the earnings of the past two years were \$100,855.44, of which the contract labor system netted the State \$71,810.81. A new contract for eight years was made for 200 men.

Since the inception of the parole system in 1892 the board has granted 177 paroles; only 17 men have violated their paroles. Three have escaped from the State.

The number of convicts received in 1895 was 235, and in 1896 the same number. July 31, 1896, there were in custody 469.

The ninth biennial report of the State Training School shows that 361 were present July 31, 1896, and the daily average for 1896 was 366½; average time of detention of those released during the two years, two years and seven months.

The largest number committed were between fifteen and sixteen years of age. Twenty-six could not read.

An apparatus has been put in for the manufacture of sorghum sirup. Enough cane has been raised to yield about 1,500 gallons a year, all that is needed for the supply of the school. A cabinet shop has been added.

Banks.—The failure of the Bank of Minnesota in December, 1896, was followed by others. Three—the Germania, the Allemania, and the West Side,

all of St. Paul, none of them national—closed their doors Jan. 4. The Minnesota Savings Bank, of St. Paul, failed Jan. 18. An affidavit was filed, stating that the assets would amount to about \$250,000, while the liabilities are about \$230,000.

A joint committee of the Legislature appointed to investigate the insolvent banks, reported April 6, giving many details. In May indictments were found against several of the officers of the insolvent banks.

Products and Industries.—The wheat harvested this year was estimated at 36,000,000 bushels. The shipments of coarse grains at Duluth were reported very large at the close of the crop year, Aug. 31.

The season's ore shipments from Duluth, Superior, and Two Harbors were 5,560,000 tons. The year's Mesaba shipments were 2,376,063 tons; in 1896 they were 1,998,935 tons.

The discovery of a wonderfully rich deposit of iron ore on the Mesaba range, about 10 miles from Biwabik, was reported in September.

Gold has been discovered on Oak Point island in Rainy lake. It is said that, according to maps of the geological survey, the island is in Canadian territory, while by the treaty it is in the United States.

Garnets, opals, and abestos have been reported as discovered in Itasca County.

By reports of the factory-inspection force it appears that the total number of manufacturing establishments in the State is 1,918; the men employed, 37,252; women, 5,030; children, 298; total, 42,580. The census of the iron mines of the Duluth district showed a total of 3,097 employees.

Public Works.—An action was brought to enjoin the capitol commissioners from continuing with the work at St. Paul, in the interest of another site for the capital city. It failed in the courts, and the work will go on. The basement will be of St. Cloud granite, and the superstructure will be faced with Georgia marble.

The monument at Gettysburg to the First Minnesota Regiment was dedicated July 2. Addresses were made by the Governor, Col. E. B. Cope, Government engineer in charge of the park, Judge Lochren, acting adjutant at the close of the second day at Gettysburg, Senator Davis, Col. Colville, who led the charge, Major Martin Maginuis, a member of the regiment, Mrs. Allerman, who assisted in caring for the wounded after the battle, and others.

The contract for beginning the dredging in the Duluth-Superior harbor was let in March, calling for over 20,000,000 cubic feet of dredging for \$1,655,645.

Lands.—An approximate estimate of the number of acres of vacant public lands in the States and Territories assigns 6,240,049 to Minnesota.

The biennial report of the Auditor has some important statements and recommendations in regard to railroad grants. The General Land Department business shows that the grants of land to railroad companies by Congress and by the State within the limits of Minnesota to aid in the construction of the 3,200 miles of line have amounted to over 20,000,000 acres. A reasonable valuation of these railroad lands is \$103,000,000, or \$32,000 per mile.

Forests.—The second annual report of the chief fire warden covers the year 1896. The Legislature of 1895 passed a law for the preservation of forests, under which the State Auditor is forest commissioner, and the supervisors of towns, mayors of cities, and presidents of village councils fire wardens of their respective towns, cities, and villages. There is also a chief warden, who may appoint other wardens. The law is specific about the careless setting of fires, or leaving them to burn, and fines are assess-

able on those who are convicted of such wanton carelessness, and imprisonment is also made a penalty.

The summary of forest fires for the year shows: Total acres burned over, 14,912; damage, \$16,059; and the causes are classified as follow: From clearing land, 12; from railroad locomotives, 9; from hunters and fishers, 11; from other causes, 22; unknown, 33.

Several wardens failed to answer a question calling for an estimate of the amount of damage done by forest fires previous to 1895, but the aggregate estimates of 75 fire wardens amount to \$4,232,000.

Legislative Session.—The Legislature met Jan. 6, and adjourned at the close of April. B. D. Jones was chosen Speaker of the House. George T. Barr was elected President *pro tem.* of the Senate April 19.

The appropriation bill carried a total of \$1,955,359.15. This is somewhat larger than those of 1893 and 1895; but the committee called attention, when it was introduced, to the fact that many of the items have heretofore been made the subjects of separate bills. For the State educational institutions—the university, normal schools, School of Agriculture, and experiment farms—\$217,000 was appropriated for current expenses, buildings, equipment and the like for 1898 and 1899, and \$36,000 for deficiencies, besides \$27,000 for repairs and completion of improvements. For correctional and charitable institutions, \$789,200 for 1898 and 1899 for current expenses, and for buildings, improvements, etc., \$406,500.

The law that was passed in regard to county conventions will have an important bearing on the conduct of political canvasses. It provides that when delegates are to be chosen to a State convention all the counties in the State shall hold their convention for the election of delegates to the State convention on the same day, the day to be fixed in the call issued by the duly authorized State committee, and when the convention to which delegates are to be elected is a district convention composed of more than one county, all the counties composing the district shall hold their convention on the same day, the day to be fixed in the call issued by the duly authorized committee.

It was provided that any county or municipality in the State may, by a two-thirds vote of the council or board of supervisors, elect to use a voting machine, and may adopt any one they deem most desirable.

Other enactments were:

For an inheritance tax.

Amending the game and fish laws.

A new railroad-tax law.

Requiring the assessment of grain in elevators.

Prescribing penalties for adulteration of food.

Prohibiting the sale or gift to minors of cigarettes or any substitute therefor.

Revising the military code, providing for reorganizing the militia.

Providing for parole of prisoners.

For encouraging sugar-beet culture.

For exterminating the San José scale.

Exempting a husband from damages arising from the torts of his wife.

Granting State aid to day schools for the deaf.

Providing for a gross-earnings tax on telephone companies, fast freight and equipment companies, express companies, and sleeping-car companies.

Prohibiting the admission of any one under twenty-one to dance houses, concert saloons, or any place where intoxicating liquors are sold or given away.

To prevent the desecration of Memorial Day, providing that no saloons shall be kept open, and that

no game of sport shall be played in towns where the graves of soldiers are to be decorated or where memorial exercises are to be held.

An investigation of the Labor Commission resulted in its vindication.

A bill was prepared by the Tax Reform Association which was a step in the direction of the single tax. It proposed a constitutional amendment authorizing counties, cities, villages, and townships to exempt from taxation, for local purposes only, the improvements on real estate, and increase proportionately the tax upon unimproved and idle land by vote at any general or town election. The bill received a favorable report from the judiciary committee of the Senate, but not early enough to permit of action by both houses before adjournment.

The need of a fourth hospital for the insane is conceded, and in a special message the Governor urged an appropriation of \$100,000 for the purpose. The Legislature decided on Hastings as the site, and the Governor vetoed the bill, which failed to pass over his veto.

An attempt was made to abolish department stores. A committee reported that they are "a serious menace to public property and detrimental to the general welfare of the people." It was proposed to divide merchandise into 59 classes and impose a graduated occupation tax; but the bill failed.

MISSISSIPPI, a Southern State, admitted to the Union Dec. 10, 1817; area, 46,810 square miles. The population, according to each decennial census since admission, was 75,448 in 1820; 136,621 in 1830; 375,651 in 1840; 606,526 in 1850; 791,305 in 1860; 827,922 in 1870; 1,131,597 in 1880; and 1,289,600, in 1890. Capital, Jackson.

Government.—The following were the State officers during the year: Governor, Anselm J. McLaurin; Lieutenant Governor, J. H. Jones; Secretary of State, J. L. Power; Auditor, W. D. Holder; Treasurer, Albert Q. May; Attorney-General, Wiley N. Nash; Superintendent of Education, A. A. Kincannon; Adjutant General, William Henry; Revenue Agent, Wirt Adams; Land Commissioner, J. M. Simonton; Railroad Commissioners, M. M. Evans, J. D. Evans, and J. D. McInnis; Chief Justice of the Supreme Court, Thomas H. Woods; Associate Justices, Albert H. Whitfield and T. R. Stockdale, succeeded in May by S. H. Terral. All the State officers are Democrats.

Finances.—The condition of the finances previous to the special session of the Legislature will be seen from the statement of the Governor's message under "Legislative Session." The receipts for the fiscal year ending Sept. 30, 1897, were \$1,492,978.92, which, with the balance at the beginning of the year, made a total of \$1,510,985.60. The disbursements were \$1,457,134.54.

In accordance with the act of the Legislature, \$75,000 was borrowed at 5 per cent. and \$10,000 at 5½ per cent. The principal is made payable on or before Jan. 10, 1899, and the interest semiannually.

The collections made by the revenue agent for the past two fiscal years amounted to \$57,856.27. He has begun suits against the Yazoo and Mississippi Valley and Illinois Central Railroad Companies for about \$750,000 taxes, alleged to be due the State and the counties traversed by what is known as the L., N. O. and T. Railroad for the years 1892-'95, or what was prior to Oct. 24, 1892, the property of the Louisville, New Orleans and Texas company.

The time having expired for filing claims against the direct-tax fund, the balance of \$20,048 left of the original \$69,952 paid back to the State reverts to the State treasury.

In 1896 the State paid 3,963 pensioners \$18.75 each, and 6 \$75 each. In 1897 there were 4,400 who received \$17 each, and 9 who received \$75 each.

Education.—From a review of the history of the colleges of the State by Prof. Edward Mayes, of Millsaps College, it is learned that the oldest—Jefferson College, at Washington—has for only a few years had a curriculum that would entitle it to the rank of a college according to present ideas, and never has granted a baccalaureate degree. Its endowment is \$40,000. It was incorporated in 1802, and is the oldest existent school in the South outside of Virginia and North Carolina.

Mississippi College, at Clinton, conferred the first degrees ever given in the State, and these were conferred in 1832 on two young women. The department for girls was discontinued about 1850. The institution has had a varied history, having been at different times under the care of the State and of the Presbyterian and the Baptist denominations, and having lost practically its whole endowment by the war, and again by the financial crisis of 1873. It has a high collegiate curriculum and about 250 students. This year it was not opened until Dec. 7, on account of the yellow-fever quarantine.

The University of Mississippi has had an average of about 210 students in the literary and 24 in the law department. Since its organization, in 1848, nearly 5,000 pupils have attended, of whom nearly 500 were law students. Its endowment is more than \$500,000.

The Agricultural and Mechanical College has a faculty of about 18, and an average attendance of 325 students.

Millsaps College, opened in 1892, has had an average attendance of about 180, and graduated a class of 7 in June. The new Webster Science Hall was dedicated in April.

The Chickasaw lands have been definitely laid down for each county this year, so that the school fund may be accurately divided—the division among the counties receiving it depending not upon the school population, but upon the quantity of Chickasaw land in the county. The fund this year amounted to \$25,526, and was divided among 23 counties. The University Summer Normal Schools had about 190 students in 1896, and 262 in 1897.

Penitentiary.—The number of convicts is more than 900. They are employed on 13 plantations, and a net annual profit of about \$50,000 is realized. Three of the plantations are owned by the State, 3 are rented, and 7 are worked on shares. During the overflow in the spring 200 or more of the convicts were put at work on the levees.

Militia.—The National Guard of the State has 1,600 men and 195 officers. An instructor has been furnished from the United States army.

United States Senator.—The death of Senator James Z. George, in August, caused a vacancy, which was filled by the Governor's appointment of Senator-elect H. D. Money, who was chosen to succeed Senator George in 1899, to fill the vacancy until the next session of the Legislature.

Banks.—The bank statement, July 19, shows that there were 83 State banks, an increase of 10 or 12 over the statement made in September, 1896. There were several other State banks in process of organization. The resources amounted to \$13,320,593.95; capital paid in, \$3,581,225.64; surplus, \$373,259.02; individual deposits subject to check, \$7,037,916.14. A tabulated statement published in August indicates that Mississippi has a smaller amount of money *per capita* deposited in banks than any other State in the Union.

Railroads.—A new road, the Mobile, Jackson and Kansas City, is under construction. The line crosses

Leake river into Mississippi at a point about 40 miles northwest of Mobile. This road will open to transportation a large tract of pine-timber land between Mobile and Jackson.

Insurance.—Indictments were returned, July 21, against 35 insurance companies as conspirators in a trust organization for the maintenance of rates of fire insurance premiums in Lauderdale County. The prosecution of the companies began at the April, 1896, term of the circuit court. The companies were brought to trial and fined \$500 each after conviction. The case was carried to the Supreme Court, which reversed the decision of the lower court and ruled that the indictment was defective in that no specific charge was made against the defendants that they had upheld agreed rates on insurance and thereby deprived the public of the benefits of competition in the premises. At this term the grand jury was instructed to reopen the investigation. The affidavits in the case are now so worded as to conform to the ruling of the Supreme Court.

Tax Titles.—The tax titles to large tracts of land in the delta have been attacked in the courts this year, but were sustained. It is estimated that not less than 3,000,000 acres of land in the delta passed through the Liquidating Levee Board at tax sales, the title to which depends upon the validity of the tax sales made to the board. The decision of the United States Supreme Court confirms the titles of the present holders.

Mob Violence.—A negro who confessed the murder of two citizens at Belen was lynched at Jonestown, April 2. Another who had murdered an old man near Crystal Springs was taken by a mob and hanged June 25, after confessing the crime. Two requests for troops to protect the prisoner had been telegraphed to Jackson, but as both the Governor and the Lieutenant Governor were absent from the capital, the troops could not be moved until it was too late. At Wesson, a negro, supposed to be the murderer of Mrs. Smith and her four children, Dec. 10, was hanged by a mob that took him from the sheriff.

The Mississippi Flood.—During the overflow of the river in the spring it was estimated by the Agricultural Department that 7,900 square miles in the State were under water, April 6. On this tract is a population of about 186,489, of whom about five sixths are colored. About 18,500 farms are included in the district. It was feared that the deluge would cause the depreciation of the value of the property; but a better crop was raised than ever before, and values are not affected. At Vicksburg, April 16, the gauge showed a flood of 52½ feet, being 1 foot 5 inches above the flood of 1862, the highest record ever made in the historic period.

Yellow Fever.—This disease was discovered at Ocean Springs, Sept. 17. It was first pronounced dengue, or "breakbone" fever. Soon afterward cases of illness at Edwards were recognized as yellow fever, and strict quarantine was established around infected districts, which was not removed till Dec. 1. A report of the physicians having in charge Biloxi, Bay St. Louis, Waveland, McHenry, and Perkinson, a district having an aggregate population of 8,200, showed that 1,023 cases were reported, from which 50 deaths resulted.

A committee, appointed at Jackson, upon the announcement of the fever at Edwards, to receive subscriptions for relief reported collections amounting to \$933.70 and disbursements \$752.81, the remainder being reserved for the pay of trained nurses still on duty. The Mississippi refugees in St. Louis raised about \$2,500, which was sent to the sufferers.

Legislative Session.—The tax levy of 6 mills which was ordered by the Legislature of 1896 and

the sale of \$400,000 of bonds having proved insufficient to meet the expenses of the State, the Governor called a special session to meet April 27, naming in the proclamation as the object "to consider the subjects and matters of finance, including revenue and appropriations; and also, if in the judgment of the Legislature it is deemed proper, to consider the subject and matter of building a Capitol."

In his message the Governor gave the condition of the finances as follows:

"It was expected by your honorable body when in regular session last year that a levy of 6 mills State tax, with the contingent collections for which you provided and the sale of \$400,000 bonds, would realize revenue sufficient to meet all appropriations made for the years 1896 and 1897. This expectation failed to materialize, and on the 18th day of July, 1896, the treasury was first unable to pay all claims as presented, and this condition prevailed until about the 1st of January, 1897. The receipts for the fiscal year from Oct. 1, 1895, to Sept. 30, 1896, inclusive, were \$1,777,586.01, and the disbursements for the same period were \$1,759,579.33, as shown by the Treasurer's books. In the foregoing receipts for the fiscal year 1895 and 1896, ending Oct. 1, 1896, are three items, viz.: Special loan of \$150,000 and proceeds from the sale of \$400,000 bonds to the amount of \$413,698.85, under chapter xxxiv, page 27, of the acts of 1896, and \$7,660.35 balance from account 1894 and 1895. Deduct these three items, amounting to \$571,359.20, from the total receipts, and there remains \$1,206,226.81, which represents the receipts from all other sources from the 1st of October, 1895, to the 30th of September, 1896, inclusive.

"In the disbursements are two items, viz., refunding the aforementioned special loan of \$150,000 and \$1,633.32 interest thereon; deduct these two items, amounting to \$151,633.32, from the total disbursements, and there remains the sum of \$1,607,946.01, which amount represents disbursements for all other purposes; and \$401,719.20, the difference between \$1,607,946.01 and \$1,206,226.81, represents the amount of regular disbursements over regular receipts.

"In the disbursements is an item of \$195,495 of special warrant of 1894. Deduct this amount of indebtedness of the State paid during the fiscal year, and the amount of other disbursements is \$1,412,451.01, which is the amount of current expenses and the interest on the public debt, being \$213,884.55 more than the regular collections. This statement of receipts and disbursements is taken from the Treasurer's books.

"Of the \$18,006.68 on hand on Oct. 1, 1896, only \$506.68 was available, the remainder being a donation of the United States to the Agricultural and Mechanical colleges."

It was recommended that the Legislature provide for a new Capitol building which should cost about \$750,000.

The Governor and the Ways and Means Committee prepared a revenue bill for the emergency, and the Finance Committee prepared another.

The plan of the Finance Committee to authorize the Governor to borrow a sum not to exceed \$200,000, at a rate of interest not over 6 per cent., for defraying the State's expenses through the year, was adopted. The levy for 1897 was fixed at 6½ mills, and it was further provided that boards of supervisors may levy taxes for all purposes, which, added to the State tax, will make 16 mills on the dollar, and no more. Municipal bonds issued for the purpose of raising money for school buildings, lands, and improvements were exempted from taxation.

Other acts were :

To authorize the organization of loan and trust companies.

To authorize individuals already owning lands and personal property in the State exceeding in value \$250,000 to convey the same to planting and mercantile corporations, hereafter to be formed, in the *bona fide* payment of subscriptions to the capital stock of such corporations.

To create the office of road commissioner.

To create the Mississippi Department of Public Health.

To amend the law in reference to the refunding of purchase money by the State and county to purchasers of land sold for taxes.

The laws in regard to the Levee Commissioners were amended, enlarging their powers, and the issuing of bonds for levee purposes was authorized.

There was a bitter contest over the subject of the proposed new Capitol, to provide for which was one of the chief objects of the special session. Two plans were under consideration and two sites, and there was a difference of opinion as to the appointment of commissioners to have charge of the work. The House adopted the present site, the Weathers' plan, and decided that the commissioners should be elected by the Legislature, refusing, by a large vote, to allow the Governor to name them. The Senate declared for the Penitentiary site, the Gordon plan and the election of the commissioners, one by the House, one by the Senate, and one by the joint session—none by the Governor. After conferences, the two houses got together, the Senate yielding the site, the House the plans and manner of electing the commissioners, and the bill passed. The Governor sent a message saying that he had not time to consider the bill, and asking the Legislature to allow the matter to lie over till January. The session was extended five days, and the Governor sent in a veto, and an effort was made in the House to pass the bill over the veto, which failed by a vote of 53 to 59. A resolution was offered in the Senate, declaring that it was the expression of that body that the Capitol bill was "wholly free from any constitutional or other objections as stated in the Governor's veto." After a long debate, this was adopted by a vote of 18 to 8.

The session was adjourned May 27.

MISSOURI, a Western State, admitted to the Union Aug. 10, 1821; area, 69,415 square miles. The population, according to each decennial census since admission, was 140,455 in 1830; 383,702 in 1840; 682,044 in 1850; 1,182,012 in 1860; 1,721,295 in 1870; 2,168,380 in 1880; and 2,679,184 in 1890. Capital, Jefferson City.

Government.—The following were the State officers during the year: Governor, Lon V. Stephens; Lieutenant Governor, August H. Bolte; Secretary of State, Alexander A. Lesueur; Treasurer, Frank L. Pitts; Auditor, James M. Seibert; Attorney-General, E. C. Crow; Adjutant General, M. Fred Bell; Superintendent of Education, John R. Kirk; Railroad and Warehouse Commissioner, T. J. Hennessey; Secretary State Board of Agriculture, John R. Rippey; Commissioner of Insurance, E. T. Orear—all Democrats except Mr. Kirk, Republican; Labor Commissioner, Arthur Rozelle, Populist; Secretary of the Fish Commission, F. P. Yennawine; Chief Justice of the Supreme Court, Theodore Brace; Associate Justices, Thomas A. Sherwood, Shepard Barclay, James B. Gantt, Gavon D. Burgess, George B. Macfarlane, Democrats, and Walter M. Robinson, Republican; Clerk, J. R. Green, Democrat.

Finances.—The receipts in the general fund in 1897 were \$2,489,357.99. The total receipts into the treasury amounted to \$4,166,490.35, and the total disbursements to \$4,094,947.21. The general balance

in the treasury, all the funds, was \$577,463.05 on Jan. 1, 1897, and \$649,006.19 on Jan. 1, 1898. The receipts into the State interest fund during the year were \$969,804.53. Of that fund \$173,547.30 was used to pay interest on the bonded debt, \$186,090 interest on school certificates, and \$62,711.96 interest on seminary certificates. The fund commissioners called in and redeemed \$500,000 of the bonds, leaving \$4,500,000 of 3½-per-cent. option bonds outstanding.

Valuations.—The aggregate values of real and personal property as assessed for taxes of 1897 are as follow: Real estate, \$760,105,423; personal property, \$216,235,897; total, \$976,341,320.

Militia.—The National Guard is reported as having an effective force of 2,650 officers and men—



LON V. STEPHENS, GOVERNOR OF MISSOURI.

an increase over the number the previous year, which was 2,462.

Education.—The school enumeration for the year was 973,147. In July an apportionment of \$876,622.25 was made—about 90 cents *per capita*.

The State University military department had an enrollment of 182 in November, the largest in its history. There is this year a regular class doing graduate work in law. The attendance in all departments surpasses all previous records. The standards of admission to several of the departments are higher than heretofore.

Banks.—The report on bank inspection, submitted Jan. 27, gave the following details: The law passed in 1895 providing for bank examination went into effect June 21 that year, and by July 1, 1895, two examiners were appointed, and the examination of banks was begun. There were 494 incorporated State banks, 96 private banks, and 7 trust companies, subject to examination. Since that time 725 examinations have been made, 28 banks have been permanently closed by the State, 4 banks have been closed by the State and permitted to resume, and 20 banks have gone into voluntary liquidation. In the meantime 41 banks have been organized in the State. There are 68 national banks doing business in this State. The Mullaugh Savings Bank, of St. Louis, was closed Feb. 27 by the examiner, and the Citizens' Bank, of Bowling Green, March 30.

The President of the Kansas City Safe Deposit and Savings Bank, which failed in 1894, was convicted, Nov. 11, of wrecking the bank, and was sentenced to two years in the Penitentiary. This was the largest savings bank in the State. It had \$2,000,000 in deposits, nearly all from poor people, and when it failed only \$11,000 in cash was in its vaults.

Products.—The Secretary of the State Board of Agriculture issued a statement in December, from which is taken the following:

"The agricultural productions were not so abundant for 1897 as last season. We produced 167,000,000 bushels of corn against 200,000,000 for last season; 9,400,000 bushels of wheat against 12,710,000 bushels for 1896; 26,000,000 bushels of oats against 21,660,000 bushels; 3,021,000 tons of hay against 3,540,000 tons, 550,000 bushels of flaxseed against 500,000 bushels; 32,150 bales of cotton against 33,197 bales; 7,200,000 pounds of tobacco against 7,000,000 pounds; and 3,650,000 bushels of potatoes against 7,830,000 bushels for 1896.

"Secretary Goodman, of the State Horticultural Society, estimates the apple crop, at \$12,000,000; peaches, \$3,500,000; pears, cherries, plums, and grapes, \$1,500,000; berries, \$2,500,000; a total of \$20,000,000 for the fruit crop of 1897.

"The shipments of agricultural products reported to us by the transportation companies and compiled this season show an output far in excess of our most sanguine expectations.

"The shipment of cattle was estimated at 700,000 head. The actual returns show 1,118,500 head. Hogs for the same period were estimated at 2,200,000 head, and the shipments amounted to 3,142,000 head. Horses and mules were estimated at 70,000 head, and we shipped 104,361 head; sheep at 300,000 head, actual shipments were 326,340 head; wool at 3,000,000 pounds, shipments 3,086,000 pounds; poultry 50,000,000 pounds, shipments 48,040,383 pounds; eggs 25,000,000 dozen, shipments 33,426,579 dozen; total timber product at 450,000,000 feet, shipments 518,000,000 feet; cotton 29,000 bales, shipments 33,197 bales."

The last half of 1897 shows an increase in the lead and zinc output over the corresponding part of 1896 of \$388,572.

Discoveries of gold in St. Charles and Montgomery Counties have been announced, and the finding of pearls in the Pomme de Terre and Osage rivers.

Floods.—Heavy rains in January caused overflows in all the streams, washouts, and other damage in western Missouri. The great flood in the Mississippi in April submerged about 1,750 square miles in the State. The report of the Agricultural Department, April 11, said: "The agricultural interests affected in Missouri represent a total capital of over \$9,000,000, the 5,300 submerged farms containing an area of about 470,000 acres.

Mob Violence.—Two men suspected of thieving were killed by White Caps near Mountain Grove, May 18, and the house of another, who was away from home, was burned.

St. Louis.—The city directory for 1897 indicates a large increase in the population. The number of names given is 212,859, indicating, by the rule estimating 3 inhabitants to each, a population of 638,577. The increase is said to be nearly 3,000 greater than the average annual gain.

By the city election in April the entire Republican ticket was elected with the exception of four members of the House of Delegates.

A proposition to impose a tax for a free library was carried by 35,212 majority.

Decisions.—According to a decision of the circuit court at Kansas City, Oct. 30, it appears that, by the Revised Statutes of 1889, even one day's residence in the State is sufficient in order to procure a divorce

if the offense proved was committed in Missouri, or while one or both of the parties lived in the State.

The court of appeals at St. Louis decided in May that bicycles are not baggage.

An opinion was given in the United States Circuit Court of Appeals in November that the boycott is not a legal weapon. One of the judges dissented in an opinion in which he said: "The only weapon of defense laborers can appeal to is the strike or the boycott, or both. These weapons they have an undoubted right to use so long as they use them in a peaceable and orderly manner."

The effect of a decision rendered by the State Supreme Court, Feb. 29, at Kansas City, is to open to women nearly all the elective county and State offices in Missouri. The decision was in the case of the State *vs.* F. P. Hostetter, clerk of the St. Clair county court. Mr. Hostetter was appointed to fill an unexpired term, and at the next election Mrs. Maggie D. Wheeler was elected to succeed him. He refused to surrender the office on the ground that women were ineligible to hold office. The State sued to oust him, and by the decision succeeded. The court held that a woman is eligible to hold any elective office in the State which is not specifically barred against her by statute.

Political.—The Union Reform Press Association was organized at Kansas City, Feb. 23, and General-Master-Workman J. R. Sovereign, of the Knights of Labor, was made its president. It was formed by the Populist editors who refused to recognize the right of President Paul Van Der Voort to call a meeting of the National Reform Press Association at Memphis. The new organization adopted resolutions on the line of the St. Louis platform and favoring co-operation with other friendly bodies, and adjourned to meet at Omaha, Feb. 22, 1898.

Legislative Session.—The thirty-ninth General Assembly met Jan. 6, and adjourned March 23. J. W. Farris was Speaker of the House.

The new State government was inaugurated Jan. 11.

A successor to United States Senator George G. Vest was to be chosen Jan. 20. The Democratic members nominated Senator Vest, the Republicans Richard C. Kerens, and the Populists O. D. Jones. Senator Vest was elected.

The laws in regard to aliens holding real estate were made more lenient. Aliens are now permitted to take mortgages to secure the payment of loans, and, in case of foreclosure and sale, to purchase and take the title to the property and hold it for five years, within which time it must be sold to a *bona fide* purchaser under penalty of escheat to the State.

A fellow-servant act was passed, making a railroad company responsible for damages sustained by one agent or servant by reason of the negligence of another; and persons in the service of such companies having control over others or with the duty of inspection are declared to be vice-principals of the companies, and not fellow-servants with the employees under their supervision. Contracts limiting the liability of a company for injury or death to agents or servants are declared void.

A measure passed, which was introduced by the Horse-Breeders' Association, prohibiting bookmaking and pool selling everywhere except on race tracks where races are being actually run, and allowing it then only for ninety days, upon a license issued by the State Auditor. This measure was designed to close pool rooms. The Supreme Court decided that it was class legislation, and therefore unconstitutional.

A school text-book commission was provided for, to be composed of the State Auditor, Attorney-Gen-

eral, State Superintendent of Public Schools, the principal of the Kirksville Normal School, and a public school-teacher, to be appointed by the Governor, who shall meet at Jefferson City and enter into contracts with publishing houses for school-books at greatly reduced prices. The cities of St. Louis, Kansas City, and St. Joseph are exempted from the provisions of the law. The bill is practically a re-enactment of the text-book law of six years ago.

A bill for the government of public schools, proposed by the St. Louis Civic Federation, provided for the appointment of a board of 9 members by the mayor, without regard to politics, and to receive no compensation. It was amended so as to provide for 12 directors, elective at large, and passed.

The law under which persons convicted of vagrancy were sold at public auction to the highest bidder was repealed.

A new parole law was enacted, under which any person under the age of twenty-five years convicted for the first time of any crime except murder, arson, or rape, may be released on parole at the discretion of the judge of the court before whom he was convicted.

Some changes were made in the election and revenue laws, and some important changes in the insurance laws, relating chiefly to the business of foreign companies; and an antitrust measure was passed.

For the contingent expenses of the Legislature and pay of members \$168,593.24 was appropriated, and for educational institutions: Kirksville Normal School, \$28,280; Warrensburg Normal, 29,500; Cape Girardeau Normal, \$23,000; Lincoln Institute, \$36,550; State University, \$100,000; School of Mines, \$16,000.

Resolutions were passed expressing sympathy for the Cubans, asking Congress to improve Grand river, and instructing the State's representatives in Congress to vote for a national park at Vicksburg.

The House also passed the following:

"Whereas, The press dispatches inform us that Grover Cleveland, a private citizen of the United States, is now aboard of a Government boat with a party of friends indulging his passion for duck shooting at public expense, and whereas the cost of running the Government boat, which the said Grover Cleveland appears to have confiscated for his own use, is heavy, and the taxpayers are already staggering under the burden of debt which Grover Cleveland, when a public official, greatly increased, therefore be it

"Resolved, By the House of Representatives of the thirty-ninth General Assembly of Missouri that the President of the United States is hereby respectfully memorialized to have an inquiry made into the reported confiscation of a Government boat by the said Grover Cleveland, and if the inquiry develops that the report is true, the President is respectfully asked to take immediate steps to recover the said Government boat and return it to its proper station."

Other enactments were:

Making the Home for ex-Confederate Soldiers at Higginsville and the St. James Home for ex-Federal Soldiers State institutions; appropriating \$24,000 for the former and \$10,000 for the latter, and providing that when the necessity for the homes no longer exists, on account of the passing away of the veterans, the property shall revert to the State.

To reorganize the State militia.

Prohibiting any preacher or other person who is not an American citizen from performing the marriage ceremony.

To prevent the adulteration of candy.

For the suppression of contagious diseases among animals.

Requiring biweekly payment of wages in lawful money.

Amending the fish and game law so as to allow the netting and scining of fish in back waters.

Giving juries in criminal cases discretion as to whether they will sentence to death or imprisonment for life.

Creating a State board of charities and corrections.

Authorizing each member of the Legislature to appoint two students to free scholarships in the university.

Creating a separate department for the inspection of building and loan associations.

To establish a board of dental examiners.

Making it a misdemeanor to mix grains of different grades.

Requiring the teaching of physiology and hygiene in public schools.

Requiring skimmed-milk cheese to be labeled as such.

The Governor vetoed a bill requiring all hangings to take place within penitentiary walls.

He also vetoed a bill providing that the assets of insolvent corporations shall constitute a trust fund for the benefit of creditors, and that no preferences shall be given.

MONTANA, a Western State, admitted to the Union Nov. 8, 1889; area, 146,080 square miles. The population, according to the census of 1890, was 132,159. Capital, Helena.

Government.—The following were the State officers during the year: Governor, Robert B. Smith; Lieutenant Governor, A. E. Spriggs; Secretary of State, T. S. Hogan; Treasurer, T. E. Col-



ROBERT B. SMITH, GOVERNOR OF MONTANA.

lins; Auditor, T. W. Poindexter, Jr.; Attorney-General, C. B. Nolan; Superintendent of Education, E. A. Carleton—all elected on a fusion ticket of Democrats and Populists; Adjutant General, James W. Drennen; State Examiner, D. D. Bogart, succeeded in March by John G. Moroney; Commissioner of Agriculture, J. H. Calderhead; Land Agent, James M. Page, succeeded by Henry Neill; Land Register, S. A. Swiggett, succeeded by H. D.

Moore in March; Chief Justice of the Supreme Court, W. Y. Pemberton, Fusion; Associate Justices, W. H. Hunt, Republican, and H. R. Buck, Democrat; Clerk, Benjamin Webster, Republican. Judge Buck died Dec. 6. William T. Pigott was appointed to succeed him.

Finances.—The receipts by the State Treasurer for the fiscal year ending Nov. 30 were \$897,096.53, compared with \$667,747.03 for the same period of 1896. The total receipts from the counties for the fiscal year of 1897 were \$532,912.47, compared with \$474,864.75 for 1896. The following increases are shown: Fees from State officers, \$23,425.03; register of State lands, sales, and leases, \$60,120.54; sale of bonds of State institutions, \$55,025; miscellaneous, \$13,151.20. The total expenses were \$525,520.

The Auditor's report shows balances in the important funds Dec. 1 as follow: General fund, 46 cents; stock indemnity, \$5,873.81; sheep indemnity, \$3,694.85; escheated estates, \$4,064.64; bounty, \$9,718.73; arid land, \$149.70; permanent school fund, \$210,644.85; permanent university fund, \$12,812.72; normal bonds, \$17.14; Fish and Game fund, \$344.85; Capitol building, \$2,246.98; university income, \$8,488.68; Reform School, cash received during year and on hand Dec. 1, \$7,695.24; warrants paid \$3,845.17, balance \$3,850.17 (in this fund there are \$17,517.27 outstanding warrants); Deaf and Dumb Asylum, outstanding warrants \$34,893.21, balance in cash \$509.43; School of Mines, outstanding warrants \$8,146.68, cash \$110.84.

Licenses for the sale of liquor contributed largely to the funds for running the State, county, and city governments. The total licenses collected in the State amounted to \$505,780.96. The total receipts for licensed gambling were \$34,182. The receipts from butchers were \$2,942; from brewers, \$4,826; and from hotels and restaurants, \$9,017.

The receipts at the office of the Secretary of State amounted to \$9,253, of which \$6,112.85 was for filing and recording articles of incorporation of Montana companies.

Valuations.—The total assessment of Montana for 1897 is \$130,757,411.55, against \$120,697,847 in 1896. The statistics show that the total real property in the State is \$67,175,589; the personal, \$49,907,770; and the total value of the railroad property, \$13,674,052.55. This is a large increase in railroad valuations, adding about \$100,000 to their tax.

Education.—There are about 30,000 children in the public schools, and during the year ending Feb. 28 the sum of \$844,344.78 was expended in the State for schools.

Money has been collected by ex-Gov. Rickards to complete the School of Mines, at Butte, and the brickwork was finished in November.

The State Normal School, at Dillon, was opened Sept. 6 with 5 instructors and 55 students. A building has been erected at a cost of \$50,000.

The Legislature provided for the construction of buildings for the State University, at Missoula, to cost \$100,000. The university has been occupying temporary quarters. Buildings for the Agricultural College also are in progress.

Charities.—The number of insane in the asylum Dec. 1 was 412, an increase of 34 over the number one year previously. The report says: "The contract now in existence provided for a 90-cent-*per-capita*-per-day payment; the new contract provides for keeping of the insane at a rate of 55 cents *per capita* per day. This will effect a saving of about \$37,000 a year."

The State Soldiers' Home, at Columbia Falls, was opened about the close of June. There were 24 inmates in November. There are accommodations for about 36, though the building when fully furnished will give room for 65.

Convicts.—There are 343 convicts in the Penitentiary. The contract for keeping them is let at 40 cents a day, an increase of 5 cents over the price of the previous year. The contractors agreed to furnish the convicts to the State free for all State work, while under the former contract they collected 5 cents a day.

Mining Products.—The State's output of gold, silver, copper, and lead in 1896 was of the value of \$50,732,099.13. The gold product was of the value of \$4,380,671; silver, \$20,234,877.47; copper, \$25,356,540.77; lead, \$70,000.87. The gold yield in 1897 was estimated in October at \$6,000,000. The silver product is apparently decreasing. The report of the great Anaconda Copper Mining Company for the year ending June 30, 1897, shows that in the year 132,364,198 pounds of fine copper were shipped in the form of electrolytic cathodes and converter bars. The shipments of silver, either in bullion or converter bars, amounted to about 6,200,000 fine ounces and of gold 20,380 fine ounces.

Live Stock.—The report of the Board of Stock Commissioners for 1897 shows that in the year the stock inspectors recovered 19,104 head of cattle valued at \$750,000. The board estimates the value of the stock output for the year at \$9,500,000. The first report of the sheep commissioners, published in November, shows that Montana in 1897 led the States in wool production. Since March 1 last there were sheared in this State 22,169,921 pounds of wool, which brought an average price of 11½ cents, or 4 cents more than last year. Allowing for shipments out of the State, which have been heavier this year than ever before, there are 3,670,855 sheep in Montana, a net increase over last year of more than 500,000. The value of sheep has nearly doubled this year.

Noxious Animals.—Statistics as to the number of stock-destroying animals that have been killed in the various counties for the fiscal year ending June 30, 1897, upon which the State will pay bounties show that in all 21,161 coyotes and 4,995 wolves were destroyed. The bounties amounted to \$78,468.

Banks.—The condition of the 21 national banks, July 23, as shown by the chief items was: Loans and discounts, \$7,068,696; due from banks, national and State, \$910,375; reserve in banks and deposited with reserve agents, \$3,731,744; of which \$669,674 was gold; total resources, \$14,886,414; liabilities, capital stock, \$2,655,000; surplus fund and undivided profit, \$985,935; due to banks, national and State, \$587,890; deposits, \$9,963,477. The average reserve held was 38½ per cent.

The comptroller of the currency notified, Oct. 11, the stockholders of the First National Bank of Helena, which failed in 1896, that they were to pay \$100 on each share of stock, as it appeared from the accounts of the receiver that it would be necessary to enforce the liability of the stockholders to that extent.

The Northwestern National Bank, of Great Falls, one of the oldest institutions in the State, failed Feb. 5. The cashier was arrested in April.

The Merchants' National Bank, of Helena closed its doors Feb. 13.

In a suit involving the liability of a city treasurer and his bondsmen for city money which he had placed in a bank that afterward failed, the decision was in their favor.

Railroads.—But 12 miles of railroad were built in the State during the year. Following are the amounts assessed to the roads for State and county taxes: Northern Pacific and branches, \$170,777.91; Great Northern, Pacific extension, Montana Central, \$125,031.82; Oregon Short Line, \$12,865.20; Montana Railroad, \$401.10; Great Falls and Canada, \$4,754.80; Big Horn Southern, \$6,642.27; Montana

Union, \$8,980.21; Butte, Anaconda and Pacific, \$4,656.79; total, \$334,110.10.

Public Lands.—The report of the State Land Agent for the year ending Nov. 30 shows a large increase in the business of the office. Lands aggregating 922,310 acres have been appraised and apportioned among the funds for schools and State institutions. The grant for the State University is filled, and about two thirds of the others. There are still many thousand acres of indemnity school lands to be selected. The amount realized for the various funds from the sale and rental of lands from trespass and from timber sales and back rentals for the year ending Nov. 30, 1897, was \$102,886.53. There are 332,053 acres under lease at a rental of \$38,-234.34.

The report of the United States Mineral Land Commission, Helena district, of lands examined and classified from Aug. 15 to Dec. 31, 1897, gives the number of acres of surveyed land as mineral, 64,200; nonmineral, 322,950. The land in the district remaining unclassified is 3,553,580 acres, of which 340,120 have been surveyed.

The ceded portion of the Fort Belknap Indian reservation in the western part of Choteau County was thrown open for settlement under the mining laws of the State, March 12. It contains a little more than 14,000 acres. The amount of money paid by the Government for this land was \$360,000, or about \$24.50 an acre. This amount is not to be paid all at once, but will be drawn from the Government treasury in four parts or \$90,000 yearly.

The Divorce Law.—The question arose this year whether that portion of the code which forbade the marriage of divorced persons within a certain time—two years for the party securing the divorce and three years for the other party—had been repealed. The Attorney-General decided in December that the repeal is operative.

School Elections.—It has been a question for several years whether it is lawful for women who are not taxpayers to vote at a school election where the question of issuing bonds is voted upon. In order to settle the matter until it can be passed upon by the Supreme Court, the State Superintendent prepared an opinion in which he held that the women can vote whether they are taxpayers or not.

The Cheyennes.—Trouble arose with these Indians in May, beginning with the murder of a sheep herder, apparently to prevent him from giving testimony as to the illegal slaughtering of beef by the Indians. It was feared that attempts to make arrests would cause an outbreak, and many settlers took refuge in Miles City. The confessed murderer, an Indian named Little Whirlwind, was arrested, and there seems to have been no more trouble except an unsuccessful attack in July by several Indians upon the home of one of the deputy sheriffs who aided in the arrest.

Legislative Session.—The fifth Legislative Assembly met Jan. 4, and adjourned March 4. On joint ballot the political division was: Democrats, 53; Populists, 19; Republicans, 19. The Governor was inaugurated Jan. 4. C. W. Hoffman was President *pro tem.* of the Senate, J. M. Kennedy Speaker of the House, and Albert I. Loeb Speaker *pro tem.* Of 334 measures introduced in the House about 100, for the most part appropriation bills, passed. In the Senate 130 bills were introduced, 30 of which passed both houses.

A new county, Broadwater, was formed, making the twenty-fourth in the State. Townsend is to be at present the county seat; but no courthouse is to be built until the valuation of the county exceeds \$3,000,000.

The Legislature of 1895 passed a law prohibiting all kinds of gambling; but it was declared void be-

cause its title described it as an amendment to a section that bore no reference to gambling. A similar law was enacted this year, making it a penitentiary offense to play any game of chance for money, with cards, dice, or any device whatsoever, or any banking or percentage game. This also was attacked in the courts on the ground that as Broadwater County came into existence March 1, and had no representation in the Legislature of 1897, all acts passed after that date were void. The antigambling law was signed March 4. The court upheld the constitutionality of the law. The Attorney-General gave an opinion to the effect that the law does not apply to pool selling.

An inheritance-tax law imposes a tax of 5 per cent. on bequests to any beneficiary not a relative where the estate amounts to over \$100. The tax on estates directly inherited, where the value of the estate is over \$7,500, is 1 per cent. This, too, was resisted, but was declared constitutional by the Supreme Court.

A new fish and game law was enacted, differing in some important respects from the former one. There is no closed season for fishing; but it is forbidden to sell "trout or grayling taken for speculative purposes, except from private ponds. Only the hook and line can be used in catching fish except in the Missouri below the big falls and in the Yellowstone below the mouth of Big Horn river." There are provisions against the killing of more than a stated number of elk, moose, or deer by any one person in a single season. The open season for killing deer was changed, the new law fixing it between Sept. 1 and Dec. 3.

A license was made requisite for insurance companies doing business in the State, the law providing that all fire, life, and casualty companies must pay a license of \$125 a year where the receipts in premiums are from \$1 to \$5,000. All above the latter sum pay 2 per cent. upon the receipts.

A bill for free text-books for schools was so amended as to provide that the voters of each school district shall decide the question at an election.

A law imposing a license tax of \$10 a month on retail cigarette dealers was resisted, but was decided constitutional in a United States court.

One of the most important acts was an amendment to the law regarding the arid lands granted by the National Government. A fund for the reclamation of these lands is to be raised by the sale of bonds, the principal and interest of which are to be paid from the proceeds of sales of the reclaimed lands. The work is to be in the hands of commissioners appointed by the Governor. The former commissioners of arid lands resigned, and the Governor appointed C. O. Reed for six years, Donald Bradford and T. Marshall for four, A. H. Mitchell for two, and J. K. Toole for one year. The amount to be expended in 1897 was limited to \$500,000; each succeeding year to \$1,000,000.

A law to prevent ticket scalping was passed, and on a test case the Supreme Court pronounced it constitutional.

Other enactments were:

Prohibiting the wearing of buttons, badges, or other insignia of labor organizations by any persons not members.

Providing for a levy for a stock-detective fund.

For reorganizing the militia.

Relating to the adoption of children.

Requiring railroad companies to transport physicians on freight trains or engines in cases of emergency.

Changing the name of the Agricultural College of Montana to Montana State College.

A resolution was passed protesting against Presi-

dent Cleveland's order setting aside large timber reservations in the State, on the ground that it would seriously retard State development.

An appropriation of \$15,000 was made for an exhibit of the State's resources at the Omaha Exposition.

Among bills defeated was one for submitting a proposition to permit woman suffrage.

The Treasurer was authorized to sell \$100,000 bonds for completing and furnishing the university at Missoula. These were sold at private sale in April at a premium of \$25.

Toward the close of the session there were charges that bribes had been used in connection with the antigambling bill and the bills for county divisions, and the Capitol-building commissioners were also accused of corrupt methods. Committees were appointed to investigate, and most of the charges came to nothing. But one member of the lower house, Martin Buckley, of Jefferson County, was expelled, for the reason that he had confessed before the joint investigating committee that he had received money for supporting one bill and working against another.

The secretary of the Senate, John Bloor, was accused of secreting a bill that passed both houses until after adjournment, so that it did not receive the signature of the Speaker of the House. It was a bill relating to county salaries, and would have cut down the number of deputies and the salaries of officers and deputies about 33 per cent. The secretary of the Senate was tried and convicted on this charge, and was sentenced to one year in the Penitentiary.

MORAVIANS. The statistics of the Moravian Church, or *Unitas Fratrum*, for 1897 give it in the American Province 120 ministers, 112 churches, 14,220 communicants, and a total membership of 21,882 souls; in the British Province the total membership is 5,866; in the European Province, 8,752; and in the foreign missions, 97,812; making a grand total of 131,762. It will be observed that the total membership in the American Province is larger than that of the British and European Provinces combined, and that of the foreign missions exceeds that of all these three provinces together. At the close of the last fiscal year a deficit of \$26,000 was found to have been incurred in the foreign-mission work, and this only a short time after a large deficiency previously existing had been extinguished through the special efforts of the whole Church. The entire debt was assumed by a single member of the British Province; and he dying before the amount was paid, the executors of his estate discharged the obligation. A mission begun in 1895 in Alberta, Canada, now includes three organized churches and many other preaching places, where services are held among English, German, Norwegian, and Russian immigrants. The number of colonists from Volhynia, among whom the work was begun, is steadily increasing.

Reports made at the annual meeting of the London Association in Aid of Moravian Missions, May 6, represented that the income of the missions had been £9,645, an increase of £1,400. The legacies,

however, were about £2,200 less than in the previous year. Reports from the mission fields indicated the addition of 2,000 members to the congregations. Efforts were being made to obtain £7,000 for the purchase of a new mission ship to be used in the service to and from Labrador.

The attitude of the professors in the seminary at Gnadenfeld, Germany, on certain points of belief has caused attention to be directed to doctrinal questions in both Europe and America. The fourth synod in the Northern Province of America at its regular session adopted resolutions "in view of the increasing prevalence of the 'modern theology' in the Church in Germany declaring that it remained 'immovably fixed on the foundation of the apostles and prophets, Jesus Christ himself being the chief corner stone, even as our confession of faith and declaration of the principles of the Brethren's Church, given at the General Synod, clearly set forth; and that we must heartily indorse the resolution lately adopted at the conference of lay members of the Brethren's Church held in Gerlitz, Prussia, viz.: 'Not a single jot or tittle of the Holy Scriptures, Old and New Testaments as they have been delivered to us, will we surrender.'"" The president of the synod was requested to transmit this declaration to Herrnhut, for the information of the synod there.

On the subject of the theological attitude of the professors at Gnadenfeld the synod of the German Province declared a belief in Jesus Christ, the crucified, "made for us by God to be wisdom, justification, sanctification, and redemption. The Christ of the Scriptures remains our way and truth, and no other name is given whereby we can be saved. He only is our Lord, our Shepherd, and our Master." Emphasis is especially laid in the resolutions upon the personal appropriation of the salvation given us in Christ.

The Brethren's Church, it is further declared, has ever and will ever stand in an independent and free position over against the manifold and varying tendencies of scholastic theology which alter from age to age, especially because it emphasizes the truth that all proclamation of the Gospel is a testimony of heart's experience, not a scientific disquisition of doctrine. Beside the former the latter must always occupy a secondary position. "Nevertheless, doctrine as such is not a matter of indifference or of little consequence, least of all in our theological seminary in which our future ministers receive their training. After a thorough investigation of the actual situation the synod has come to the conviction that the type of theological research and teaching for which our seminary at present stands, although it has entered upon new paths of scientific presentation, does come within the bounds above described. It places in the center of its confession of faith and doctrine of redemption the crucified and risen Saviour, Jesus Christ, as the one to whom we are directed in life and death, for time and for eternity." The synod, however, expressly declared that this judgment had reference only to its own seminary, and that it did not thereby attach itself to any school of theology.

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NATIONAL ACADEMY OF SCIENCES. The officers of the Academy in 1897 were: President, Wolcott Gibbs; Vice-President, Francis A. Walker, succeeded by Asaph Hall; Foreign Secretary, Alexander Agassiz; Home Secretary, Asaph Hall, succeeded by Ira Remsen; Treasurer, John S. Bil-

lings. Two meetings were held in 1897. The first or stated meeting was held in Washington city, April 20-22. On that occasion the following papers were read:

"On Recent Borings in Coral Reefs," by Alexander Agassiz; "On the Variation of Latitude," by

Seth C. Chandler; "The Position of the Tarsi and Relationship to the Phylogeny of Man," by Theodore Gill; "On the Energy Involved in Recent Earthquakes," by Thomas C. Mendenhall; "On a Ring Pendulum for Absolute Determinations of Gravity," by Thomas C. Mendenhall and A. S. Kimball; "A New Harmonic Analyzer," by Albert A. Michelson and S. W. Stratton; and "Notes of Experiments upon the Röntgen Rays," by Arthur W. Wright.

The following papers were read by scientists not members of the Academy: "The Influence of Environment upon the Biological Processes of the Various Members of the Colon Group of Bacilli," by Adelaide W. Peckham (presented by John S. Billings), and "Variation of Latitude and Constant of Aberration from Observations at Columbia University," by John K. Rees, Harold Jacoby, and Herman S. Davis (presented by Seth C. Chandler).

Also the following biographical memoirs were read: "Charles E. Brown-Séquard," by Henry P. Bowditch; "Thomas L. Casey," by Henry L. Abbot; "George H. Cook," by Grove K. Gilbert; "George Brown Goode," by Samuel P. Langley; and "Hubert A. Newton," by J. Willard Gibbs.

Forestry.—The principal public business transacted at this meeting was the presentation of a report by President Gibbs, in which he gave a summary of his action concerning forestry preservation. In 1896 the Secretary of the Interior addressed a letter to the President of the National Academy of Sciences calling for an official expression on the following points concerning the inauguration of a national forest policy of the forest lands of the United States:

"1. Is it desirable and practicable to preserve from fire and to maintain permanently as forested lands those portions of the public domain now bearing wood growth for the supply of timber?"

"2. How far does the influence of forest upon climate, soil, and water conditions make desirable a policy of forest conservation in regions where the public domain is principally situated?"

"3. What specific legislation should be enacted to remedy the evils now confessedly existing?"

In accordance with this request, a committee was appointed consisting of Prof. Charles S. Sargent, director of the Arnold Arboretum of Harvard University, as chairman; Dr. Alexander Agassiz, of the Museum of Comparative Zoölogy; Gen. Henry L. Abbot, a distinguished engineer officer; Prof. William H. Brewer, of Yale University; Arnold Hague, of the United States Geological Survey; and Gifford Pinchot, who has charge of the botanical work of George Vanderbilt's estate at Biltmore, N. C. This committee visited most of the forest reservations and other public forests of the United States, beginning that work on July 2, 1896, and submitted a report on Feb. 1 of this year, acting upon which the President of the United States set apart as a public reserve the following reservations:

The Black Hills Reserve, embracing the central portion of the Black Hills of South Dakota, with an estimated area of 967,630 acres; the Big Horn Reserve, in northern central Wyoming, embracing both slopes of the Big Horn mountain, with an area of 1,198,080 acres; the Teton Reserve, adjacent to the Yellowstone National Park, Timberland Reserve being south thereof, and containing 829,440 acres; the Flathead Reserve, embracing both slopes of the main Rocky mountain range or Continental Divide in northern Montana and extending from near the line of the Great Northern Railroad northward to the international boundary, with an estimated area of 1,382,400 acres; the Lewis-and-Clarke Forest Reserve, embracing both slopes of the Continental Divide in Montana, and

extending from a boundary near the line of the Great Northern Railroad southward nearly to the forty-seventh degree of north latitude, with an estimated area of 2,426,000 acres; the Priest River Forest Reserve, occupying the basin of Priest lake and Priest river, in the extreme northern part of Idaho and in northeastern Washington, and extending from a boundary a few miles north of the line of the Great Northern Railroad to the international boundary, with an area estimated at 552,960 acres in Idaho and 92,160 acres in Washington, making a total of 645,120; the Bitter Root Forest Reserve, on both sides of the boundary between Montana and Idaho, with an estimated area of 4,147,000 acres, of which 691,000 are in Montana and 3,456,000 in Idaho; the Washington Forest Reserve, in the State of Washington, extending from about the one hundred and twentieth degree of west longitude nearly to the one hundred and twenty-second degree, and from the international boundary southward a little below the forty-eighth degree of latitude, with an estimated area of 3,594,240 acres; the Olympic Forest Reserve, occupying the high and broken Olympic mountain region in northwestern Washington, and containing an estimated area of 2,188,000 acres; and the Mount Rainier Forest Reserve, originally established by executive order of Feb. 20, 1893, as the "Pacific Forest Reserve." The present proclamation extends the reserve southward along the two slopes of the Cascade mountains nearly to Columbia river, and changes the name from the Pacific to the Mount Rainier Forest Reserve. The proposed extension makes the total area of the Mount Rainier Reserve 2,234,880 acres; the Stanislaus Forest Reserve, extending along the slopes of the Sierra Nevada mountains in California, and embracing an area of 691,200 acres; the San Jacinto Forest Reserve, embracing the San Jacinto mountains in southern California and separated from the existing San Bernardino Forest Reserve by the San Geronimo pass, with an estimated area of 737,280 acres; the Uintah Forest Reserve, embracing both slopes of the eastern part of the Uintah mountain range in northern Utah, and the northern slope only of the western part of this range, the southern slope being part of the Uintah Indian Reservation.

The details of this action, which formed so large a portion of President Gibbs's annual address, are contained in a letter of the Secretary of the Interior to the President, "transmitting a report by the National Forestry Commission to the National Academy of Sciences, recommending the establishment of additional forest reservations" which has been published.

At this meeting, the following new members were elected: William Henry Dall, honorary curator of the department of mollusks in the United States National Museum, probably the first living conchologist in the United States; Frank Austin Gooch, Professor of Chemistry in Yale University, who has contributed important papers to the literature of his chosen science on analytical methods; Charles Sedgwick Minot, of the Harvard Medical School, who is a leader among biologists; and Edward Williams Morley, of the Case Scientific School, of Cleveland, Ohio, whose researches on the atomic weight of oxygen, have gained for him a high rank among American chemists.

Other business included the election of Asaph Hall to the vice-presidency of the Academy, in place of Francis A. Walker, deceased, and of Ira Remsen to the place of home secretary, made vacant by the promotion of Prof. Hall. The following gentlemen were elected members of the council: Henry P. Bowditch, George J. Brush, John S. Billings, Othniel C. Marsh, Simon Newcomb, and Arnold Hague.

The scientific session was held in Boston, Mass., Nov. 16-18, when the following papers were read: "The Secular Softening of Cold Hard Steel," by Carl Barus; "Comparison of the Theory of the Motion of the Pole with Recent Observations," by Seth C. Chandler; "The Influence of Borax and Boric Acid on Nutrition," by Russell H. Chittenden; "Evolution and Migrations of Land Shells on Hawaiian Islands," by Alpheus Hyatt; "Recent Observations on European Dinosaurs" and "The Jurassic Formation on the Atlantic Coast—Supplement," by O. C. Marsh; "On the Elastic Resistance of Steel Knife Edges," by Thomas C. Mendenhall; "Results obtained with a New Harmonic Analyzer," by Albert A. Michelson and S. W. Stratton; "Embryological Observations," by Charles S. Minot; "A Contribution to the Study of the Action of the Venom of the *Crotalus Adamanteus* [a species of rattlesnake] upon the Blood," by S. Weir Mitchell and Alonzo H. Stewart; "On the Ancient Molluscan Fauna of New England," by Edward S. Morse; "An Hypothesis to account for Movements in the Crust of the Earth," by John W. Powell; "On a New Method of obtaining Derivatives of Guanidine," "On the Boiling Points of Mixtures of Benzine and Alcohols," and "On Double Halides containing Organic Bases," by Ira Remsen; "On a Final Determination of the Relative Lengths of the Imperial Yard and of the Metre of the International Bureau," by William A. Rogers; "Ovarian Variations and Cannibalistic Selection as Factors in the Evolution of Species," "Notable Instances of Free Variation nearly unchecked by Natural Selection," and "Some of the Important Factors in the Evolution of the Marine Animals of Coral-Reef Seas," by Addison E. Verrill; and finally a dissertation on "The Mass of the Earth's Atmosphere," by Robert S. Woodward.

The following papers were read by scientists, not members of the Academy: "On a New Application of the Wave Siren," by Charles R. Cross, and "New Apparatus for Comparison of Thermometers and for Determination of the Heat of Combustion of Fuels," by Charles L. Norton.

At the business meeting, held Nov. 17, Miss Alice L. Gould, daughter of Benjamin Apthorp Gould, who was an original member of the Academy, presented to the organization a fund of \$20,000, for which the Academy is to select trustees. It is to be known as the Alice L. Gould fund, to distinguish it from the generous gift made to the Academy by the deceased astronomer, and the proceeds are to be used at the discretion of the trustees in furthering astronomical and mathematical research. The fund was accepted by the Academy, and the donor received a unanimous expression of the thanks of the members. The trustees chosen were Asaph Hall, of Cambridge, Lewis Boss, of Albany, and Seth C. Chandler, of Cambridge.

Other features of the meeting were a lecture at the Jefferson Physical Laboratory in Cambridge "On Electrical Discharges, with Exhibition of Apparatus for obtaining High Voltage," by John Trowbridge, and "An Account of the International Congress of Geologists in St. Petersburg," by Samuel F. Emmons. During the year the Academy lost by death the following members: Edward Drinker Cope, Matthew Carey Lea, Theodore Lyman, Alfred Marshall Mayer, John Hammond Trumbull, and Francis Amasa Walker, sketches of each of whom will be found in this volume among the OBITUARIES, AMERICAN.

NEBRASKA, a Western State, admitted to the Union March 1, 1867; area, 77,510 square miles. The population, according to each decennial census since admission, was 122,993 in 1870; 452,402 in 1880; and 1,058,910 in 1890. Capital, Lincoln.

Government.—The following were the State officers during the year: Governor, Silas A. Holcomb; Lieutenant Governor, James E. Harris; Secretary of State, W. F. Porter; Treasurer, J. B. Meserve; Auditor, J. F. Cornell; Attorney-General, C. J. Smythe; Adjutant General, P. H. Barry; Superintendent of Education, W. R. Jackson; Land Com-



SILAS A. HOLCOMB, GOVERNOR OF NEBRASKA.

missioner, J. V. Wolfe; Oil Inspector, J. H. Edmiston—all of the silver parties; Chief Justice of the Supreme Court, A. M. Post; Associate Justices, T. O. C. Harrison, T. L. Norval; Clerk, D. A. Campbell—all Republicans.

Finances.—The assessed valuation of property in the State, as returned by assessors in 1897, is \$165,085,582.92, which is \$1,992,687.45 less than the assessed valuation of 1896. The levy as fixed by the State board makes the total assessment \$1,183,069.57. The amount to be raised by all the counties is \$4,619.38 less than the assessment of last year. The total assessment of 1895 was \$1,196,276.83. The Legislature appropriated \$2,335,843.40 for expenses of the State for two years.

Treasury Defalcations.—The Governor sent a special message to the Legislature, Feb. 17, asking for an investigation of the State treasury, pointing out that \$537,762 still remained to be accounted for by the ex-Treasurer. A shortage of about \$25,000 had already been acknowledged by the ex-Auditor. Criminal and civil suits against the ex-Treasurer and ex-Auditor and their bondsmen followed, and both were convicted. Ex-Treasurer J. S. Bartley was sentenced, June 26, to serve twenty years at hard labor in the Penitentiary and pay a fine of \$303,768.90, which was twice the amount he was charged with embezzling in the count on which he was convicted. The Supreme Court affirmed the judgment of the county court. The civil suit to recover the amount of the shortage from Bartley and his bondsmen was not concluded at the end of the year. Ex-Auditor Eugene Moore was sentenced, Nov. 30, to serve eight years in the Penitentiary and pay a fine of \$46,816 for the embezzlement of \$23,000 State funds.

The legislative investigating committee received the final report in October from the expert accountant employed on the ex-Treasurer's books, which showed a loss to the State of \$870,164.39.

The city treasurer of Omaha, Henry Bolin, who was found in June, 1895, to be short \$105,000 in his accounts, was tried, convicted, and sentenced to serve nineteen years in the Penitentiary and pay a fine of \$211,000. The case was appealed, and in May, 1897, the Supreme Court affirmed the judgment.

Education.—The apportionment to schools in June was \$362,226, and in December \$377,366. The school population at the later date was 354,929, an increase in a year of 6,401.

The State University has about 1,700 students. In June 132 were graduated in the classical, scientific, electrical engineering, and law departments. The expenditure for the year was about \$176,000.

The Supreme Court declared unconstitutional the law of 1895, under which students in the county districts who were prepared for the high-school work were allowed to enter the high school of the nearest city or village, tuition at the rate of 50 cents a week being paid for each student by his own county. About 3,000 students were entered under this law, and a rehearing was strongly urged.

Banks.—The Omaha Savings Bank closed its doors Jan. 2. It claimed to be solvent, with \$200,000 assets in excess of its liabilities.

Frank M. Dorsey and E. D. Higgins were tried in the Federal court for violating the banking laws in conducting the Ponca Bank. The jury in November acquitted Higgins, but as to the guilt of Dorsey disagreed.

The First National Bank of Alma was closed by a bank examiner Jan. 9.

The Grain Harvest.—An estimate in October by a member of the Board of Agriculture gave the farmers \$105,000,000 worth of grain to send out of the State and \$90,000,000 to be fed to stock or sold to millers.

Insurance.—In the suit of the receiver of a fire insurance company against stockholders and directors, the Supreme Court gave a decision to the effect that the receiver of an insolvent corporation has authority to collect assessments; that the directors of an insolvent corporation who took part in its meetings are in no position to question their liabilities for the amount of assessments levied at such meetings because of the fact of no judgment having been rendered against the corporation.

Mortgages.—The State mortgage report for the first six months of the year shows that the amount of farm mortgages satisfied exceeds the amount of those filed by \$943,366.14. The number of farm mortgages filed, as shown by the report, was 6,589, amounting to \$6,267,374.55. The number released was 8,001, amounting to \$7,210,740.69. There were 2,182 town and city mortgages filed, amounting to \$1,883,175.58, and 2,996 released, amounting to \$3,198,173.35. Sheriffs' deeds and other forms of foreclosure are considered the same as releases, and the figures given above as releases include foreclosures. Sixty-four counties reported 750 farm mortgage foreclosures, amounting to \$951,129, and 176 town and city foreclosures to \$231,374.98.

Chicory.—The raising of chicory is a new industry in Nebraska and promises to be very profitable. The processes of manufacture are said to be more simple and less expensive than those for beet sugar. The growth of chicory roots began five years ago at O'Neill, Holt County, and, with the first year, a small plant for caring for the roots was put in. In 1895 the American Chicory Company was organized, succeeding the German Chicory Company at O'Neill, and this company at

once enlarged the capacity of the O'Neill plant and put in a manufacturing plant at Omaha and a drying plant at Fremont. Last year the company contracted for 1,200 acres of chicory, and took every pound of it from the farmers.

State Boundary.—A compact has been made between this State and South Dakota, and signed by the Governor, fixing the line between the States in the center of the main channel of Missouri river between a point directly north of the west line of Dixon County, Nebraska, and a point directly south of the east line of Clay County, South Dakota.

India Relief.—The India relief commission appointed by Gov. Holcomb has reported the result of its labors. The Governor is credited with being the first governor of the United States to call attention of the public to this charity. The commission gave its services. During the winter much corn was offered and refused, because it was not of such a quality as would bear transportation. Thirty-three car loads were hauled free jointly by the Union Pacific and B. and M. to San Francisco, and were there loaded on the steamer "Everett," which sailed June 12 for India. Three car loads were shipped to New York and exported. Freight on these was paid by Louis Klopsch, of the "Christian Herald." The sum of \$509.67 was received in cash and transferred to the Rev. W. E. Hopkins, of India, an American missionary.

Home for the Friendless.—The report of this institution in October gave the following items: Three hundred and ten persons have been received into the home. Fourteen came from other institutions. Sixty came from temporary shelter. The dismissals numbered 277. Of this number, 53 found work. The average size of the home family has been 118½.

The superintendent and assistant traveled 5,461 miles, more than 400 by team, in placing children, or visiting them.

Legislative Session.—The Legislature convened Jan. 5, and adjourned April 9. J. N. Gaffin was Speaker of the House, and Frank T. Ransom president *pro tem.* of the Senate. The Democrats had on joint ballot 7 votes, the Republicans 39, the Fusionists 57, and 30 were independent.

The principle of the initiative and referendum was embodied in limited form in a law applying only to cities and villages, in which it becomes operative after having been accepted by a two-thirds vote of the franchise holders. But authority is given to the mayor and council of any city to adopt it by a majority vote without submission. According to the provisions of the act, ordinances, including all measures within the power of the lawmaking authorities of the city or village, may be proposed by voters; if 15 per cent. ask to have any measure submitted to vote it shall be so submitted; and if 20 per cent. so require, a special election shall be called for the vote.

The powers of the State Board of Transportation were very greatly increased. A fine of \$500 to \$5,000 is imposed upon any railroad officer who fails to comply with the regulations of the board. The constitutionality of this law is attacked.

Important changes were made in the election laws. The precinct election boards were made appointive instead of elective. Appointments are to be made by county judges from the three parties casting the largest votes at the next preceding general election. The "blanket ballot" was adopted. Other changes were made in the details of the law.

A new charter was given to Omaha. It provides for an election to be held within thirty days, thus legislating out of office the entire city government, which was Republican. It deprives the Board of

Fire and Police Commissioners of office, and gives the appointment of a new board to the Governor. This provision was resisted and taken to the courts to be tested. Another provision was that city property shall be assessed at its full value.

An appropriation of \$100,000 was made for the Trans-Mississippi Exposition.

In response to a memorial from the Kansas Legislature, asking that a commission be appointed to represent Nebraska in a joint commission comprising representatives from Nebraska, Kansas, Oklahoma, Texas, and other Southwestern sections, in order to secure from existing railways rates to the Southern Gulf ports proportionate to those charged to Eastern ports, and to encourage or promote the building of a north-and-south railway to some Gulf port, to force other railways to afford favorable rates for the short haul to tidewater, a bill was passed authorizing such a commission.

It was made a misdemeanor "for any corporation doing business in Nebraska to contribute money, property, transportation, help, or assistance in any manner or form to any political party or to any candidate for any civil office or to any political organization or committee, or to any individual to be used as or expended for political purposes," under penalty of \$1,000 fine for the first offense, and for the second \$2,000 and loss of charter, or, if a foreign corporation, of the right to do business in the State.

A law in reference to fraternal beneficiary associations has a provision that each "such society shall have a lodge system, with ritualistic form of work and representative form of government."

An antitrust act was passed, and one to prevent insurance companies from combining on rates.

A bill abolishing deficiency judgments was passed just before adjournment, and became a law without the Governor's signature.

The sale of cigarettes was prohibited.

The sugar-bounty law was repealed, and the one placing a premium on the destruction of the Russian thistle.

Changes were made in the laws relating to the militia. The appropriation was \$30,000, as for the two bienniums preceding.

An appropriation of \$30,000 was made for a building at the Hastings Asylum for the Insane.

An act was passed vesting in the Governor and the Board of Public Lands and Buildings the management of the Home for the Friendless, for Orphans and Aged Women at Lincoln, and also of the Milford Home for Unfortunate Women. These have been under the care of boards of women.

A joint resolution was passed instructing Senator Thurston to vote for free coinage of silver.

Political.—The State election in November was to fill the offices of Justice of the Supreme Court and two Regents of the University. There were five tickets in the field.

The Prohibitionists held a convention at Lincoln, May 26. Their candidates were: For Associate Justice, D. M. Strong; for Regent, Mrs. Isabella Sperlock. The resolutions called for woman suffrage and suppression of the liquor traffic. This is the sound-money wing of the party, but no declaration was made on the financial question.

The National Liberty party, the silver wing of the Prohibition party, held a convention at Lincoln, June 29, and nominated Mrs. Zara A. Wilson for Justice, and for Regent Rufus C. Bentley. The resolutions favored, besides prohibition, woman suffrage, the adoption of a "system of full legal-tender paper money issued through Government banks on equal terms to all, the supply being regulated by the demand and the ability to furnish security; amendment of the Federal Constitution

so as to make contracts, past and future, payable in lawful money of the United States"; granting of public land to actual settlers only, and Government ownership of railroads and telegraphs, "and when necessary the collective ownership of all the means of production and distribution."

The Republican convention, at Lincoln, Aug. 26, renominated Judge A. M. Post, and chose as candidates for the office of Regent G. W. Kaley and John N. Dryden. On State issues the platform condemns the Governor for dereliction in duty in not calling for the regular reports on public funds, and thereby discovering the shortages earlier. It deplores the discredit that has been brought on the State by the Populist administration's attempt to array class against class for partisan purposes. It denounces acts of the last State Legislature in attempting to count in two Populist judges of the Supreme Court by falsification of the returns. It regrets the increase of freight rates on grain transported between Chicago and these parts, and calls upon the Interstate Commerce Commission for protection for the West from excessive charges.

The Democrats, the Populists, and the Silver Republicans united again, holding conventions at Lincoln at the same time, Sept. 1. They united on the following ticket: For Justice, John J. Sullivan, Democrat; for Regents, George F. Kenower, Silver Republican, and E. Von Forell, Populist. On State matters the three platforms were in substantial agreement, commending the administration and denouncing the frauds on the Treasury. The Democratic platform said further: "With great deference and respect, we humbly appeal to the Supreme Court of the United States for an early decision in the Nebraska minimum rate cases."

In regard to prosperity the platform of the Populists said: "We are thankful to Providence rather than to any man for the measure of prosperity with which our State has been blessed, and we attribute the rise in wheat to foreign scarcity rather than suppose it to be the result of dear sugar or an increased tariff."

The National Democrats held a convention at Omaha, Sept. 22, and nominated J. M. Woolworth for Justice. He declined, and the name of Warren Switzler was substituted. J. G. Morton and J. C. Crawford were named for Regents. J. I. Leas was later substituted for J. C. Crawford. Protests were entered against allowing the party names "Silver Republican" and "National Democrat" on the official ballot, as being contrary to the State law, but the Secretary of State decided to allow them both.

The fusion candidates were elected. Following is the vote for Judge of the Supreme Court: John J. Sullivan, Fusion, 102,838; A. M. Post, Republican, 89,009; D. M. Strong, Prohibition, 1,625; Warren Switzler, National Democrat, 718; Mrs. Wilson, National Liberty, 82.

When the canvassing board met to open the official returns, a protest was made against the canvass of the returns from 22 of the counties, because these returns had been opened in the office of the Secretary of State and some of them sent back to the counties for correction in regard to certain required forms, contrary to the law, which provides that official returns must be opened in the presence of the board at a stated time, and the result declared within five days. The charge was not denied, but the board overruled the objections.

NETHERLANDS, a constitutional monarchy in western Europe. The legislative power is vested in the States General, consisting of a First Chamber of 50 members elected by the provincial councils for nine years, one third being renewed every three years, and a Second Chamber of 100 members elected for four years by the votes of all qualified

Dutch citizens. The reigning sovereign is Queen Willemina, born Aug. 31, 1880, who will come of age in 1898. The royal prerogative is exercised in her name during her minority by her mother, the dowager Queen Emma, relict of King Willem III. The ministry, constituted on May 7, 1894, was composed as follows: President of the Council and Minister of Foreign Affairs, Dr. J. Roell; Minister of the Interior, Dr. S. van Houten; Minister of Finance, Dr. J. P. Sprenger van Eyk; Minister of Justice, Dr. W. van der Kaay; Minister of the Colonies, J. H. Bergsma; Minister of Marine, H. M. van der Wyck; Minister of War, C. O. H. Schneider; Minister of Public Works and Commerce, P. W. van der Sleyden.

Area and Population.—The area of the kingdom is 12,648 square miles. The population on Dec. 31, 1896, was estimated at 4,928,658 persons, of whom 2,438,975 were males and 2,489,683 females. The number of marriages in 1896 was 35,929; of births, 167,763; of deaths, 91,818; excess of births, 75,945. The number of emigrants was 2,188. The city of Amsterdam had 494,189 inhabitants at the end of 1896, Rotterdam had 286,105, and the Hague 191,530.

General Election.—The first election held under M. van Houten's new electoral law took place in June, 1897. The franchise was bestowed by that measure on all Dutch citizens above the age of twenty-five who pay at least 1 guilder yearly in direct taxation, or own or rent a boat of a certain capacity, or have held the same employment for a certain length of time, or are in receipt of an official pension, or have at least 50 guilders deposited in the savings bank. All householders and male citizens having their own lodgings possessed the franchise under the former law. The new law more than doubled the number of electors, which was only about 350,000 before. The extension of the franchise worked, as in Belgium, to the advantage of the compactly organized religious elements opposed to secular education, which in Holland consisted of two camps, theologically divided, but united temporarily in a political alliance, namely, the Roman Catholics, led by Dr. Schaepman, and the Orthodox or Anti-Revolutionary Protestant party, led by Dr. Kuyper. In half the districts the first ballot gave the Roman Catholics a great lead over the Liberals, while the Calvinistic Anti-Revolutionists won nearly as many seats as they. In the other half second ballots were necessary. The Minister of the Interior, who was the author of the extended franchise, was beaten in the first ballot, and the Minister of Justice was doomed to defeat in the second. A Christian Historic party had been organized by moderate Orthodox Protestants in opposition to the Calvinistic and Catholic union. This party elected no candidates on the first ballot, but it exercised an important influence on the second elections. The Socialist and the Radical Labor parties were not benefited materially by the extension of the franchise. The question of free trade or protection was involved as well as that of education, the Catholics and Calvinists being protectionists. The Clericals were also opponents of the introduction of obligatory personal military services. The Liberals of all shades combined against the Catholic and Calvinistic union, the Historic Christians gave their votes to the Liberal candidates, and the Calvinists themselves, although they won most of their districts only by the aid of Catholic votes, rebelled against their leaders and deserted their allies, and in every district where the contest was between a Catholic and a Liberal voted for the Liberal candidate or remained away from the polls. Thus the Clerical coalition was kept from winning a majority. At the same time

the Moderate Liberal Cabinet was left in a minority, for most of the Liberals who were returned belonged to the Progressive wing of the party. In the last Chamber there were 57 Liberals, 3 Radicals, 15 Anti-Revolutionists, and 25 Catholics. The new one consisted of 48 Liberals, 20 Catholics, 21 Anti-Revolutionist Protestants, 4 Historic Christians, 4 Radicals, and 3 Socialists. Even numbering the Historic Christians with the Clericals, there was an Anti-Clerical majority of 10, but it was composed of the most heterogeneous elements, embracing former Conservatives, Liberals of every kind, and Socialists.

Change of Cabinet.—The ministers had expected to resign after the elections, having carried out their programme of the extension of the franchise. On June 28 Jonkheer Roell tendered the collective resignation of the Cabinet to the Queen Regent. A new Cabinet, Liberal throughout, but more Progressive than the outgoing one, was constituted on July 24 as follows: President of the Council and Minister of Finance, Dr. N. G. Pierson; Minister of Foreign Affairs, W. H. de Beaufort; Minister of Justice, P. W. A. Cort van der Linden; Minister of the Interior, H. Goeman Borgesius; Minister of Marine, J. C. Jansen; Minister of War, Major-Gen. K. Eland; Minister of Waterstaat, Commerce, and Industry, C. Lely; Minister of the Colonies, J. T. Cremer. The new Ministers of the Interior and Justice were prominent Progressives, and the Foreign Minister alone belonged to the moderate section of the Liberals.

The new Minister of War prepared a bill to establish on a solid basis the principle of conscription in the army, doing away with substitution, but not disturbing the existing organization of the army. In the speech from the throne at the opening of the States General on Sept. 21, a bill was promised modifying the customs tariff without changing the present system. On Dec. 15 the Second Chamber refused by 46 votes against 41 to grant 3,600,000 guilders for the construction of a small battle ship of improved type. In consequence of this vote the Minister of Marine resigned, and Gen. Eland took the portfolio *ad interim*. A permanent commission of the State was constituted by the former Cabinet for the preparation under the presidency of M. Asser of a code of international private law according to the programme communicated to the powers by the Government of the Netherlands at the convention of the Hague in 1886.

Finances.—The budget for 1897 makes the total revenue 131,393,965 guilders. Of this 33,080,000 guilders are derived from direct taxes, including 12,160,000 guilders from the land taxes, 9,350,000 guilders from the personal tax, 6,950,000 guilders from the tax on incomes from investments, and 4,620,000 guilders from the tax on professional incomes. The excise receipts are 43,070,000 guilders, of which 26,400,000 guilders are raised by the duty on spirituous liquors and 16,670,000 guilders by duties on other articles. The stamp, registration, and succession duties yield 20,320,000 guilders; customs, 8,215,000 guilders; assay fees, 225,900 guilders; domains, 2,450,000 guilders; the post office, 8,624,000 guilders; telegraphs, 1,404,000 guilders; lottery, 659,000 guilders; shooting and fishing licenses, 128,000 guilders; pilot dues, 1,600,000 guilders; mining royalties, 5,865 guilders; railroads, 3,885,000 guilders; various receipts, 7,727,200 guilders. The total expenditures in 1897 were estimated at 138,726,839 guilders, of which 800,000 guilders were for the royal household, 673,887 guilders for the superior authorities of the state, 850,918 guilders for foreign affairs, 5,455,665 guilders for justice, 14,112,164 guilders for the interior, 15,583,554 guilders for marine, 23,728,839 guilders for war, 32,643,745

guilders for the public debt, 9,481,617 guilders for finance, 9,341,457 guilders for payments to communities in compensation for the suppression of the *octroi*, 1,969,662 guilders for worship, 1,337,579 guilders for the central administration of the colonies, 22,697,752 guilders for the Waterstaat, commerce, and industry, which includes 1,935,000 guilders for the railroads and 50,000 guilders for unforeseen expenses.

The public debt, nearly two thirds of which pays 2½ per cent. and the rest 3 per cent. interest, amounted in 1897 to 1,072,792,650 guilders, including 3,013,700 guilders for railroad bonds assumed when the lines were transferred to the state, but not including 15,000,000 guilders of paper money. The annual interest charge is 29,333,235 guilders, and the sinking-fund charge and the cost of converting debt to 3 per cent. under the law of Dec. 30, 1895, was 2,708,500 guilders.

The Army and Navy.—The main reliance for the defense of the country still rests on the enlisted soldiers. Besides these, 10,400 young men are drawn into the service every year by conscription, who serve, or their substitutes serve, twelve months with the colors and six years longer on leave of absence. All other able-bodied citizens are inscribed in the *Schuttercyen*, or civil guard, for ten years, and up to the age of fifty years every man who can bear arms belongs to the *Landstorm*. The peace effective for 1897 was as follows: Staff, 206 officers; 46 battalions, 985 officers and 16,884 men; 16 squadrons and 3 depots, 143 officers and 3,093 men; 21 batteries, 3 divisions of train, and 3 depots, 157 officers and 2,752 men; 40 companies of fortress artillery, 217 officers and 1,976 men; 4 companies of artillery for armored forts, 15 officers and 202 men; 2 companies of pontonniers, 14 officers and 196 men; 2 torpedo companies, 12 officers and 206 men; 9 companies of engineers, 98 officers and 726 men; 3 sanitary-service companies, 3 officers and 108 men; 1 corps of gendarmes, 19 officers and 767 men; 2 companies in recruiting service for the colonies, 13 officers and 62 men; total, 1,882 officers and 26,972 men, with 5,755 horses.

The naval force consists of 13 armored or protected vessels, 12 ironclad monitors, 5 river gunboats, 22 gunboats, 37 torpedo boats, and 14 minor vessels, besides 3 stationary hulks, 24 school ships, and one torpedo transport; the total armament is 879 guns and 33 torpedo ejectors. The crews number 6,918 men. A naval militia is drawn by conscription to serve a nominal term of five years, but all the men in actual service are recruited by enlistment.

Communications.—There were 1,680 miles of railroads in operation on Jan. 1, 1897. The Government telegraph lines had a total length of 3,560 miles, with 12,640 miles of wire. The number of messages sent in 1896 was 4,621,954, of which 2,427,708 were internal and 2,161,090 international paid messages and 33,156 were official. The receipts were 2,927,923 francs, and expenses 4,349,289 francs, not including 662,029 francs of extraordinary expenditure. The post office in 1896 forwarded 70,264,000 internal and 24,175,000 foreign letters, 36,650,000 internal and 6,645,000 foreign postal cards, 120,919,000 internal and 15,837,000 foreign printed inclosures, and 3,358,000 internal money orders and letters of the value of 324,002,000 francs, and 548,000 foreign ones of the value of 107,750,000 francs.

Commerce.—The special imports in 1896 were valued at 1,628,200,000 guilders, not including 6,700,000 guilders of specie, and the exports of Dutch produce and manufactures at 1,336,100,000 guilders, not including 1,300,000 guilders of specie. Of the imports of merchandise 495,300,000 guilders were alimentary articles, 593,700,000 guilders raw mate-

rials, 267,000,000 guilders manufactured products, and 272,200,000 guilders miscellaneous merchandise. Of the exports, 457,400,000 guilders consisted of alimentary products, 464,200,000 guilders of raw materials, 261,600,000 guilders of manufactured articles, and 152,900,000 guilders of miscellaneous products. The amount of trade, in guilders, with the several foreign countries in 1896 is shown in the following table, which includes specie:

COUNTRIES.	Imports.	Exports.
Germany.....	278,700,000	679,700,000
Great Britain.....	255,700,000	290,200,000
Belgium.....	174,200,000	164,000,000
Russia.....	223,400,000	5,500,000
France.....	23,600,000	23,400,000
Sweden and Norway.....	22,000,000	9,100,000
Roumania.....	49,000,000	
Turkey.....	8,700,000	5,800,000
Italy.....	5,100,000	6,200,000
Spain.....	36,400,000	1,200,000
Dutch East Indies.....	239,200,000	52,800,000
British East Indies.....	41,500,000	2,400,000
Africa.....	7,600,000	16,800,000
United States.....	166,800,000	46,500,000
Brazil.....	13,600,000	
Peru and Bolivia.....	20,800,000	
Other countries.....	68,600,000	33,800,000
Total.....	1,634,900,000	1,337,400,000

Navigation.—During 1895 there were 1,456 sailing vessels, measuring 990,209 cubic metres, and 9,597 steamers, measuring 21,340,457 cubic metres, entered at Dutch ports, and 1,495 sailing vessels, measuring 900,863 cubic metres, and 9,271 steamers, measuring 20,850,175 cubic metres, cleared. Of the arrivals 1,209 sailing vessels, of 927,180 cubic metres, and 9,013 steamers, of 20,570,567 cubic metres, and of the departures 1,115 sailing vessels, of 535,431 cubic metres, and 6,059 steamers, of 11,315,847 cubic metres, were with cargoes. The sailing vessels belonging to the Dutch mercantile marine among those entered numbered 607, of 277,115 cubic metres; the Dutch steamers numbered 2,429, of 5,467,415 cubic metres, and of the vessels cleared 662 sailing vessels, of 280,992 cubic metres, and 2,385 steamers, of 5,472,647 cubic metres, were of Dutch registry. The merchant marine on Jan. 1, 1896, consisted of 440 sailing ships, of 278,888 cubic metres, and 172 steamers, of 555,817 cubic metres.

The Dutch East Indies.—The Dutch possessions in Asia comprise the colony of Java and Madura and the outposts, which include Sumatra, parts of Borneo and New Guinea, the Riau-Lingga Archipelago, Banca, Billiton, Celebes, the Molucca Archipelago, and the minor Sunda islands. The area of Java and Madura is 50,554 square miles. The population in 1895 was 25,700,946, of whom 25,372,247 were native Malays, 51,489 Europeans, 257,489 Chinese, 16,569 Arabs, and 3,152 Hindus and others. The outposts have a total area of 685,846 square miles, with an enumerated population of 8,378,219. Batavia, the capital of Java, has 114,566 inhabitants; Surakarta, 104,589; Sourabaya, 124,529; Palembang, in Sumatra, 53,788; Bandjermassin, in Borneo, 45,028.

The Governor-General of the East Indies is Jonkheer C. H. A. van der Wyck, appointed in 1893. The estimated revenue for 1897 was 127,773,578 guilders, of which 18,169,345 guilders were the proceeds of sales of coffee, 117,216 guilders from *einhehona*, 17,110,000 guilders from tin, 15,156,000 guilders from the farming of the opium monopoly, 17,339,000 guilders from the land tax or tithe, 8,558,000 guilders from the salt tax, 2,000,800 guilders from posts and telegraphs, 10,577,000 guilders from railroads, and 33,239,542 guilders from other sources. The expenditures were estimated at 142,746,809 guilders.

The merchandise imports of private persons into

Java in 1895 were 98,405,000 guilders, and into the outposts 46,646,000 guilders; imports of the Government, 8,135,000 guilders; total imports of merchandise, 153,236,000 guilders. The exports of private individuals from Java were 151,693,000 guilders, and from the outposts 49,959,000 guilders; exports of the Government, 22,281,000 guilders; total exports of merchandise, 223,933,000 guilders. The total imports of specie were 8,294,000 guilders; exports, 1,154,000 guilders. There were 1,102 miles of railroad in operation, and 415 under construction in Java in 1897, and in Sumatra 200 miles were in operation and 20 under construction. The shipping arriving in 1895 comprised 3,418 steam vessels, of 3,866,000 cubic metres, and 1,690 sailing vessels, of 517,000 cubic metres. The merchant fleet numbered 2,002 vessels, of 244,340 cubic metres.

The army of Netherlands India had on Jan. 1, 1897, a total effective strength of 1,674 officers and 40,346 rank and file, comprising 514 staff officers and 2,553 men attached to the staff, 901 infantry officers and 32,561 men, 38 officers and 982 men in the cavalry, 147 officers and 3,451 men in the artillery, and 74 officers and 799 men in the engineers. The army was composed of 16,066 Europeans, 55 Africans, and 22,938 natives. The reserves numbered 7,742 men, including 4,263 in the armed Indian corps. The fleet consisted of 1 protected cruiser, an old ironclad, 13 gunboats, 1 armed steamer, and 1 torpedo boat, besides 2 stationary vessels and 3 in hydrographic service. The fleet was manned by 2,134 officers and men.

The war against the troublesome Acheenese of northern Sumatra, which has disturbed the formerly flourishing finances of the Dutch East Indies for many years and cost the lives of a large number of Dutch soldiers every year, has been brought nearer to a termination by the vigorous tactics of the Dutch commanders. Already in January, 1897, the troops were chasing the insurgent chief Tokoe Oemar, whose residence near Gentool they captured and destroyed. His followers were driven into their mountain fastnesses, but occasionally they resumed the offensive, taking a Dutch fort near Gentool in one of their incursions. After being beaten and losing one of his best forts in a warm engagement near Poeding, Tokoe himself fled to the eastern part of the colony, whither the victors pursued him. In May, Solang, near the frontier of Kloemang, was taken by the Dutch. The chief Panglima Palim, who had erected three fortified positions at Glieng, was surprised by a large Dutch force, and fled after a stubborn resistance, leaving a large quantity of rifles and ammunition in the hands of the Dutch, who killed 63 of the enemy and lost 25 killed and 40 wounded. Following up their victory, they captured two more important forts and occupied Fjot Glie, near Indrapura. In the mountains of this section a vigorous campaign was prosecuted throughout the rest of the season. In a fierce combat fought in July several of the insurgent chiefs were slain. A simultaneous movement was carried out against the rebels that had taken up their quarters in the mountains near Selimoen by several columns of troops that marched out from Kotaradja. A Dutch force was surprised in August by a furious attack of the rebels near Gigin, but the latter were beaten off and finally fled, leaving 84 dead and hundreds of wounded on the field. Later a band of Tokoe Oemar's followers, descending from the mountains, fell upon a Dutch patrol in Lepong, killing several men. Notwithstanding such occasional forays, the entire plain of Acheen, from Ololeh to Selimoen was effectively held by the Dutch. The people, protected by the untiring vigilance of the troops, were becoming gradually accus-

tomed to Dutch administration, and the increasing confidence inspired by the civil authorities enabled the commanders so to extend the organization of their spies that the disaffected could hardly make a move without their being made aware of it. The aggressive campaign in the mountains dealt a severe blow to the war party in Pedir, and a second expedition to be undertaken from the other side was expected to crush out the spirit of resistance in that district. These forward movements, however, entailed fresh sacrifices of life. The women of Holland began an agitation, which was taken up by the press of the country, in favor of appointing a Government commission to study the conditions in Acheen with a view to bringing by any means this apparently interminable war to a conclusion.

In the autumn a disturbance arose among the usually peaceable inhabitants of the island of Lombok. Stirred up by some local grievance, the natives of the village of Sisela murdered a Dutch official. The prison at Paya was seized by marauders, who set the prisoners free. This band was pursued, and 20 were killed by a Dutch patrol. The disturbance spread until the arrival of additional Dutch troops, who occupied Kampong, killing 25 of the insurgent Sasaks.

The long controversy with the English Government over the illegal seizure by the Dutch East Indian authorities of an Australian whaler was referred to the arbitration of the Emperor of Russia, and decided on Feb. 25, 1897, by the award of Prof. de Martins, who held the Dutch Government responsible and fixed the total indemnity to be paid to the officers and crew and the owners of the "Costa Rica Packet" at £11,082, including the costs of arbitration. This sum was paid over on March 3. Capt. Carpenter, who was thrown into prison at Macassar, received £3,150. He had taken possession of a Dutch prauw which he had found floating derelict at sea in 1888, and had appropriated the cargo. The owner, instead of proceeding in English courts for his remedy, if any was due, obtained a warrant from the court at Macassar on which Carpenter was arrested when he touched at Ternate in November, 1891, and his vessel was detained during a part of the whaling season. The Macassar court decided that it had no jurisdiction in the case, and released the whaling captain after a month's detention, but his ship remained in port till the following April, and was then sold at a reduced price, while he and his employers reclaimed substantial damages. Owing to this negligence on their part the damages given were much less than the amount claimed.

NEVADA, a Pacific coast State, admitted to the Union Oct. 31, 1864; area, 110,700 square miles. The population, according to each decennial census since admission, was 42,491 in 1870; 62,266 in 1880; and 45,761 in 1890. Capital, Carson City.

Government.—The following were the State officers during the year: Governor, Reinhold Sadler; Lieutenant Governor, C. H. E. Hardin; Secretary of State, Eugene Howell; Treasurer, W. J. Westerfield; Comptroller, C. A. La Grave; Superintendent of Public Instruction, H. C. Cutting; Attorney-General, James R. Judge; Adjutant General, C. H. Galusha—all of the Silver party, except Galusha, Republican; Chief Justice of the Supreme Court, C. H. Belknap; Associate Justices, M. S. Bonfield, W. A. Massey; Clerk, Eugene Howell—all of the Silver party.

Finances.—The Governor's message gave the following information on financial conditions: The general school fund amounted to \$1,240,208.33. The Orphans' Home had \$4.56 of the 1896 appropriation still on hand, and the State Prison had used but \$57,779.22 of its \$63,000. The Board of

Health had cost \$1,000, the asylum \$68,663.38, and the weather service \$1,200 a year. There was no floating debts except \$10,462.50 for rent of armories and \$531 for railroad transportation of militia.

The Government appropriation for the Carson mint was \$19,300.

Education.—The school population is 9,089. The securities in the State school fund are: Irredeemable State bonds, \$380,000; Nevada State bonds, \$275,364.20; United States bonds, \$640,000; total, \$1,429,969.04, coin and bonds.

The State University, at Reno, has about 300 students. Its financial condition at the close of the year was unsatisfactory, described as follows: "There are in the State University fund \$50,000 in United States bonds and \$74,000 in State bonds. This fund is irreducible and, as in the case of the State school fund, the interest only can be applied to the payment of the university expenses. This interest is not sufficient to defray the expenses of the university. The Legislature at the last session appropriated for the support of the university and laboratory \$32,500, payable out of the contingent university fund and the interest-account ninety-thousand-acre grant, \$16,250 from each. Unfortunately the money is not in these funds, and as the university must be provided for other means have to be resorted to. The State Board of Education decided to dispose of \$10,000 of United States bonds and have the State substitute its own bonds for the amount, the money to be applied in paying contingent expenses of the university. While the State is willing to loan its credit to the university, the trouble is the borrowing power of the State, under the constitutional limit, is nearly exhausted." The National Government contributes \$25,000 a year to the support of the university. The salaries amount to about \$38,000.

The State Prison.—There were in the prison in September 67 men and 1 woman. During the past two years substantial improvements have been made in the buildings—a new hospital, new baths, and a new engine house with modern machinery.

Live Stock.—On account of the heavy shipments to Eastern markets in 1896, the number of cattle on the ranges in the early part of the year was far below the average, which is about 50,000.

Wild Horses.—The act passed by the last Legislature authorizing the killing of wild horses throughout the State has developed a profitable industry, and camps of hunters have been established at all of the springs and water courses where the bands resort. The hides sell for \$2 each, and the hair of the manes and tails bring 15 cents a pound. The first hunters to take the field after the law went into effect realized handsomely, frequently shooting from 6 to 10 a day; but since the slaughter began the animals have come to view man as a relentless foe, and as soon as one is sighted or scented by a band they bound away over hill, plain, and cañon at a speed that defies pursuit. The vast plains, hill slopes, and valleys in Humboldt County west of Humboldt river, extending to the Black Rock and Pueblo mountain ranges on the Oregon and Idaho borders, are a favorite grazing region for wild horses, bands numbering thousands roaming over them, keeping in fine condition, subsisting on bunch grass, which, when they are exterminated, will feed countless herds of cattle prevented heretofore from ranging in the same locality, for the wild horses attack fiercely any cattle that venture within their boundaries.

Mob Law.—A murderer was taken from the sheriff at Genoa in December by a mob of two dozen men, hanged to a tree, and shot. Efforts were made at the close of the year to bring the lynchers to justice.

Mining.—The statistics of the production of precious metals in 1896, as sent from Washington in June, credit Nevada with \$2,468,300 value in gold and \$1,355,895 in silver. Of the prospects of the State the Salt Lake "Tribune" says: "With the rest, Nevada is on the up grade. One gold mine, the De Lamar, last year gave up 90,000 tons of ore, which yielded \$2,000,000. This was far in the southeast portion of the State, 150 miles from railroads, while 100 miles north of the railroad extensive works have begun on the copper and placer gold of that region, and the old camp of Tuscarora is in evidence as much as it was twenty years ago."

It was announced in May that a rich strike had been uncovered in the Buckeye mines in the Pine Nut group. The want of water is a serious drawback to work in this region, and plans have been made for an aqueduct from Alpine County, which will cost about \$1,000,000.

The new camp of Gold Creek, 60 miles from Elko, has attracted attention this year, and the gold and copper camp of Salmon, 60 miles north of Wells. In August was announced a valuable discovery in the Sierra Nevada mine. A crosscut run into the ledge showed 4 feet of ore which is reported to assay \$60 a ton in gold, and 5 feet of ore assaying about \$25 a ton.

Eastern capitalists have bonded the immense copper mines a short distance from Yerrington, 50 miles from Carson, and are to build a mill and smelters at once. The opening up of the copper industry in Nevada promises to extend further.

A new process for reducing ore tailings, by which it is possible to work up to 98 per cent. of the assay value of ore tailings of any grade, is in use near Dayton.

Legislative Session.—The Legislature convened Jan. 19 and adjourned March 15. Alexander McCone was President *pro tempore* of the Senate, and Lemuel Allen Speaker of the House.

The term of United States Senator John P. Jones expired, and he was made the candidate of the Silver party for re-election, George S. Nixon having been also a candidate before the caucus. William McMillan was the Republican candidate, and received 4 votes out of 45, Mr. Jones receiving 40 and Mr. Fitzgerald 1.

The Legislature passed 116 bills and 7 joint resolutions.

The most noted act of the session, giving rise to comment almost exclusively unfavorable all over the country, was the act "to restrict and license glove contests or exhibitions between man and man," thus legalizing prize fighting and allowing of the notorious fight which took place at Carson, March 17. The license for such an exhibition was placed at \$1,000. Later in the session a resolution was passed to submit to the people at the next general election the question whether this act shall be repealed.

The tax for State purposes was raised from 90 cents on the \$100 to 92, and an act was passed providing for the payment of taxes in semiannual installments, after Jan. 1, 1898. This bill had been passed at the preceding session and vetoed by Gov. Jones, and was now passed over the veto.

Militia affairs are placed under a new law, making it the duty of counties where military arms and the like are received for the use of the National Guard, to provide armories, at a rate not exceeding \$50 a month for each company, except that where guns requiring horses are used not more than \$5 additional may be allowed for each piece. In order to receive public money for support, a company must meet for drill and instruction not less than one hour at least twice each month, and practice at

rifle firing twice each month during five months of the year.

A new probate law of many sections was passed.

A resolution for a constitutional amendment restricting regular legislative sessions forty days and extraordinary sessions to ten days was passed.

An act "relating to the location, relocation, manner of recording lode and placer claims, mill sites, tunnel rights, amount of work necessary to hold possession of mining claims and the rights of co-owners therein," makes radical changes in the mining law in these respects. It was provided that the State superintendent should make a pamphlet compilation of the mining laws for publication.

The appropriations in the general bill aggregated \$304,680. This included—besides salaries of State officers—\$200 for expenses of teachers' institutes, \$33,500 University Book fund, \$6,120 armory rents, \$700 indexing State reports, \$73,500 for the State Insane Asylum, \$30,400 for the State Orphans' Home, \$59,500 for the State Prison, and \$4,000 for the education of the deaf, dumb, and blind.

An appropriation of \$12,000 was made for the building and equipment of a mechanical building at the university at Reno, and for completing the gymnasium; and another of \$11,746 to complete payment for the dormitories there. In returning this bill with his signature, the Governor charged extravagance in the furnishing of the building and the management of the University, and suggested the appointment of an investigating committee. A joint resolution for a committee to investigate State expenditures was passed.

Among other acts were:

Abolishing the office of Fish Commissioner from Sept. 1, 1897, and for protecting fish—the close season in lakes to be from Jan. 1 to June 1; in rivers from Oct. 1 to April 1.

Empowering the State Board of Education to grant life diplomas to residents of Nevada who have taught ten years.

Licensing the sale of cigarettes and cigarette papers—quarterly license, \$15.

Authorizing farmers and others to form mutual insurance companies. Providing for a fire insurance fund in the State treasury.

Authorizing the formation of corporations for the transaction of business as sureties on bonds.

Appropriating \$32,000 for a legislative fund.

Providing safeguards for school elections.

Amending the act for the preservation of wild game, beaver, and otter.

To prevent adulteration of candy.

Providing for payment of the militia.

To provide for free public libraries.

To provide for better preservation of mining records.

Authorizing the destruction of all wild or unbranded horses, mares, or colts over the age of six months running at large on public range lands.

A resolution for an amendment to allow woman suffrage passed the Senate by a vote of 9 to 5, but was lost in the Assembly by a vote of 15 to 15.

Vetoes were sustained on a bill giving mine-owners greater protection from ore thieves, and on one concerning the marking of mining claims.

NEW BRUNSWICK. Politics and Government.—The second session of the present Legislature was opened Feb. 4, 1897, with a speech from the throne by the Lieutenant Governor, the Hon. A. R. McLellan, of which the following are the significant portions:

"I am happy to be able to congratulate you upon the fairly prosperous condition of the business of the province. Providence has given to our farmers average crops, and wherever farming has been pursued upon correct principles results have been sat-

isfactory. Throughout the province there is a gradual improvement of methods in agriculture. The rapid development of the dairy industry in the province within the past few years and the many recent changes and improvements in agricultural methods has led my Government to consider carefully the state of laws with regard to agriculture with a view of bringing them up more fully to the requirements of the times.

"Our lumbermen have also had a prosperous year, and are looking to the future more hopefully than for some time past. The policy of my Government in conserving, as far as possible, the forest lands of the province has had an excellent effect upon the lumber business.

"While our province has during the past year been blessed with an abundant harvest and a large measure of general prosperity, a serious calamity has befallen our fellow-subjects in India, where a famine of almost unprecedented severity has desolated the wide extent of territory and brought suffering and death to many thousands. The bond which unites all dependencies of the Crown is happily such that disaster can befall no part of the empire, however remote, without exciting a responsive sympathy throughout the whole. Much has been done to alleviate the acute distress and suffering which mark the progress of this great disaster, but unhappily much yet remains to be done. I am satisfied that it is only necessary for me to point out to the people of this province how urgent is the call upon them from our suffering fellow-subjects in India to insure a ready and benevolent response.

"The subject of cold storage has occupied much of the attention of my Government during recess, and they have tried to arrange for the construction of such depots as will meet the requirements of the various sections of the province. Thus far their efforts have not met with the desired success.

"At the last session of the Legislature an appropriation was made to provide for the importation of cattle, sheep, and swine. My Government, after giving the matter careful consideration, did not for various reasons deem it expedient to make an importation of cattle during the then current year. A number of pure-bred swine were imported and distributed in various sections of the province, and I am pleased to inform you that this has met with general approval."

The Legislature adjourned on March 13. The following are the more important measures that were passed:

To incorporate the St. John Railway Terminal Company.

To provide for redemption of certain provincial debentures.

To amend the public-health act.

In amendment of the elections act of 1889.

To revise the act incorporating the Woodstock and Centerville Railway Company.

To amend and consolidate the acts relating to arrest, imprisonment, and examination of debtors.

To establish almshouses in the various municipalities.

In amendment of the succession duty act.

In addition to and in amendment of the liquor license act.

Government Changes.—The retirement of the Hon. James Mitchell, from failing health, took place in October, 1896, and he was succeeded in the premiership by the Hon. H. R. Emerson. Mr. Mitchell died soon afterward, amid general regret. Mr. Emerson retained his old post of Commissioner of Public Works, and the rest of the new ministry was unchanged. Hon. A. S. White became Attorney-General, Hon. L. J. Tweedie Provincial Secretary, Hon. A. T. Dunn Surveyor General, Hon. C. H. La-

billois Commissioner of Agriculture, Hon. L. P. Ferris minister without portfolio.

Finances.—Mr. Tweedie's budget speech was delivered Feb. 17, 1897. In the course of it he said:

"There have been five issues of bonds altogether. In November the Government sold \$40,000 of 4-per-cent. bonds at a rate of 105·96½. The bonds were issued for the construction of permanent bridges under 59th Victoria, chap. iii. They had forty years to run, and had no provision for optional redemption before maturity. A sinking fund was provided. In December \$7,000 of redemption bonds were sold at 105·52½, with twenty years to run and no optional redemption. In the same month there had been sold \$35,000 of Gulf Shore Railway bonds at 103·52½, with forty years to run, optional redemption after ten years. On Jan. 1, \$2,500 of bonds in account of deep-water wharves and grain elevators, St. John, had been sold, with forty years to run, and no option of redemption, at 106·06. On Feb. 8 there were sold on Parliament-bridge account bonds to the amount of \$25,000, under the same conditions as the issue of November, at 106·06½. Turning to the estimated expenditures for 1896 it would be seen that while the estimate for administration of justice was \$14,400, the actual outlay was \$12,705.14. Upon agriculture the estimate was \$24,150, while the actual expenditure was \$21,888.46. This was owing to the fact that only \$2,000 of bonds for importation of horses were retired instead of \$4,000, and the sinking fund was now all paid up. These bonds would come due in July, and the money was now in the People's Bank to pay them at maturity. The expenditure was also increased by the fact that no importation of cattle had been made last year as was intended. For the Boys' Industrial Home \$1,500 had been paid instead of the \$500 estimated. This institution was well worthy of support, and upon the representation of the trustees that the full amount authorized by law was needed, it was paid by the Government. Contingencies had been estimated at \$13,000, while the actual outlay was \$14,041. This amount varied from year to year somewhat, and was difficult to estimate. It included all the contingencies of the departments and all the expenses of the Legislature except salaries. The estimate of \$188,914.48 upon education had been slightly exceeded, the actual figures being \$191,638.21. The excess over the estimate had been applied to common schools. The expense for elections had been placed at \$6,000; the amount paid was \$5,844.87. The estimate for executive government was \$28,420, which had been exceeded by \$720.08. That increase was fully accounted for by increased salaries paid in the Board of Works. The work of that department was much greater than it had been formerly.

"For fisheries protection \$1,200 had been asked, of which \$939.66 was expended. The allowance under the free-grants act, \$2,000, had been exceeded by \$48.50. For game protection \$2,000 had been voted, of which \$1,971.43 was expended. Interest on the bonded debt had been estimated at \$117,000, but \$119,375.97 had been expended. The cost of the Legislature was \$20,741.79, which was \$753.21 less than the amount voted by the House. The expenditure upon the lunatic asylum of \$41,872 was slightly within the estimate. Upon mining \$500 was estimated, but only \$200 was expended. Grants of \$125 had been made to the Natural History Society and New Brunswick Historical Society. Public health had cost \$1,337.09, which was \$762.91 less than estimated, and \$4,400 had been expended upon public hospitals. The grant for public printing was \$11,000, and the amount actually expended on this service was \$11,433.36. Public works had cost \$203,150 as compared with the vote of \$195,150. Re-

funds, Crown lands, came to \$179, while the amount voted was \$200. For relief of the sufferers by the Chatham fire \$500 had been paid. For surveys and railway inspection the expenditure was \$1,879.51, while the estimate was \$2,000. Stumpage collections had cost \$9,250 as compared with the estimate of \$9,000. Unforeseen expenses had reached a total of \$1,465.55, or \$534.45 less than expected, making in all a total expenditure of \$701,462.03, while the estimate was \$699,879."

Mr. Tweedie said the actual normal revenue of the province last year was \$698,437.96, leaving a deficiency of \$3,015.07.

Education.—The annual report for 1896 of the Chief Superintendent of Education was voluminous. It shows that the total number of day schools was 1,724, with 57,612 pupils five to ten years of age; of Sunday schools, 1,020, with 32,707 pupils five to sixteen years of age.

The average yearly salaries were as follow: Grammar-school teachers, \$384.61; superior-school teachers, \$563.84; first class, male, \$504.59; second class, male, \$296.09; third class, male, \$227.77; first class, female, \$314.31; second class, female, \$235.48; third class, female, \$188.97.

The expenditure on schools for the year, not including district assessment for school buildings, apparatus, fuel, etc., was: Provincial grants, \$158,135.23; schoolhouse grants, \$955; county fund, \$91,527.88; district assessment (approximate), \$211,114.77; total, \$461,732.88.

Agriculture.—In his annual report, issued in December, 1897, Mr. Chipman, Secretary for Agriculture, gave the following estimate of the production for the year in tons: Hay, 756,384; oats, 1,715,826; wheat, 166,189; barley, 227,530; rye, 23,500; buckwheat, 203,896; beans, 25,193; potatoes, 4,352,898; turnips, etc., 1,491,784.

NEWFOUNDLAND. Legislation.—The Governor is Sir Herbert H. Murray, K. C. B. The legislation of the session of 1897 was not important, being mainly routine. The supply and revenue acts provided for the expenses of the civil government of the colony and for the continuance of the usual duties on imports. A grant of \$125,000 was made for construction and repairing of roads and bridges.

The railway act provided for the construction of three branch lines from the present trunk line, to Clarke's Beach, to Carbonear, and to Burnt Bay; also for fencing certain lines and laying heavier rails. The payment for these is to be in debenture bonds bearing interest at 3½ per cent. and maturing at the end of fifty years.

The act regarding the French treaties' act continues this act and the *modus vivendi* till Dec. 31, 1898.

The act amending the education law commemorates her Majesty's jubilee, 1897, by appropriating \$600 annually, for three scholarships.

An act respecting the administration of local affairs provides for the establishment of local boards to take charge of roads, etc.

An act to amend the deer-preservation act of 1896 provides that the close season for deer shall be from Feb. 1 to July 15, and from Oct. 7 to Oct. 20 in each year; and that no person is allowed to sell any part of a carcass from Feb. 20 till July 15.

The act for the preservation of beavers makes a close season for beavers from April 1, 1897, to Oct. 1, 1900; breaches of the law to be visited by penalties not exceeding \$200, or imprisonment for three months.

The act to amend the law of evidence provides that an entry in a banker's book shall in legal proceedings be received as *prima facie* evidence of such entry and of matters therein recorded.

The act respecting the summary jurisdiction of magistrates and justices of the peace provides that any person convicted of an offense for which a fine or penalty is provided who is unable to pay the fine may be imprisoned for a term proportioned to the amount of the fine—seven days for \$2.50; fourteen days for \$5, etc. Any person convicted of being drunk, or of carnally knowing any girl under sixteen years of age, may be fined and imprisoned, or imprisoned for six months with hard labor.

The usual money-appropriation bills for the various services of Government closed the legislation of the session.

The act to amend chapter cxxiv of the Consolidated Statutes (second series), entitled "of the coast fisheries," and an "Act to amend the election act of 1889 and the acts in amendment thereof," were reserved for the consideration of her Majesty's Government, and were not assented to by the Governor. The last-named act was finally disallowed by the Imperial Government.

Fisheries.—The seal fishery of 1897 was one of the poorest on record, the total catch of seals having been only 126,628, and their weight 2,737 tons. The average number of seals taken annually of late years is about 300,000. There were 20 steamers engaged in this industry, and their crews numbered 4,838 in 1897.

On the Labrador coast and the northeastern bays the cod fishery in 1897 was a failure, but elsewhere it was fairly good. The total catch was about 1,000,000 quintals, being 300,000 below an average. Only 48 vessels engaged in the bank fishery, the crews numbering 616. Their catch reached 54,802 quintals. Along with this falling off came a very serious decline in the price of dried codfish, amounting to \$1.50 a quintal. This was caused largely by the glutted condition of European markets and the poverty of the people in those fish-consuming countries. The consequences were disastrous to the fishermen of Newfoundland, of whom many are in a very impoverished condition and suffer privations during the long winter. Prices of fish are now improving. The French are the great rivals of Newfoundland fishermen in European markets, and, being sustained by a large bounty, they are able in many places to undersell the Newfoundland exporters.

The lobster fishery of 1897 was the best on record. The quantity taken was 60,000 cases, each case containing 48 pounds. The value was about \$600,000. The price of lobsters is steadily advancing in all countries, owing to increasing scarcity.

The herring fishery of 1897 was excellent. Not fewer than 60,000 barrels of fresh herring were exported in a frozen condition from Placentia Bay alone to the United States. The export of pickled herring was about 80,000 barrels. Were this industry carried on in a skillful and intelligent manner, and herring cured and packed in the country instead of being sold fresh to others, at \$1 a barrel, it would be worth \$3,000,000 annually.

The salmon fishery was a disastrous failure. The once prolific salmon rivers were neglected and ruined by "barring" and overfishing. They are now thoroughly protected and placed under the guardianship of the Department of Fisheries. So depleted had they become that years must elapse before they are restored to their former condition.

In the artificial propagation of lobsters Newfoundland leads the world. The average number of young lobsters hatched and planted annually in the bays is 450,000,000. This is done by means of floating incubators, the invention of A. Nielsen, Superintendent of Fisheries. Twenty-eight men are employed in working these incubators, at an annual cost of \$1,650. The work had been going on for

seven years, and the good results are more apparent every year. There are 25 stations along the shores of the large bays where this artificial propagation is carried on.

At the Dildo cod hatchery, Trinity Bay, the number of cod fry hatched ranges from 180,000,000 to 225,000,000. In that bay there is already a marked increase in the number of codfish of various ages, giving promise of success for this experiment.

Finances.—The revenue, according to the latest returns, reached \$1,564,457. The value of the imports was \$5,986,571; of the exports, \$6,638,187. The funded public debt at the close of 1896 was \$13,096,945. By judicious retrenchments the annual expenditure of the colony for civil services has been reduced by nearly \$560,000—an amount which will pay the interest on the public debt—while the efficiency of the public service is not impaired by the reduction. The finances of the colony are now in a sound condition, and its credit abroad is excellent. The interest on the public debt is about \$560,000.

The grant for education in 1895-'96 was \$164,888; for the relief of the poor and support of lunatics, \$262,552; for the support and extension of telegraph lines, \$25,325.

Commerce.—In 1895-'96 the colony imported 88,223 tons of coal, value \$190,160; 14,515 barrels of beef, value \$145,150; 732,800 pounds of butter, value \$109,920; 362,923 barrels of flour, value \$1,270,230; 1,338,463 gallons of molasses, value \$334,165; 945,005 pounds of tea, value \$136,919; 2,625,800 pounds of sugar, value \$83,615; tobacco, 284,885 pounds, value \$28,359; wines and spirits, 52,688 gallons, value \$39,125.

On Dec. 31, 1896, the registered shipping was: Sailing vessels, 2,308, of 98,718 tons; 32 steamers, of 5,661 tons.

In 1896 the value of imports was as follows:

From the United Kingdom.....	\$1,875,754
From Canada.....	2,231,641
From the British West Indies.....	286,018
From the United States.....	1,473,721

The value of the exports for the same year was as follows:

To the United Kingdom.....	\$1,726,147
To Canada.....	635,833
To the British West Indies.....	303,314
To the United States.....	487,665
To Spain.....	280,432
To Portugal.....	1,245,344
To Italy.....	314,174
To France.....	18,538
To Brazil.....	1,082,217

Events.—The most important event of the year was the completion of the transinsular railway, 550 miles, from St. John's to Port-au-Basque, at the southeastern extremity of the island. This line passes through the great valleys of the Exploits, Humber, St. George's, and Codroy, and opens up the best agricultural, timber, and mineral lands of the colony, thus rendering possible the development of its resources and the settlement of the interior. The cost of the line was about \$13,000,000. The contractor received \$15,600 a mile for construction in debentures of the colony, bearing interest at 3½ per cent. For operating the line for the first ten years he receives a concession of 5,000 acres for each mile of railway, to be selected along the line in blocks of one mile fronting the railway and eight miles in depth, the Government taking alternate blocks. If the land along the line is swampy or useless, the contractor can select his concessions elsewhere. His total land grant is thus 2,500,000 acres. He has built a fine steamer to ply between Port-au-Basque and Sydney, in Cape Breton. She makes the run in five or six hours. Placentia is at present the port of departure, as the wharves,

stores, etc., at Port-au-Basque are not completed. Newfoundland has now a semiweekly mail, instead of a fortnightly one as formerly. The railway is equipped with the finest palace cars, and hotels will be erected at the most desirable places.

A coal field has been discovered at Grand lake. The good lands along the line will be sold to settlers. When all is complete a passenger will be able to leave St. John's and in fifty hours arrive at Montreal.

Early in 1898 the contractor who built this line entered into a contract with the Government to operate all the railways of the colony which have been consolidated under his management for fifty years. He has also purchased the dry dock at St. John's for \$325,000 and contracted to work it on a large scale; also he is to build eight steamers for local service on the bays. He has leased the coal areas, and undertakes to work them and pay a royalty on the output. He is to complete and operate three short branch lines of railway. At the expiration of fifty years the reversion of the railway will belong to him, and for this he pays to the colony now \$1,000,000.

The general election was held Oct. 28. The result was, that the political party, led by Sir William Whiteway, who had held the reins of power for eight years, was defeated by a very large majority, and Sir James Winter became Premier, his principal colleagues being the Hon. A. B. Morine, Receiver General, and the Hon. A. Robinson, Colonial Secretary.

The Queen's jubilee day in 1897 was observed with fervid loyalty throughout the island. In the capital an immense procession marched to the summit of Signal Hill, overlooking the harbor and commanding a view of the Atlantic in order to witness the laying of the foundation stone of a tower to be erected in memory of John Cabot, the discoverer of the island in 1499. This memorial tower will be used as a signal station and meteorological observatory. On the same day was laid, as a memorial of the Queen's jubilee, the foundation stone of a new wing to the Public Hospital, to be called the Victoria Wing, and to be set apart for the exclusive use of women and children. The funds were raised by public subscription.

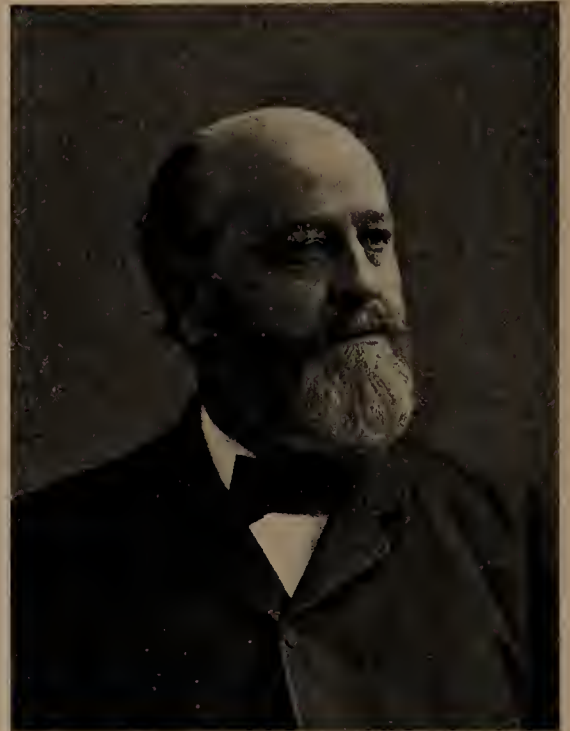
NEW HAMPSHIRE, a New England State, one of the original thirteen, ratified the Constitution June 21, 1788; area, 9,305 square miles. The population, according to each decennial census, was 141,885 in 1790; 183,858 in 1800; 214,460 in 1810; 244,022 in 1820; 269,328 in 1830; 284,574 in 1840; 317,916 in 1850; 326,073 in 1860; 318,300 in 1870; 346,991 in 1880; and 376,530 in 1890. Capital, Concord.

Government.—The following were the State officers during the year: Governor, George A. Ramsdell; Secretary of State, Ezra S. Stearns; Treasurer, Solon A. Carter; Attorney-General, Edwin J. Eastman; Adjutant General, Augustus D. Ayling—all Republicans; Insurance Commissioner, John C. Linehan; Bank Commissioners, John Hatch, Alpheus W. Baker, and Thomas J. Walker; Superintendent of Public Instruction, Frederic Gowing; Secretary of the Board of Agriculture, N. J. Bachelder; Labor Commissioner, Julian F. Trask; State Printer, Arthur E. Clarke; Chief Justice of the Supreme Court, Alonzo P. Carpenter, Republican; Associate Justices, William M. Chase, Democrat, Frank N. Parsons, Republican, Robert G. Pike, Republican, R. M. Wallace, Republican, Isaac N. Blodgett, Democrat, and Lewis W. Clark, Democrat; Clerk, A. J. Shurtleff, Republican.

Finances.—The State is remarkable this year for having a large surplus to apply upon its debt. The Treasurer's report for the year ending June 1

shows that the debt has been reduced about \$160,000. The net State debt is \$1,667,767.54, more than \$1,000,000 having been paid off since 1892 of the 6-per-cent. bonds authorized by the Legislature of 1871.

The State tax for the fiscal year ending June 1, 1898, is \$500,000. After that the reduction author-



GEORGE A. RAMSDOLL, GOVERNOR OF NEW HAMPSHIRE.

ized by the last Legislature goes into effect, and it will be \$425,000 a year. The valuations for taxation in 1897 were: Valuation by inventories, \$203,507,734; savings-bank deposits taxable, \$50,859,365; insurance capital, \$1,375,000; railroads, \$21,855,000; telegraphs, \$203,100; telephones, \$213,600.

Education.—The College of Agriculture and Mechanic Arts, at Durham, held its twenty-seventh commencement exercises June 9, and graduated a class of 17, the largest in its history. The summer school held a three weeks' session in August.

At Dartmouth commencement, June 30, degrees were conferred on 55 candidates for the degree of bachelor of arts, 15 for that of bachelor of letters, and 19 for that of bachelor of science. The college plant will be increased within the next four years by four new buildings, the James B. Richardson dormitory, the Charles T. Wilder physical laboratory, a chemical laboratory and heating plant in connection, and a new alumni memorial hall.

Industrial School.—The report of the State Industrial School, at Manchester, rendered in May, shows that the number in the school Sept. 30, 1896, was 135. The annual appropriation is \$6,000. The receipts for the year were \$23,605.04, and the payments \$21,725.18.

Banks.—The annual report of the Bank Commissioners is summarized as follows: Since the last report made by the commissioners two new savings banks have been organized and opened for business, one at Laconia and one at Keene. The number of savings banks has thus been increased to 77, of which 17 are in liquidation, under the management of their own officers, and 9 by assignees appointed by the court. There are 14 State banks and trust companies, 9 of which have savings departments; and 18 building and loan associations. One build-

ing and loan association, the Granite State Provident, is in the hands of an assignee.

Of the 14 trust companies, the New Hampshire Trust Company, of Manchester, and the Security Trust Company, of Nashua, are in the hands of assignees, and the Bank of New England is liquidating its saving department under the management of its own directors.

The condition of the savings banks June 30, 1897, is shown by the following statement of liabilities and premiums, the savings departments of the trust companies not being included:

ITEMS.	1896.	1897.
Amount due depositors....	\$51,001,621 15	\$49,493,055 94
Guarantee fund.....	2,909,217 84	2,892,059 21
Interest.....	1,207,835 89	1,020,884 49
Miscellaneous indebtedness	51,061 46	89,126 76
Total.....	\$55,169,736 34	\$53,495,126 40
Premium.....	1,732,700 14	1,963,019 51
Total.....	\$56,902,436 48	\$55,458,145 91

The number of local building and loan associations has not been increased during the year. Their total assets June 30, 1897, were \$1,962,058.53, an increase since Oct. 31, 1896, of \$177,943.79.

The assignee of the Granite State Provident Association won a suit in April which was brought in Colorado, and by which it was sought to have the assets of the institution in that State retained for distribution among the shareholders there. The decision is that all the assets must be turned into the general fund to be divided among all the creditors. Similar suits have been brought in other States.

The suit of a shareholder in the wrecked Dover National Bank to compel the books to be opened for inspection of the attorneys of the shareholder was won in November.

Dr. J. C. Moore, whose numerous trials have been mentioned in former issues of the "Annual Cyclopædia," was sentenced in April to four years in the State Prison, having been convicted of a fraudulent issue of 50 shares of stock of the Union Publishing Company, which was issued to himself and deposited in the Laconia National Bank.

Insurance.—The summary of the business of fire insurance companies for 1896 gives the following: Thirty-four New Hampshire companies—risks written, \$43,593,581.17; premiums received, \$571,235.44; losses incurred, \$269,381.94. Fifty-nine foreign fire and marine insurance companies—risks written, \$48,658,561.62; premiums received, \$669,116.04; losses incurred, \$318,104.65.

The commissioner gives a comparison of the ratio of losses paid to premiums in New Hampshire and the other New England and the Middle States. New Hampshire's ratio is the lowest, 43.9; Vermont's is the highest, 71.8; although New Hampshire is the only one having a valued policy law.

Railroads.—After an inspection of the railroads in September, the commissioners reported that the freshets wrought much more serious damage throughout New Hampshire than was generally understood to be the case. One hundred thousand dollars would hardly cover the losses.

A petition to the commissioners for leave to extend the Pemigewasset Valley Railroad from its present terminus at North Woodstock to a point near the Mount Liberty house was opposed by the Forestry Commission, on the ground that the proposed road would have to depend for its earning almost wholly upon the freight from lumber cut in the Pemigewasset valley; that the topography of that region and its relation to the watershed of the Merrimack river system rendered the removal of

the forest growth there a matter of vital importance to many interests far removed from the scene of the immediate cutting; and that therefore the proposed extension was not for the public good.

An important question was decided by the Supreme Court in March, by which the demurrer of the Manchester and Lawrence Railroad was overruled, so that the suit of the State against the road may be now tried upon its merits. The State seeks to recover \$750,000 from the Manchester and Lawrence Railroad, this being the sum which that road received from the Concord and Montreal under the award of the referees to whom the case in equity of the Manchester and Lawrence against the Concord Railroad had been referred.

Under the charter of the Manchester and Lawrence, and as provided by various enactments of the Legislature prior to 1844, and covering the period during which the major railroad systems of the State were constructed, railroad corporations are required to pay into the State treasury all sums received by them in excess of 10 per cent. per annum of net income; and as the Manchester and Lawrence had maintained a 10-per-cent. dividend up to the time it received its \$750,000, judgment from the Concord and Montreal, Gov. Busiel attempted to establish a lien in behalf of the State upon that sum of money.

Industries.—The report of the State Board of Agriculture for two years ending Nov. 1, 1896, shows that the agriculture of New Hampshire is represented by 29,151 farms, containing 1,727,387 improved acres, valued at \$66,162,160. The number of persons engaged in it is 42,670, and the total value of farm products about \$13,000,000 annually.

The Board of Cattle Commissioners reported that in the two years 517 herds of cattle were inspected and 562 animals were killed. The State pays owners half the health value.

The biennial report of the Bureau of Labor shows that there are 64 establishments engaged in the manufacture of shoes, paying for wages \$3,469,918 annually, giving employment to 8,069 people. The cost of material used is \$6,749,322; annual product, \$11,986,008, an increase during the decade of 7.81 per cent.; in number of establishments of employees, 45.04 per cent.; in amount in paid wages, 43.27 per cent.; in material used, 29.44 per cent.; and in value of product, 29.67 per cent.

An estimate of the stock of logs ready to be manufactured into lumber and pulp April 1 in Coos and Grafton Counties shows a total of 240,000,000 feet.

Legislative Session.—The one hundred and first session of the General Court began Jan. 6 and ended March 26, with 24 Senators and 357 Representatives. Chester B. Jordan was President of the Senate and James F. Briggs Speaker of the House.

George A. Ramsdell was inaugurated, Jan. 7, the fifty-fourth Governor of the State and the forty-fifth person to occupy the office. The following were declared to have been elected councilors: Joseph O. Hobbs, Allen N. Clapp, George W. Cummings, Walter S. Davis, Charles F. Piper.

A successor to United States Senator Jacob H. Gallinger was to be elected. Ex-Gov. Busiel was a candidate, but withdrew his name before the caucus met, and Senator Gallinger was unanimously chosen by the Republicans, and was elected to succeed himself.

The Republican candidates for State officers—Ezra S. Stearns for Secretary of State, Solon A. Carter for Treasurer, and Arthur E. Clarke for State Printer—were also elected.

In all, 509 measures were introduced, 142 bills and 45 joint resolutions were passed, and only 1 was vetoed.

Many bills were introduced having for their object the improvement of the highways.

An act to go into effect Sept. 1 provides for the appointment of three separate State boards of medical examiners, to be selected by the Governor and Council from lists furnished by the New Hampshire Medical Society, the New Hampshire Homœopathic Medical Society, and the New Hampshire Eclectic Society. Candidates for license are to be examined by these boards. Among those to whom the law does not apply are physicians and surgeons in Government service, those called from other States for consultation or to attend regular patients, and clairvoyants and persons practicing hypnotism, magnetic healing, mind cure, massage, Christian Science, so called, or any other method of healing, if no drugs are employed or surgical operations are performed.

The statutes relating to the manner of conducting caucuses and elections were so amended as to throw greater safeguards around the exercise of the suffrage.

An act to provide for the education and maintenance of dependent children forbids the keeping of such children between three and fifteen years of age at county almshouses for more than sixty days, unless they are physically or mentally incapacitated for education, or are under sentence for crime; county commissioners are to find suitable homes for them or give them into the care of the State Board of Charities to be so provided for at the expense of the counties to which they are chargeable.

It is made the duty of the Board of Charities to inspect all State and county charitable or correctional institutions, except the State Prison and the asylum, for instance, at Concord, and report to the Governor and Council and Legislature biennially the result of their inspection.

The law in reference to the capital per mile of railroads organized under the general law was so amended that the capital stock of a corporation may not be less than \$5,000 for each mile if the gauge is to be three feet or less and \$10,000 when the gauge is to be more than three feet. It shall be divided into shares of \$100 each.

It is made the duty of boards of health to inspect the sources from which ice is taken for domestic use in cities and towns, and to forbid the sale of such as may be taken from unclean sources.

Days of grace were abolished, except where there is an express stipulation for them.

It was enacted that no policy of life or endowment insurance, issued upon the industrial plan, shall become forfeit or void for nonpayment of premium after premiums have been paid thereon for the term of two consecutive years. Every such policy shall have a surrender value after the payment of the premiums for two full years. On policies of prudential or industrial insurance on which the weekly premiums are not more than fifty cents each, the surrender value shall be payable in cash. When the weekly premium is more than fifty cents per week, a paid-up policy may be issued.

Itinerant venders wishing to do business in the State are to deposit \$500 with the Secretary of State as a special deposit, and pay \$25 as a State license fee, besides a local license tax amounting to 2 per cent. of the value of the goods to be sold, which may not be advertised until after the licenses have been paid. The special deposit is to be returned after the expiration or surrender of the State license, except so much as may be required to satisfy just such claims against it.

Another act relating to hawkers requires them to take out licenses from the Secretary of State, \$1 for each city and town where the applicant desires to

sell, and also to pay in each city or town a tax proportioned to its size; but any soldier or sailor disabled in the war for the suppression of the rebellion, or by sickness or disability contracted therein, or since his discharge from the service, shall be exempt from paying license fees.

The issuing of railroad passes was made legal.

Bills to limit the use and prevent the sale of cigarettes were defeated; but the House voted to memorialize Congress to place them in the same category with spirituous liquors so far as interstate commerce is concerned.

The State tax was reduced from \$500,000 a year to \$425,000 for each of the ensuing two years.

The special appropriations amounted to \$74,000 less than usual. By a new rule adopted by the previous Legislature, a committee on appropriations received all bills reported from other committees which carried appropriations, so that this committee could keep track of all such and know what amount of expenditure was to be authorized. Among the special appropriations were \$5,000 to Dartmouth College for each of the ensuing two years, and \$2,500 each year to the College of Agriculture and the Mechanic Arts, besides \$3,105 for purchase of land; also \$20,000 to the State Soldiers' Home for the two years, \$2,500 for repairs at the Industrial School, and \$8,000 for improvements at the State camp ground.

Among other measures passed were:

Providing for the appointment of boards of health in the several towns.

Establishing the city of Berlin.

Regulating the use of bicycles.

Raising the age of consent from thirteen to sixteen years.

To promote the planting of nut, shade, and ornamental trees.

Protecting moose, caribou, and deer, and providing for the disposition of fish and game captured or taken from persons who have illegally taken them.

Repealing the law providing for a bounty on hawks.

For the better protection of trout.

Prohibiting the killing of beaver until Jan. 1, 1909.

Authorizing the Fish and Game Commissioners to close ponds and lakes against fishing through the ice.

All bills for important changes in the liquor laws were defeated, as were many applications for special charters for electric roads.

NEW JERSEY, a Middle Atlantic State, one of the original thirteen, ratified the Constitution Dec. 18, 1787. Area, 7,815 square miles. The population, according to each decennial census, was 184,139 in 1790; 211,149 in 1800; 245,562 in 1810; 277,426 in 1820; 320,823 in 1830; 373,306 in 1840; 489,555 in 1850; 672,035 in 1860; 906,096 in 1870; 1,131,116 in 1880; and 1,444,933 in 1890; by the State census of 1895, 1,672,942. Capital, Trenton.

Government.—The following were the State officers: Governor, John W. Griggs, Republican; Secretary of State, Henry C. Kelsey, Democrat, until March, then George Wurtz, Republican; Treasurer, George B. Swain, Republican; Comptroller, William S. Hancock, Republican; Attorney-General, John P. Stockton, Democrat, until March, then Samuel H. Grey, Republican; Adjutant General, William S. Stryker, Republican; Superintendent of Public Instruction, Charles J. Baxter, Republican. Chief Justice of the Supreme Court, Mercer Beasley, Democrat, until March, then William J. Magie, Republican. Associate Justices, William J. Magie, Republican, until March, then Gilbert Collins, Republican; David A. Depue, Republican; Jonathan

Dixon, Republican; Bennet Van Syckel, Democrat; Charles G. Garrison, Democrat; Job H. Lippincott, Democrat; William S. Gummere, Republican; George C. Ludlow, Democrat; Clerk, Benjamin F. Lee, Democrat, until March, then William Riker, Republican. Court of Errors and Appeals: Judges, J. W. Bogart, G. Krueger, William L. Dayton, John S. Barkalow, Charles E. Hendrickson, and James H. Nixon. Chancellor, Alexander T. McGill.

Finances.—The expenses of the State and its various boards, departments, and officers are paid out of the State fund. The receipts on account of this fund for the fiscal year ending in 1896 were \$2,138,532.88, among the items of receipt being the following: Tax on railroad corporations, \$1,079,687; tax on miscellaneous corporations, \$707,951; official fees, \$145,321; collateral inheritance tax, \$82,247; State prison receipts, \$45,016; judicial fees, \$31,098; sinking-fund account, \$20,000; dividends, \$18,870; Dairy Commissioner (fines), \$2,551. The total expenditures out of the said fund amounted to \$2,072,651.78, showing a balance of receipts over disbursements of \$65,881.10. There was a decrease in receipts from the preceding year of \$37,398.95. There was also a decrease in disbursements from the preceding year of \$196,388. The following disbursements are included in the amount of expenditures for the year: For State Prison Building Commission, \$100,000; State Reformatory, \$100,000; improvements at Morris Plains Hospital, \$49,544; Camden Armory, \$44,996; revision of statutes, \$18,000; Passaic Valley Sewerage Commission, \$10,000; Trenton battle monument, \$6,600; political and legislative history of New Jersey, \$4,500. The balance of the State fund in bank at the close of the year was \$959,628.98. The following sums were expended for charitable uses during the year: For State Hospital for the Insane, \$189,145.94; for maintenance of lunatics in county asylums, \$137,335.27; maintenance of blind and feeble-minded, \$94,587.02; the Reform School for Boys, \$60,793.21; Normal School, \$31,988.07; industrial education, \$31,864.75; the Reform School for Girls, \$21,458.88; the Home for Disabled Soldiers, \$15,166.66; for the deaf-mutes, \$38,076; total, \$620,415.80. The only direct tax levied upon the people of the State is the school tax, which for the year amounted to \$2,196,240, all of which was collected and paid out to the several school districts. The State paid out during the year to different counties having county asylums the sum of \$137,335.27.

Banks.—In November, 1897, the Comptroller of the Currency gave out the following abstract of the reports of the 102 national banks of the State: Resources: Loans and discounts, \$52,105,939.06; overdrafts, \$48,506.17; United States bonds, \$6,170,200; premiums on United States bonds, \$340,676.54; stocks, securities, etc., \$9,731,173.41; banking houses and fixtures, \$3,168,286.12; real estate and mortgages, \$643,659.27; due from national banks, \$2,350,292.51; due from State banks, \$511,789.51; due from reserve agents, \$11,570,153.89; checks and other cash items, \$853,089.78; exchanges for clearing houses, \$371,755; bills of other national banks, \$335,138; fractional currency, \$44,385.30; gold coin, \$1,777,883.38; gold Treasury certificates, \$255,470; silver dollars, \$111,211; silver Treasury certificates, \$1,014,026; silver fractional coin, \$213,223.62; total specie, \$3,371,814; legal-tender notes, \$2,096,436; total reserve, \$5,468,251; 5-per-cent. redemption, \$248,253.75; due from United States' Treasurer, \$24,790.04; total resources, \$94,001,730.24. Liabilities: Capital stock paid in, \$14,445,000; surplus fund, \$8,235,500; undivided profits, \$4,257,843.15; national bank notes issued, \$5,103,675; less amount on hand, \$90,065.50; amount outstanding, \$5,013,609.50; State bank

notes outstanding, \$5,402; due to other national banks, \$3,620,773.62; due to State banks, \$660,339.39; individual deposits, \$57,172,946.63; United States deposits, \$225,531.92; deposits of United States disbursing officers, \$53,470.53; notes and bills rediscounted, \$24,970; bills payable, \$313,000; liabilities other than State, \$4,000; total liabilities, \$94,001,730.24. Average reserve, 29.69 per cent. For 1895-'96 the number of depositors in the savings banks was 154,334; amount of deposits, \$39,635,535; average due each depositor, \$256.82.

Insurance.—There were reported for 1896 117 companies in the State doing fire insurance exclusively, and 29 companies uniting fire with a marine business. Their total receipts were \$129,233,412, being an increase of \$84,203 over the receipts of 10 less companies in 1895. The net fire premiums received were smaller by \$501,081, the total being \$115,379,232. The net marine and inland premiums received amounted to \$4,827,398, an increase of \$590,605. The receipts from interest, dividends, and miscellaneous sources were \$9,026,728. The receipts for the year exceeded disbursements by \$15,044,079. The total expenditure was \$114,189,334; aggregate of fire losses paid, \$61,641,169; marine and inland losses, \$4,000,795; dividends to stockholders, \$5,226,423; commissions, salaries, taxes, and miscellaneous expenses, \$43,320,947. At the close of the year the risks outstanding aggregated \$17,691,930,337, which was an increase for the year of \$556,684,290. Risks amounting to \$13,775,413,633 were written during the year, for which \$146,951,446 in gross premiums was charged.

The life and miscellaneous insurance companies, other than fire and marine, numbered 131. The fixed premium life companies admitted assets of \$1,230,171,160. The assets of the New Jersey companies showed an increase for the year of \$6,348,084; companies of other States and countries, \$79,723,020. The aggregate of liabilities, excluding capital stock (\$9,675,250), was \$1,055,461,758; the policy reserve amounted to \$1,036,602,786, and was in excess of 98 per cent. of the total liabilities. Unsettled policy claims were reported at \$7,430,240; dividends due policy holders amounted to \$2,345,172, and all other liabilities to \$9,083,560. The aggregate surplus showed an increase for the year of \$14,987,540, the amount being \$174,709,402. The total income of these companies for the year was \$279,621,913; premiums received amounted to \$224,342,583; receipts from interest, dividends, rents, and miscellaneous profits were \$55,279,329. The total disbursements were \$200,729,838. The increase in payment to policy holders over the previous year was \$11,246,050.

The admitted assets of the 21 fidelity and casualty companies aggregated \$23,541,692. Excluding capital stock and surplus, the liabilities amounted to \$10,270,629. The total income for the year was \$16,457,979; total expenditure, \$15,653,253, of which \$6,203,298 was for losses and claims.

Internal Revenue and Distillation.—The National Bureau of Statistics reported that in the ten years ending with 1896 the State's internal-revenue collections grew from \$3,951,675.75 to \$4,111,712.89; that the increase in the production of distilled spirits in the same time was from 498,154 gallons to 614,518 gallons; and the increase in the production of fermented liquors was from 1,640,876 gallons to 2,023,926 gallons.

Manufactures.—Among the principal industries of the State the Bureau of Labor Statistics reported the following: Brick and terra cotta—capital invested, \$2,058,540; value of stock used, \$487,559; value of goods made, \$1,392,222; persons employed, average during year, 1,500; wages paid, \$588,397. Hats—capital invested, \$694,740; value of stock

used, \$802,751; value of goods made, \$1,698,524; persons employed, 1,320; wages paid, \$547,575. Shoes—capital invested, \$393,546; value of stock used, \$529,944; value of goods made, \$1,609,865; persons employed, 1,350; wages paid, \$585,889. Silk goods—capital invested, \$9,330,440; value of stock used, \$7,781,515; value of goods made, \$14,752,857; persons employed, 12,105; wages paid, \$4,672,355. Woolen and worsted goods—capital invested, \$4,246,373; value of stock used, \$3,988,486; value of goods made, \$6,166,845; persons employed, 4,461; wages paid, \$1,319,775.

Education.—The whole number of children of school age in the State in 1896 was reported at 438,969, against 424,959 in 1895, making a total gain of 14,010, against a loss of 14,289 in 1895, and an increase in the State appropriation for the succeeding school year (1897-'98) of \$70,050. The number of children attending private schools was 45,021; number attending no school, 89,201; number between ten and eighteen years of age who are unable to read (including immigrants, feeble-minded, etc.), 1,581; number employed in factories, mines, and stores, 5,650 (a large percentage attending evening schools). The total number of evening schools kept open was 1,520; pupils enrolled, 13,163; average attendance, 5,895; teachers employed, 294; total cost of evening schools, \$56,378. The number of colored children in the State was 12,689.

The following facts appear in a summary of statistics prepared by the Superintendent of Public Instruction: The total enrollment in the public schools was 280,330; in the primary grade, 186,785; in the grammar grade, 81,619; in the high-school grade, 11,926; average number on roll, 201,658; average daily attendance, 175,895; number of teachers, 5,620—males 779, females 4,841; average salary per month paid to male teachers, \$83.03; to females, \$48.13; amount expended for teachers' salaries, \$3,029,777. The principal items of receipts were: From income of State school fund, \$289,806; State school tax, \$2,196,240; district and city tax, \$2,599,268; appropriated by counties for salaries and expenses of county superintendents, \$28,082; interest of surplus revenue, \$31,992; raised in districts for manual training, \$24,364; received from sale of district lands, \$329,554; raised in districts for school libraries, \$4,530. Number of districts that raised tax to pay teachers' salaries, 224; districts that raised tax to build or repair schoolhouses, 230; districts that raised tax to pay debt and interest, 149; districts that raised tax for text-books and apparatus, 299; districts that raised no tax, 5. The number of school buildings was 1,763; number of unsectarian private schools, 175; sectarian private schools, 145. The total value of school property was \$11,928,227. The sum expended for manual training was \$49,800. There was expended for free text-books and apparatus \$280,918.

The State contributes \$35,000 a year for current expenses in normal training. The Normal School had in 1896 about 600 students and graduated 150. The Model Preparatory School enrolled during the year 591 students and the Farnum School 132.

The Oyster Industry.—There were 664 individuals and firms engaged in planting and marketing oysters, and 255 persons engaged in gathering seed oysters. These 664 planters employed 2,033 hands, to whom wages to the amount of \$94,280 were paid, and 1,559 hands were employed while marketing, their wages amounting to \$233,917. There were planted during the year 1,473,467 bushels of seed oysters; 995,643 bushels were purchased by planters and 477,824 bushels were gathered by them; of the total planted, 636,448 bushels were obtained from State waters. The number of bushels marketed was 1,668,972. The total sum realized by the

664 planters was \$1,384,516, or an average of 83 cents per bushel. The 255 engaged in gathering seed oysters collected 229,399 bushels, for which they received \$72,433. There were 96 of these persons engaged in Newark Bay, 72 in Raritan, 55 in Barnegat, and 32 in Delaware Bay.

The Insane.—During 1896 the sum of \$522,885 was spent in maintaining the State's two institutions for the insane. The expenses of the Morris Plains hospital aggregated \$281,507 and the receipts \$279,798. In the Trenton hospital the expenses were \$241,380, and the receipts \$233,734. During the year 251 patients were admitted to the Trenton hospital and 280 to the hospital at Morris Plains; at the end of the year the former institution contained 1,001 patients and the latter 1,116. There were 160 epileptics confined in the two hospitals. The report of the Board of Managers refers pointedly to the looseness of New Jersey laws regarding commitments to insane asylums.

Good Roads.—The Commissioner of Public Roads stated in his report for 1896 that the State-aid law had stimulated the property holders of many counties to spend large sums upon their roads, resulting in many improved highways. Under this law the State paid in 1892 \$20,661.85; in 1893, \$71,237.22; in 1894, \$74,696.83; in 1895, \$100,000; in 1896, \$100,000; and the appropriation for 1897 was \$100,000, making a total of \$466,595.10, which, added to the amount which counties and individuals were required to spend to obtain the State appropriation, aggregated in six years over \$1,400,000 for roads.

Decision.—In the Supreme Court Justice Van Syckel's opinion set aside the Mercer County conviction of the Philadelphia and Reading Railroad for maintaining a nuisance, which consisted of an unprotected and dangerous crossing, no gates or flagman being employed, and frequently neither bell nor whistle signal being given. The court held that a railroad company can only be required to give such signal of approaching trains as the Legislature has prescribed, unless the crossing has some peculiarly dangerous feature occasioned by the act of the company in constructing its road or buildings.

Constitutional Amendments.—At a State election held in September constitutional amendments against gambling and permitting *ad interim* appointments to State offices were adopted, and one giving school suffrage to women was defeated.

Legislative Session.—Among the acts passed by the Legislature were the following:

Authorizing the damming of Delaware river. (Authorizes the erection of dams above tide water for the purpose only of supplying power for manufacturing and electrical purposes.)

To prevent all fishing except by troll or hook and line in Hackensack river between June 10 and Feb. 25.

Authorizing the Governor to appoint one or more commissioners to revise and codify the General Statutes.

Empowering executors and trustees holding real estate in trust to improve it and erect buildings thereon.

Requiring all motor cars to have vestibule platforms.

An extraordinary session of the Legislature was called by the Governor to rectify a clerical mistake in the act providing for the special election on the proposed constitutional amendments. In the act providing for this election the amendment prohibiting lotteries read, in part: "Nor shall any gambling device, practice, or game of chance now prohibited by law be legalized." The word "prohibited" had been made to read "provided." The extra session lasted but one day, and transacted no other business.

NEW MEXICO, a Territory of the United States, organized Sept. 9, 1850; area, 122,580 square miles. The population, according to each decennial census, was 61,547 in 1850; 93,516 in 1860; 91,874 in 1870; 119,565 in 1880; and 153,593 in 1890. Capital, Santa Fé.

Government.—The following were the Territorial officers: Governor, Miguel Antonio Otero; Secretary, George H. Wallace; Treasurer, Samuel Eldodt; Auditor, M. Garcia; Adjutant General, H.



MIGUEL A. OTERO, GOVERNOR OF NEW MEXICO.

B. Hersey; Solicitor-General, J. P. Victory; Superintendent of Public Instruction, Amado Chavez; Chief Justice of the Supreme Court, Thomas Smith; Associate Justices, N. C. Collier, N. B. Laughlin, G. D. Bantz, H. B. Hamilton.

Finances.—The report of the Treasurer to the biennial session of the Legislature dealt with Territorial finances from Dec. 3, 1894, to Nov. 28, 1896. The total revenues amounted to \$237,976.56 for 1895 and \$224,659.97 for 1896, the same having been derived from licenses, taxes, court fees, interest on deposits, etc. The expenditures for 1895 were \$330,528.32, and for 1896 were \$246,421.17, covering interest and part of the principal of the public debt, salaries and fees, expenses of Territorial institutions, normal schools, court expenses, cattle sanitary board, etc. The rate of taxation for Territorial purposes was 7-75 mills, and the assessed valuation of all the counties was \$41,140,802.67. At the close of 1896 there remained in Territorial banks \$32,301 in favor of the Territory. In his message to the Legislature Gov. Thornton said: "The great distress which has fallen upon our people during the last few years has unfortunately been such as to largely prevent the collection of taxes as closely as they should have been, and in every part of the Territory the delinquency has been so great that while the running expenses of the Territory for the same period have not been so large the taxes collected have not been sufficient to meet the demands of the Territory, and there is a deficiency in nearly every department."

In November, 1897, Gov. Otero and Auditor Garcia reported having checked up evidences of in-

debtedness paid by the Territory during the year as follow: Penitentiary, current expense, \$36,199.91; salaries, \$34,716.66; licenses, \$4,499.59; transportation of convicts, \$3,408.42; schools, \$1,288.36; Territorial institutions, \$54,144.44; New Mexico Military Institute, \$5,300; agricultural experiment stations, \$35.18; Supreme Court, \$356.22; special deficit forty-fourth fiscal year, \$63.30; special court fund, \$1,283.87; miscellaneous fund, \$31,838.08; deficiency fund forty-sixth fiscal year, \$836.39; cattle indemnity, \$16,990.65; compensation of assessors, \$8,857.40; Silver City normal school, \$4,530.23; Las Vegas normal school, \$4,805.92; corporations, \$967.40; Territorial purposes forty-eighth fiscal year, \$3,214; legal expenses, \$1,272.25; interest on deposits, \$4,111.29; Capitol rebuilding, \$11,547.79; interest, \$55,830; note, First National Bank, Santa Fé, \$8,600; total, \$295,136.35.

Penitentiary.—During the two years covered by the report of the superintendent the expenditures were \$81,134.76. Of this amount \$23,000 was expended in erecting new buildings and in making repairs. The earnings of the convicts amounted to \$18,536. The superintendent complains that various counties that have sent prisoners have failed to pay expenses, the deficiency amounting to \$3,164. The number of prisoners in confinement was 377.

Public Lands.—During the year ending June 30, 1897, 14 contracts were awarded for the survey of public lands, private land claims or grants, and small holdings; the number of miles of different lines established by the surveys made under these contracts is 2,335. Applications were made for the survey of 45 mining claims and the amended survey of 4 mining claims, and there was deposited on account of surveys of mining claims \$1,225. There were 126 mining districts in the Territory, only 23 of which were platted, owing to insufficient clerical help. The United States Court of Private Land Claims passed upon the validity of 44 private land claims, 15 of which were confirmed and 29 rejected, and there were still about 100 cases to be acted upon. There were 3,205 claims on file.

Railways.—About 1,200 miles of railway were reported in operation in the Territory in 1897—the Santa Fé road, affording outlets to Texas and Mexico on the south and to Colorado and Kansas and all the east; the Atlantic and Pacific, through central Arizona and California to the Pacific on the west; the Denver and Rio Grande to the north and northwest; the Denver and Gulf, cutting across the northeast corner to Denver, Col., and through Texas to the Gulf of Mexico, at Galveston; the Southern Pacific, across the southwest corner, from El Paso, Texas, through southern Arizona to San Francisco, with a branch from Deming to Silver City and the Grant County mining camps; and the Pecos Valley road, in the southeast.

Life Zones.—Among some statements given out by a bulletin of the Agricultural College, at Mesilla Park, are the following concerning the life zones of the Territory: "The first is the treeless region above timber line. The second is the one of block timber, which in this Territory extends from a level of 10,000 feet to timber line. This is the zone of heavy forest growth. The Pecos river rises within its limits, to which fact its continuous flow is in a measure attributed. The mid-alpine zone comes next. It lies at an elevation of 8,000 to 10,000 feet above the sea. In this area cereals can be cultivated, but not fruit trees, except some of the more hardy kinds. The next zone lies at an altitude of about 7,000 feet. It includes the town of Santa Fé. In it fruit trees do well. This is called the transition zone. Below it lies the upper Sonoran zone. This includes Albuquerque and the Mesilla valley.

Sweet potatoes and Mission grapes do well there, and figs may be grown as curiosities. Some varieties of cotton also may be grown."

Indians.—The Mescalero Apache Indians, numbering about 500, in the southeastern part of the Territory, are under the agency of Lieut. V. E. Stottler, detached from the Tenth United States Infantry, who reported satisfactory progress in the management of this refractory tribe. All the Indian children are now attending school, the force of which comprises two teachers, a matron, laundress, cook and assistant, seamstress, industrial teacher, and carpenter. All vacations were abolished during 1895. The agent found that to allow the children to go home for two months during the summer meant a lapse into the old Indian mode of life. Each child has half a day in the classroom, and the other half at industrial work. The girls take turns at the kitchen, laundry, and sewing room, and the boys farm and chop wood. During 1896 there were raised on the farm 25,000 pounds of beets, 20,000 pounds of cabbage, 1,000 pounds of cauliflower, 3,500 pounds of turnips, 1,400 pounds of onions, 500 pounds of radishes, 1,400 pounds of celery, 2,000 pounds of pumpkins, 400 pounds of peas, 960 pounds of corn, 6,500 pounds of potatoes, besides cucumbers, asparagus, etc. The school has a pen of swine, flocks of chickens, and a herd of fine milch cows, and all the food for these animals is raised on the farm. In 1896, on recommendation of Lieut. Stottler, the Government issued 5,000 sheep for distribution among the tribe, and 500 for the school, the idea being to have the Indians raise their own mutton, and then to cut off the supply of beef, which cost the Government \$6,500 in 1896. On July 1, 1897, all rations except beef were cut off. The agent reports, in conclusion, that "every male on the reservation has cut his hair, put on civilized dress, and taken a piece of land, which he has fenced, and commenced to raise grain and vegetables. They all have cabins or frame houses, with cook stoves and utensils. There is no drunkenness. Every man has ten head of sheep, and a like number for each member of his family. Every child on the reservation is at school. Every man has a wagon, harness, and plow."

New Capitol.—The new Capitol, to take the place of the one destroyed by fire, was begun early in 1897. The main façade is approached by a broad terrace leading to a massive portico. The first story will be of cut stone, above which the building will be faced with buff brick, with a heavy cornice and frieze girdling the entire structure. Over the central part of the building will be a dome 36 feet in diameter, resting on a die intended for the reception of statuary. Surmounting the dome will be a group of columns forming the lantern and supporting the flagstaff, 125 feet above the ground. Each floor will be provided with ample fireproof vaults for the storage of records.

Legislative Session.—Among the acts passed by the Legislative Assembly were the following:

Providing for payment of an occupation tax by business men. It fixes the license to be paid by business men other than liquor dealers, and provides that the money received from such licenses shall be equally divided between the general school fund and the general current-expense fund in the counties where the licenses are issued. Licenses may be taken out quarterly, semiannually, or annually.

For the protection of game and fish.

To encourage the construction of new railroads.

For printing bills and resolutions in Spanish.

Providing for the payment of wages of working-men in mines in lawful money.

For the greater safety of travelers on railroads.

NEW YORK, a Middle State, one of the original thirteen, ratified the Constitution July 26, 1788; area, 49,170 square miles. The population, according to each decennial census, was 340,120 in 1790; 589,051 in 1800; 959,049 in 1810; 1,372,111 in 1820; 1,918,608 in 1830; 2,428,921 in 1840; 3,097,394 in 1850; 3,880,735 in 1860; 4,382,759 in 1870; 5,082,871 in 1880; and 5,997,853 in 1890. According to a State census taken in 1892, the population was 6,513,344. Capital, Albany.

Government.—The following were the State officers during the year: Governor, Frank S. Black, Republican; Lieutenant Governor, Timothy L. Woodruff; Secretary of State, John Palmer; Comptroller, James A. Roberts; Treasurer, Addison B. Colvin; Attorney-General, Theodore E. Hancock; State Engineer and Surveyor, Campbell W. Adams; Superintendent of Public Instruction, Charles R. Skinner; Superintendent of Insurance, James F. Pierce, who was succeeded on Feb. 11 by Louis F. Payn; Superintendent of Banking Department, Frederick D. Kilburn; Superintendent of



FRANK S. BLACK, GOVERNOR OF NEW YORK.

State Prisons, Austin Lathrop; Superintendent of Public Works, George W. Aldridge; Commissioner of Labor Statistics, John T. McDonough; Railroad Commissioners, Ashley W. Cole, Alfred C. Chapin, and Michael Rickard, who were succeeded on Feb. 3 by Ashley W. Cole, George W. Dunn, and Frank M. Baker; Chief Judge of the Court of Appeals, Charles Andrews; Associate Judges, Albert Haight, John C. Gray, Irving G. Vann, Edward T. Bartlett, Denis O'Brien, and Celora E. Martin.

Finances.—The balance in the treasury Oct. 1, 1897, was \$2,313,314, compared with \$4,930,046 on Sept. 30, 1896. The total receipts of the year were as follow: From general sources, including excise, \$21,894,120, compared with \$20,742,547 in 1896; canal tax, \$6,712,155, compared with \$3,896,283; school tax, \$4,071,837, compared with \$4,034,557. The total expenditures were \$21,067,101 from the general fund, against \$18,248,181 the preceding year; \$5,249,035 for canals, including extraordinary improvements, against \$1,896,283, and \$4,048,642 for schools, against \$4,970,134. The State tax

rate is 2.67 mills, compared with 2.69 mills in 1896. It is distributed as follows: For general purposes, 0.18; for canals, 0.175; for schools, 0.91; for canal maintenance, 0.21; for canal special, 0.095; for State care of insane, 1.10; total, 2.67. The tax will raise for general purposes, \$809,244.47; for free schools, \$4,091,180.36; for new work on canals, \$202,311.12; for payment of canal debt, \$584,454.34; canal tax for maintenance and ordinary repairs, \$944,118.54; canal tax for extraordinary expenses, \$427,101.24; State care of insane, \$4,945,382.85; total, \$12,003,792.92. The following are the estimated revenues from indirect taxation: Estimated surplus, Sept. 30, 1897, \$1,474,613.60; tax on corporations and organization tax, \$2,300,000; inheritance tax, \$2,000,000; license fees for sale of liquors, \$3,250,000; arrears and interest of nonresident taxes, \$150; fees of public officers, \$35,000; sale of lands, \$40,000; banks, for expenses of Bank Department, \$30,000; insurance companies, for expenses of Insurance Department, \$185,000; railroad companies, for salaries and expenses of Railroad Commissioners, \$65,000; gas-light companies, for salaries of inspectors of gas meters, \$9,500; special tax for judges of Supreme Court, stenographers, and attendants, \$131,595; fees of notaries, \$35,000; pool tax, \$30,000; Niagara State reservation, \$8,600; Electrical Subway Commission, \$60,000; Soldiers' and Sailors' Home, \$115,000; State prisons, \$25,000; salt duties, \$30,000; miscellaneous, \$75,000; total, \$10,048,708.60.

Wealth of the State.—The State assessors during the year were Martin Heermance, Rollin L. Jenkins, and Edward L. Adams. The amount of property in the State in 1897, as returned by the local assessors, was \$4,506,985,649, the tables for which show an increase in the value of real estate of \$138,272,791, and of \$2,690,435 in the value of real estate over that of 1896. The increase of real property subject to assessment for New York, Kings, Queens, and Richmond Counties is \$1,342,149, and of personal property \$15,135,315. New York County's total valuation of real property is \$1,787,186,791, and of personal property \$1,731,509,143. This is an increase over last year of \$55,677,658 in real estate, and an increase of \$6,514,303 in personal property. This large increase in New York County is met, however, by a decrease in the assessed value of real estate in Kings County, where the total valuation is but \$510,107,742, a decrease of \$45,203,255, while the value of personal estate is increased \$6,152,085 to \$33,688,721. Queens County shows a falling off of \$15,657,940 in the value of its real estate, as compared with last year, while Richmond shows a gain of \$3,831,398. In personal estate Richmond has a gain of \$1,513,284 over last year, and Queens shows a gain of \$955,443. Oneida and Onondaga Counties show gains of more than \$10,000,000 each in personal estate, and Herkimer a gain of \$1,000,000 in real estate. Suffolk County shows a gain of \$26,000,000 in real estate over 1896.

Legislative Session.—The regular session of the Legislature began on Jan. 6, 1897, and continued until April 24. As elected, the Senate consisted of 36 Republicans and 14 Democrats, and the Assembly of 114 Republicans, 35 Democrats, and 1 Independent Republican. Timothy E. Ellsworth was continued as President *pro tem.* of the Senate, and James M. E. O'Grady Speaker of the Assembly. The Legislature passed 1,159 bills, of which 797 were approved by the Governor.

By far the most important act of this year's Legislature was that creating the Greater New York. It passed the Assembly on March 23 by a vote of 118 against 28, and was then sent to Mayor Strong for his acceptance; but this official returned it with a message of disapproval, and again, on

April 12, it passed the Assembly by a vote of 106 against 32. On May 5 the bill received the signature of Gov. Black. It went into effect on Jan. 1, 1898. The amendments to the so-called "Raines law" were signed by the Governor, and went into immediate operation. Among the other measures adopted are the following:

Concerning New York city:

Allowing the expenditure of \$2,500,000 for the improvement of Bryant Park and the building of a free library, to be occupied by the New York Public Library on the Astor, Lenox, and Tilden foundations.

Regulating the height of fireproof dwelling houses, and providing that they shall not exceed 150 feet on streets and avenues exceeding 79 feet in width and 100 feet when the street is less than 79 feet.

Authorizing the city to contract with the Grant Monument Association for the preservation of the tomb of Gen. Grant.

For the extension of the Metropolitan Museum of Art building.

To allow cars of elevated or surface railroads to run over the Brooklyn Bridge, and making one fare good for a trip from New York or Brooklyn, without extra cost for crossing the bridge.

A new East-River-bridge bill, permitting a change in the plan of the Brooklyn approach.

Amending the act relative to the boundaries of the proposed public park for the Twenty-third Ward, by providing that the westerly boundary shall be the easterly bulkhead line of Harlem river.

Authorizing the city to issue bonds to provide for the payment for land acquired for the erection of a courthouse for the appellate division of the Supreme Court.

Other measures enacted were:

Amending the code of civil procedure to provide that a decree of probate of a will shall not be conclusive as to personality in an action brought under section 2653a to determine the validity or invalidity of such will.

Providing that the maximum punishment for arson shall be twenty-five years instead of fifteen years, for a second-degree offense; fifteen years instead of seven for a third degree.

Providing that a person who willfully, by loosening, removing, or displacing a rail, or by any other interference, wrecks, destroys, or so injures any car, tender, locomotive, or railway train, or part thereof, while it is moving on any railway in this State, whether operated by steam, electricity, or other motive power, and thereby causes the death of a human being, is guilty of murder in the first degree.

Providing that, if a woman die, leaving illegitimate children, and no lawful issue, such children shall inherit her personal property as if legitimate.

Providing that a married woman may confess judgment if the debt was contracted for the benefit of her separate estate or in the course of business carried on for her separate account.

Protecting sales of real estate of infants by special guardian prior to Jan. 1, 1872.

Amending the code of civil procedure relative to possession of real property in reference to the foreclosure of mortgages.

Authorizing the Governor to appoint a commission of three to examine the efficiency of voting machines which are offered for use.

Providing for the completion of the State Capitol building by contract under the supervision of State Superintendent of Public Works George W. Aldridge.

To authorize the records of the New York State Weather Bureau to be received and read in evidence in any court of the State.

Appropriating \$25,000 for the college of agriculture at Cornell University, to be expended in giving instruction throughout the State and in carrying on experiments.

Appropriating \$22,000 to erect an equestrian statue to Major-Gen. Henry W. Slocum, on the Gettysburg battlefield.

Appropriating \$25,000 to pay a bounty of one cent a pound on beet sugar raised in the State.

Abolishing the business of ticket scalping.

Authorizing the expenditure of \$5,000 a year for five years, under the direction of the Long Island Historical Society, in translating and preserving the old Dutch records and historical documents of Kings County, Brooklyn, New Utrecht, and Gravesend.

To establish a botanic garden in Prospect Park, Brooklyn.

Providing that any one who is found in possession of an anæsthetic (knock-out drops), unless upon a physician's prescription, shall be guilty of a felony.

Appropriating \$11,000 for the erection of a new building at the New York agricultural experiment station in Geneva.

Appropriating \$25,000 to purchase the site of the battle of Stony Point, Rockland County.

Prohibiting the hounding of deer for ten years in the towns of Dresden and Putnam, Washington County.

Amending the fish and game laws by providing that floating devices, boats propelled by hand and sailboats, may be used from which to shoot web-footed wild fowl in Long Island Sound, Great South Bay, Gardiner, Shinnecock, and Peconic Bays.

Providing that railroad companies shall not mortgage their property without the consent of stockholders owning two thirds of the stock.

Amending the election law by including primary elections under that section which makes it a misdemeanor to practice fraud or bribery.

Authorizing the sale of the Onondaga Salt Springs reservation.

Making money due to truckmen or cartmen preferred claims on the estates of debtors.

For the office of United States Senator, to succeed David B. Hill, Democrat, the nominees were Thomas C. Platt by the Republicans and David B. Hill by the Democrats. A joint session of the Assembly was held on Jan. 20, when the vote was as follows: Platt, 147; Hill, 42; Henry George, 4. On the same day Chester S. Lord was elected a Regent of the University of New York, over Henry P. O'Neil, the nominee of the Democratic caucus.

Banks.—These are under the supervision of a State superintendent, who is appointed for three years. The present incumbent is Frederick D. Kilburn, who was appointed Jan. 24, 1896. His report for the fiscal year ending Sept. 30, 1897, shows that the number of active State banks of deposit and discount in New York was 212, a net decrease of one since the last report. The total resources of all the moneyed institutions under the supervision of the department are as follow: Banks of deposit and discount, Sept. 15, 1897, \$329,272,539; savings banks, July 1, 1897, \$839,671,900; trust companies, July 1, 1897, \$443,465,620; safe-deposit companies, July 1, 1897, \$4,927,124; foreign mortgage companies, Jan. 1, 1897, \$23,427,559; building and loan associations, Jan. 1, 1897, \$54,490,218; total, \$1,695,254,960. The increase, compared with the resources of the same institutions in 1896, is \$137,291,278. The amount of capital employed by the State banks of deposit and discount and by individual bankers on Sept. 30, 1897, was \$30,570,700, a decrease of \$650,000. The resources of all the State banks of deposit and discount in New York on Sept. 15,

1897, were \$329,272,539, compared with \$273,795,005 in 1896. The securities and cash deposited with the Superintendent of Banks in trust by the several banks, individual bankers, and trust companies, and held by him, was \$4,044,378.98. The report shows that there are still outstanding \$77,979 of the circulating notes of banks incorporated under the laws of this State which have not been advertised for redemption, and which are not secured.

Insurance.—This department is under the care of a superintendent who is appointed for three years. The incumbent was James F. Pierce, whose term of office expired on Feb. 11, when he was succeeded by Louis F. Payn. The annual report for 1896, issued in May, shows that the business done by all the life companies during the year exclusive of "industrial" was: Policies in force, 269,025, insuring \$759,870,302; issued during 1896, 51,638 policies, insuring \$127,292,490; premiums received, \$26,758,946.95; claims incurred, \$12,640,235.97; claims paid, \$12,365,947.69. Twenty-five casualty and fidelity companies reported: Assets, \$28,563,940.85; liabilities, except capital, \$12,749,600.71; capital, \$10,179,600; net surplus, \$5,673,346.87; receipts, \$17,451,219.24; disbursements, \$16,274,638.04; risks in force, \$2,800,871,565.

The summary of the department's two joint reports on all kinds of companies shows: Fire—companies, 153; assets, \$261,602,530; liabilities, except capital, \$124,333,031; surplus, \$80,438,624; risks in force, \$18,236,140,779. Marine—companies, 14; assets, \$20,525,021; liabilities, except capital, \$5,113,584; surplus, \$14,411,437; risks in force, \$230,675,840. Life—companies, 36; assets, \$1,228,324,342; liabilities, except capital, \$1,053,608,138; surplus, \$164,905,704; risks in force, \$5,820,660,739. Casualty—companies, 25; assets, \$28,563,940; liabilities, except capital, \$12,749,600; surplus, \$5,634,740; risks in force, \$2,800,871,565.

Excise.—In accordance with the so-called "Raines bill," enacted in 1896, the collection of the excise dues was intrusted to a commissioner, and the incumbent during 1897 was Henry H. Lyman. The amount received in 1897 was \$12,275,247.60. One third of this amount (\$4,091,749.20) was paid to the State, and the other two thirds (\$8,183,498.40) divided among different localities. On Oct. 1, there were 28,054 licenses outstanding. The number in force before the present law went into effect was 33,437, and the amount of money received therefrom was \$3,172,376.58, hardly more than one quarter of the present income from the same source. The receipts have nearly quadrupled, and the number of licenses has decreased almost one sixth. The records of the police courts in 41 cities and 430 incorporated villages show that, notwithstanding an increase in population, the cases of drunkenness have fallen off to a marked degree. The uniform law and rate of taxation throughout the State have done much to equalize the privileges of this traffic and to remove many of its objectionable features. A census of the number of saloons in cities showed that the number of saloons to each 1,000 inhabitants ranged from a minimum of 2.6 in Jamestown to a maximum of 8.1 in Long Island City.

Civil Service.—The civil-service commissioners are Willard A. Cobb, George P. Lord, and Silas W. Burt. According to their annual report, the number of persons examined in 1896 was 3,829, against 1,460 in 1895. The number for 1896 is more than the total for the first ten years of the history of the commission. Of those examined, 1,835 were successful. The number of appointments after examination during the same period was 631, or in the ratio of about one appointment to three successful candidates. The largest number of appointments

after competitive examination in any preceding year was that for 1895, when the number was 200; 134 competitive examinations were held, on seventy-one days, in 1896, against 51 examinations in 1895. The number of eligible lists prepared during the year 1896 was 129.

Education.—This department is under the supervision of a superintendent, whose term of office is three years. The present incumbent is Charles R. Skinner. There are 11,738 school districts, compared with 11,800 in 1896. There is a decrease of 83 in the number of districts in the country, but an increase of 20 in the cities. The total valuation of schoolhouses and sites is \$66,077,600, the city schools being valued at \$49,784,983. The increase in the valuation is \$5,774,474. The number of teachers employed is 34,363, of whom 5,461 are men and 28,902 women, a net increase of 565. In cities 15,283 teachers are employed, and in the country 19,102, being an increase in the cities of 1,794 and a decrease in the country of 1,229. The average annual salary paid to teachers is \$495.43, an increase of \$8.06. In cities the average is \$720.09, a decrease of \$5.10, and in the country it is \$312.12, an increase of \$5.94. The teachers report 1,203,199 children in attendance at school between the ages of five and eighteen, of whom 685,803 live in the cities and 517,396 in the country. The increase is 17,091. The total expenditure for school purposes was \$26,689,856, as compared with \$23,173,830 in 1896. Of the expenditures, \$7,537,212 was devoted to rural districts and \$19,152,644 to cities, which shows an increase of \$3,610,573 in city districts and a decrease of \$94,547 in rural districts. The amount of salaries paid to teachers in cities was \$9,158,205, and in rural districts \$5,001,854. School buildings erected, repaired, and equipped during the year involved an expenditure of \$8,398,676, of which \$1,171,976 was spent in the country districts.

Health.—This charge is under the supervision of a board consisting of Case Jones, president; Baxter T. Smelzer, Daniel Lewis, Owen Cassidy, Frederick W. Smith, George B. Fowler, Frank E. Shaw, and Attorney-General Theodore E. Hancock, State-Engineer Campbell W. Adams, and Health-Officer Alvah H. Doty, *ex officio*. These gentlemen serve without compensation. In 1897, 124,600 deaths were reported to the State Board of Health, making a death rate for the State of 18.50 per 1,000 of population, against 18.60 in 1895. There were 19,510 deaths from infectious diseases. There were only 3 deaths from smallpox, all occurring in or near the metropolis. Grip recurred in milder form, causing fewer than 3,000 deaths, most of them in March. Typhoid fever caused 1,600 deaths. Diphtheria caused fewer deaths than during the past ten years—4,600. Scarlet fever caused 771 deaths. In contrast with typhoid fever, it is a disease of cities, there having occurred from it in the four large cities, New York, Brooklyn, Buffalo, and Rochester, 3,477 deaths, against 577 from typhoid fever, while in rural towns, with an aggregate population of 1,500,000, there were 307 deaths from it, against 366 from typhoid fever. The most noteworthy feature of the sanitary condition of the State is the steady diminution in the number of deaths from consumption in New York and Brooklyn. In the congested portions of these municipalities are found the largest percentages of deaths from nearly all infectious diseases, and slight variation from previous years, but in tuberculosis the decrease has been steady for five years. The explanation of this gratifying exhibit is the fact that the local boards of health in these cities have recognized that the disease is due to infection, and precautions have been taken to prevent its spread by a more rigid scrutiny of the food supply, espe-

cially in the quality of milk and the examination of the cows.

The fertilizer and animal-charcoal manufactories on Newtown creek are still being investigated by order of the Governor.

Charities.—There are more than 1,000 charitable institutions and private charitable organizations in the State. The State Board of Charities, in its report to the Legislature, shows that the number of beneficiaries in the various institutions subject to the supervision of the board are 66,848, who are cared for at an expense of more than \$20,000,000. There are 22 institutions wholly or partly maintained at the public expense. This report says: "While the State Board of Charities is empowered by law to approve or disapprove of the organization and incorporation of charitable institutions, societies, and associations, and to license institutions for the feeble-minded, it has no direct authority to dissolve such corporations or to revoke licenses. The board believes that the best interests of the State require that such powers should be conferred upon it, thereby providing a speedy way of closing unworthy and undesirable institutions, of which there are not a few."

Canals.—The care of these water ways is in charge of the Superintendent of Public Works. The incumbent during the year was George W. Aldridge. The canals were opened May 5, and closed for the season Dec. 1, 1897. The wheat shipments of the season reached 25,964,172 bushels. This is a decrease of 11,000,000 bushels compared with 1896, but an increase of 5,000,000 bushels over 1895. The average rate of freight on wheat was 2.8 per cent., compared with 3.7 per cent. in 1896 and 2.2 per cent. in 1895. The rate on grain this year is the lowest, with one exception, on record. Toward the close of the year it was shown by Campbell W. Adams, State Engineer and Surveyor, that the amount of \$9,000,000 appropriated for the improvement of the canals was insufficient, and that at least \$7,000,000 additional will be required. According to Gov. Black, the cost of building all the canals, of maintaining them since the completion of the Erie Canal in 1825, and enlarging them now, has been more than \$97,628,867.45, and yet the commerce passing over them paid that enormous amount in tolls in less than sixty years.

Prisons.—These are under the care of a superintendent. The present incumbent is Austin Lathrop. According to his report submitted to the Legislature, the prison population on Oct. 1, 1896, was: Auburn, 1,089; Clinton, 886; Sing Sing, 1,220; total, 3,195. The population of the State prisons is the smallest for many years. The actual decline in the year in inmates is 388; the decline since Sept. 30, 1891, is 494. The expenditures for care and maintenance were: Sing Sing, \$168,153.67; Auburn, \$154,763.06; Clinton, \$151,998.79. Deficiency in the three prisons, \$353,393.12. The expenditures for care and maintenance have risen \$7,705.89 in the three prisons. In Sing Sing the increase is \$20,293.73, in Auburn the decrease is \$7,728.73, in Clinton the decrease is \$4,859.13.

The present system of convict labor was adopted in accordance with the provisions of an act of the Legislature of 1896, which followed out the mandate of the new Constitution, prohibiting the sale of prison-made goods in this State in the open market. When the prison authorities were making preparations to carry out the law they were skeptical as to whether there would be a sufficient demand for goods to keep the convicts employed. These fears have been dissipated by the workings of the law during its first eleven months of operation. During that time requisitions have been received for more than \$750,000 worth of goods,

which guarantees the continuous employment of convicts. As it costs but about \$500,000 annually to maintain the prisons, they are made self-supporting under the new system. Superintendent Lathrop has asked the Legislature for an appropriation with which to build a prison in the central part of the State at which all executions shall take place. He says: "The reformatory prisons do not seem to be the proper place for executions. It has been found that each approaching event of this kind is the cause of perturbation and depression among the prison population; it is sometimes antagonistic to the disciplinary methods of these institutions, and is so obnoxious that the officers do not hesitate to condemn the practice of having such executions in the prison."

Labor Statistics.—This department is in charge of a commissioner. The present incumbent is John T. McDonough. In 1895 reports were received from 927 trade unions, giving their membership as 180,231, including men and women; in 1896, 962 unions sent in reports, but the total membership only reached 170,296, a falling off of about 10,000. In the clothing trade there are 20,000 fewer members this year. Returns from 1,721 establishments, in the 65 general industries covered by the report, show that, in 1891, 200,333 persons employed by these concerns were paid \$93,257,541.09, an average of \$465.51 to each employee. In 1895, according to the figures presented by 2,290 establishments, 253,139 persons engaged therein obtained in wages \$110,427,158.81, an average for the year of \$436.23. A good deal of attention was given in the report to statistics relating to wages paid by gas and electric-light companies, the costs of production, and the market values of heating and lighting products. Eight electric-light plants submitted figures showing that the employees received 42.08 per cent. of the cost of the products, and that the percentage of the companies' earnings was 84.24. The figures for 21 gas companies were 26.24 and 108.59, and the figures for 6 companies, conducting both gas and electric business, were 34.71 and 182.83. There were 40 per cent. less strikes and lockouts in 1896 than in 1895.

National Guard.—The supervision of the militia is under the charge of the Adjutant General on the Governor's staff. All the organizations of the Guard are now fully equipped for active service, and no delay would be incurred in mobilizing upon short notice. The organizations of the naval militia were found to be in excellent condition. The medical departments of the Guard and naval militia are well supplied with all necessary appliances, and the hospital corps of nearly every organization are most efficient.

Railroads.—This department is cared for by three commissioners, each of whom serves for five years. The incumbents at the beginning of the year were Ashley W. Cole, Alfred C. Chapin, and Michael Rickard, who were succeeded on Feb. 3 by Ashley W. Cole, George W. Dunn, and Frank M. Baker. According to their report, the gross earnings for the year ending June 30, 1897, show a decrease, compared with 1896, of \$5,901,397.82, and a decrease in operating expenses of \$6,977,196.29. The capital stock was increased \$3,238,855 during 1897, and the funded debt \$28,698,185.40. Other liabilities were diminished \$1,388,874.28, and the cost of road and equipment was increased \$19,647,093.84. The aggregate of bonds and stock at their par value is greater than the aggregate cost of road and equipment by \$81,953,300.51. The percentage of dividends on capital stock was 2.45, against 2.49 in 1896. The actual increase in steam-railroad mileage in this State during the year was 57.56 miles, to which the New York and Pennsylvania

railroads contributed 27.10 miles, the Depew and Tonawanda Railroad 10.56 miles, South Vandalia and State Line Railroad 4 miles, and small extensions of prior existing roads the remainder. The aggregate railroad mileage for the State is as follows: Surface, steam, 8,113.52; surface, street, 1,178.79; elevated, 65.71; total, 9,358.02.

Forest Preservation.—During 1897 the Forest Preserve Board purchased more than 250,000 acres, and the total sum expended was \$940,000. The sum included an item of less than \$15,000, covering the total expenses incident to the acquisition of this property, together with services in searching titles and inspection and determination of the value of the property. About \$12,000 was expended for the acquisition of timber rights and the payment of back taxes on lands acquired, so that only \$913,000 was expended in the purchase of 250,000 acres. This makes the average price about \$3.50 an acre. The lands acquired include many of the choicest tracts in the north woods. The sum of \$60,000 remains unexpended, and this amount the board has reserved because, for an expenditure of \$940,000, a larger acreage has been acquired than was expected from the expenditure of the entire appropriation of \$1,000,000. There are altogether about 3,000,000 acres of forest lands in the Adirondacks. Previous to the appropriation of \$1,000,000 for the acquiring of forest lands, the State owned about 800,000 acres of the total 3,000,000. When the Forest Preserve Board has spent the entire \$1,000,000, 250,000 acres will have been acquired, bringing the State's ownings up to 1,050,000 acres.

Fisheries.—The commissioners in charge of this department are Barnet H. Davis, Edward Thompson, William R. Weed, H. S. Holden, and Charles S. Babcock. Their report for the year ending Sept. 30 gives the following items: During 1897 there were hatched and planted in public waters in the State 191,726,678 fish of various kinds, all the eggs having been taken from stock fish at the hatching-station ponds or secured from wild waters in the State. The fish were hatched and distributed at a total cost of 19.6 cents a thousand. The commission reared and planted 130,400 trout eight and ten months of age and 14,858 trout from twelve to eighteen months of age, or a total of 144,855 above the age of what are commonly called "fingerlings." In addition to the fish hatched and distributed from the State hatcheries, the United States Fish Commission contributed to the State 27,417,533 fish and eggs, the eggs being hatched at the State hatcheries, making a grand total of 219,144,211 fish of all kinds planted in State waters. The increase in the output of commercial fishes from the State hatcheries for 1896 was more than 34,000,000 over that of 1895. A systematic attempt was made to cultivate the Labrador whitefish, one of the most delicious of the whitefishes, and 250,000 eggs were taken at a temporary station at Canandaigua lake and hatched at Caledonia. Since the close of the year further operations have been conducted at Canandaigua lake on a greater scale, and 13,160,000 whitefish were hatched at Caledonia from eggs taken in this lake, showing the possibilities of this branch of fish culture, should a perfectly appointed hatching station be erected.

State Capitol.—The Capitol Commission in existence at the beginning of the year was abolished by the Legislature at the instigation of the Governor, and the completion of the work was given to the Superintendent of Public Works. On May 29 the contract for completing the Capitol was awarded to the Hallowell, Me., Granite Works. The bid of this company was \$259,000, and the award was approved by Gov. Black. During the year there was contract work under way aggregating \$80,000,

which will be finished by Feb. 1, 1898. There was about \$100,000 left of last winter's appropriation, which was used upon the building and grounds.

Centennial of the Capital.—A commission, authorized by the Legislature, consisting of John B. Thacher, Myer Nussbaum, William B. Van Rensselaer, William Jay, and James M. E. O'Grady, was named by Gov. Morton to conduct the celebration in Albany, Jan. 6, 1897, of the one hundredth anniversary of the selection of that city as the State capital. The Legislature appropriated \$2,500 and authorized the city of Albany to expend \$5,000 for the celebration. The exercises began with a parade of military and civic organizations under the marshalship of Oscar Smith, and was followed by literary exercises in Harmanus Bleecker Hall. These began with an address by ex-Gov. Morton, and included an historical address by Chauncey M. Depew, an address by Thomas G. Alvord, and a poem by William H. McElroy, with music at intervals. In the evening a brilliant display of fireworks was made in Washington Park. A ball, the most brilliant ever seen in Albany, was given in the evening.

Battle Monument.—On May 30 the battle monument erected in memory of the officers and enlisted men who fell in battle during the civil war by their surviving comrades was dedicated at West Point. The monument consists of a monolithic shaft of polished pink Milford granite, 46 feet high, standing on a cylindrical pedestal, and bearing on a square abacus a granite sphere, upon which is poised a winged figure of Fame, with trumpet and wreath. The whole stands upon a circular stylobate and stereobate of granite steps divided at regular radial intervals by eight square plinths, bearing granite spheres belted with bronze, upon which are inscribed the names of 2,042 enlisted men. The names of 788 officers are applied in bronze letters on the face of the circular pedestal. The cost of the monument was about \$75,000. The architects were McKim, Mead and White, and the sculptor, Frederick Macmonnies. The ceremonies included the presentation of the monument to the United States army by Gen. John M. Wilson, its acceptance by Gen. John M. Schofield, and presentation to the General Government, and its acceptance by the Secretary of War.

Political.—The election held on Nov. 2 was for a single State officer, namely, Chief Justice of the Court of Appeals, to succeed Charles Andrews, whose term expired on Dec. 31.

The Prohibition State Convention was held in Syracuse Sept. 8, and adopted a platform calling for abolition of the liquor traffic and denouncing the Raines law. Francis E. Baldwin, of Elmira, was unanimously chosen as candidate for the chief-justiceship.

The Democratic State Committee met Sept. 15, and issued an address in which no reference was made to the Chicago platform. This committee named Alton B. Parker, of Kingston, as their candidate for the chief-justiceship.

The Republican State Committee met in New York city Sept. 18. It issued an address advocating in strong terms the gold standard and denouncing agitation for "repudiation and a dishonest dollar." The convention unanimously named William J. Wallace, of Albany, as the candidate.

Theodore F. Cuno was the nominee of the Socialist-Labor party. The vote was as follows: Total number of votes cast, 1,159,158; Parker, Democrat, received 554,680; Wallace, Republican, 493,791; Cuno, Socialist, 20,854; and Baldwin, Prohibitionist, 19,653. Parker's plurality over Wallace, 60,889. The defective, blank, and scattering votes numbered 70,180, of which 56,259 were cast in New York, 9 in Kings, and 3,851 in Queens.

NEW YORK CITY. Government.—The city officials who held office during the year were: Mayor, William L. Strong; President of the Board of Aldermen, John Jeroloman; Register, William Sohmer; and Sheriff, Edward J. H. Tamsen, all of whom were elected on the anti-Tammany ticket and took office Jan. 1, 1895, except the Register, who is a Tammany Democrat, and took office Jan. 1, 1896.

Finances.—The condition of the debts of the boroughs of Manhattan and the Bronx is shown in the accompanying table:

FUNDED DEBT.	Outstanding Dec. 31, 1896.	Outstanding Dec. 31, 1897.
1. Payable from the sinking fund, under ordinances of the Common Council.....	\$2,500,600 00	\$2,500,000 00
2. Payable from the sinking fund, under provisions of chapter 383, section 6, Laws of 1878, and section 176, New York City Consolidation act of 1882.....	9,700,000 00	9,700,000 00
3. Payable from the sinking fund, under provisions of chapter 383, section 8, Laws of 1878, and section 192, New York City Consolidation act of 1882, as amended by chapter 178, Laws of 1889.....	88,584,604 44	112,263,894 70
4. Payable from the sinking fund, under provisions of chapter 79, Laws of 1889.....	9,822,100 00	9,823,100 00
5. Payable from the sinking fund, under provisions of the constitutional amendment adopted Nov. 4, 1884.....	38,770,000 00	41,977,000 00
6. Payable from taxation..	445,100 00	445,000 00
7. Payable from taxation, under the several statutes authorizing their issue.....	35,273,802 87	34,531,602 87
8. Bonds issued for local improvements after June 9, 1880.....	9,718,448 61	10,600,536 21
9. Debt of the annexed territory of Westchester County.....	477,000 00	463,000 00
10. Debt of the annexed territory (chapter 934, laws of 1895).....	616,134 27	713,300 00
11. Special revenue bonds*.....	.....	1,461,645 01
Total funded debt.....	\$195,907,690 19	\$224,479,678 79
Deduct sinking-fund investments for redemption of debt.....	77,630,491 63	.....
Not including \$515,893.58 cash on deposit in 1897..	.....	85,654,317 52
Net funded debt.....	\$118,277,198 56	\$138,825,361 27

The foregoing table shows that during the year beginning with Dec. 31, 1896, the net bonded debt increased \$20,548,162.71. For the three years since Dec. 31, 1894, the total increase has been \$34,746,540.46. In the year the cost of permanent improvements amounted to \$28,939,915.49, and bonds were issued to cover that amount as follow: For public buildings, \$2,874,196.65; for schools and education, \$6,598,262.83; for docks and improvements of parks and highways, \$1,428,097.42; for bridges, \$1,749,846.17; for paving and repaving, \$2,464,425; extension and improvement of water supply, \$3,757,000; assessment bonds, \$982,087.60; and miscellaneous, \$4,085,999.82. The amount of the issue of

* While the bonds have always been classified as temporary debt, it has been claimed lately in the rapid-transit litigation, and probably correctly, that as they are redeemed out of the tax levy of the year succeeding the year of their issue, they do not fall within the exception in section 10 of Article VIII of the Constitution, and that they should be included with the funded debt for the purpose of ascertaining what is the city's margin of indebtedness.

bonds during 1897 is the greatest in the history of New York city. In addition to the foregoing, bonds to the amount of \$114,000 issued by the territory of Westchester County, annexed in 1895, were assumed by the city in 1897. The returns, as given below, resulted, in August, in the announcement of a tax rate of \$2.10 for each \$100 of assessment, compared with \$2.14 for 1896.

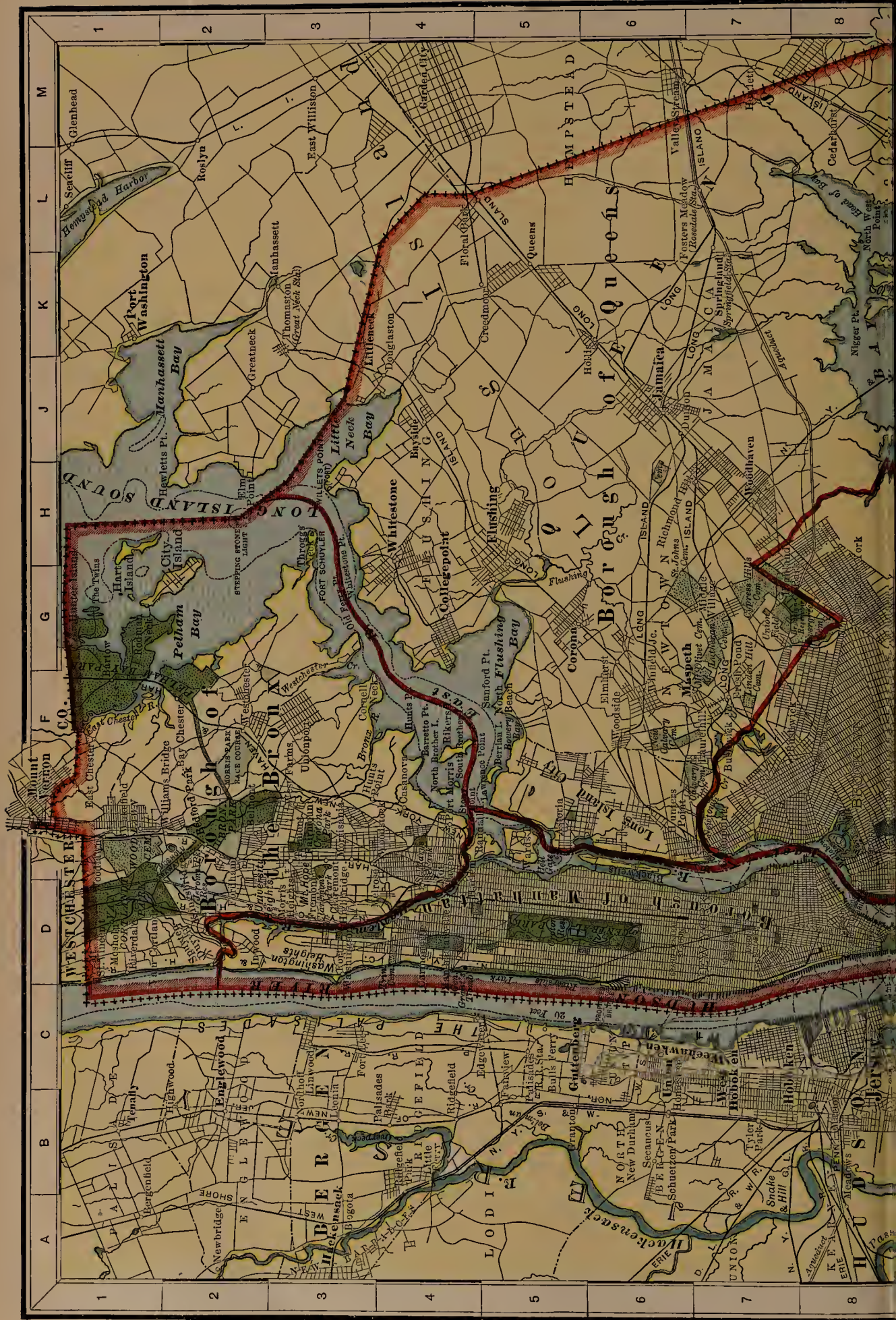
Board of Estimate and Apportionment.—This body—consisting of the Mayor, the President of the Board of Aldermen, the Comptroller (Ashbel P. Fitch), the President of the Department of Taxes and Assessments (Edward P. Barker), and the Corporation Counsel (Francis M. Scott)—allowed the following amounts for 1898: State taxes and common schools for State, \$5,704,871.81; interest on the city debt, \$6,126,801.14; redemption of city debt, \$3,352,139.85; the Mayoralty, \$42,155; the Common Council, \$90,000; Finance Department, \$360,988.21; Law Department, \$212,550; Bureau of Public Works, \$3,745,700.16; Department of Public Parks, \$1,440,025; Department of Street Improvements, Twenty-third and Twenty-fourth Wards, \$1,010,275; Department of Public Charities, \$1,364,608; Department of Correction, \$488,100; Health Department, \$653,770; Police Department, \$7,051,630.12; Department of Street Cleaning, \$2,999,002.40; Fire Department, \$2,608,753; Department of Buildings, \$340,785; Board of Education, \$6,962,145.92; College of the City of New York, \$175,000; the Normal College, \$150,000; Department of Taxes and Assessments, \$170,720; the Judiciary, \$1,958,110; printing, stationery, and blank books, \$220,000; asylums, reformatories, and charitable institutions, \$1,578,517.06; municipal service examining boards, \$30,000; Bureau of Elections, \$312,000; commissioners of accounts, \$60,000; judgments, \$250,000; fund for street and park openings, \$734,568.86; coroners' salaries and expenses, \$57,700; the sheriff, \$130,982; Register's Office, salaries and expenses, \$129,250; miscellaneous, \$915,105.11; total, \$51,443,643.64; deduct general fund, \$5,040,900.48; grand total, \$46,402,743.16.

This statement shows that the amount allowed for 1898 is \$51,443,643.64, which is reduced by deducting from the general fund made up by receipts from various sources during the year, the unexpended balance of previous years amounting to \$5,040,900.48. The total amount to be raised by taxation is \$46,402,743.16, which represents an increase of \$1,973,187.97 over that of 1897, and of \$8,825,783.12 over that of 1894. The increase is due chiefly to the greater amounts required for the administration of the larger territory, and notable among the increased amounts is that of \$1,030,906 for education, \$202,518 for public works, \$172,824 for the Fire Department, and \$69,691 for police.

Wealth of the City.—This department is a county charge, and is cared for by a board of three tax commissioners, as follows: Edward P. Barker, president, Theodore Sutro, and James L. Wells. The office is at 280 Broadway. They report the total valuations of real and personal property as assessed for taxation in 1897, at \$2,168,635,856, against \$2,106,484,905 for 1896, showing a net increase of \$62,150,951, which is distributed as follows: Increase in real estate, \$55,677,648; personal, \$6,473,303; total, \$62,150,951. The total taxation on personal estates was distributed as follows: Insurance companies, \$3,201,461; trust companies, \$5,341,508; railroad companies, \$28,426,511; miscellaneous, resident corporations, \$47,438,915; miscellaneous, nonresident corporations, \$19,934,462; resident, personal, \$87,693,719; nonresident, personal, \$27,580,833; estates, \$79,886,270; banks, \$81,936,386 total, \$381,449,065. The real-estate taxa-

tion was distributed as follows: Net result of real-estate valuations for 1896, as shown by the books sent to Receiver of Taxes, \$731,509,143; gross increase of real-estate valuations over 1896, as shown by the books when opened for revision in January, 1897, \$64,129,648 (of this amount, \$35,000,000 was for improvements on real estate); increased real-estate valuations made by consent and notice, \$17,355; total, \$1,795,656,146; total personal and real estate, \$2,168,635,856. The Aquarium, formerly Castle Garden, is rated at \$1,000,000, including the Battery wall and engine house. A valuation of \$4,200,000 is given to the land occupied by the New York end of the Brooklyn Bridge. This property includes lots on Park Row, and North William, Rose, Vandewater, Cliff, Pearl, Cherry, Water, and Front Streets. Washington Market is valued at \$600,000, and Fulton Market at \$400,000. Washington Bridge is valued at \$1,000,000, and Spuyten Duyvil Bridge, which crosses Spuyten Duyvil creek, is entered at a valuation of \$500. High Bridge is valued at \$400,000. Bellevue Hospital and grounds have an official valuation of \$1,500,000. The sections of ground on which the Washington equestrian statue and the Lincoln statue stand (at Union Square) are each valued at \$1,000. The regimental armories appear on the records at conservative valuations, that of the Seventh Regiment being \$700,000; the Eighth Regiment and Troop A, at \$650,000; the Seventy-first Regiment, \$900,000; the Ninth Regiment, \$450,000; the Twelfth Regiment, \$300,000; and the Twenty-second Regiment, \$350,000. The old distributing reservoir in Fifth Avenue, between 40th and 42d Streets, is valued at \$2,250,000, the Jerome Park Reservoir at \$1,050,000, and the reservoir on Gun Hill Road at \$400,000.

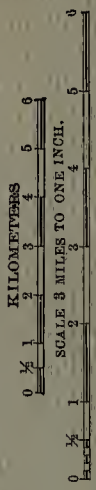
Public Works.—This department is under the charge of a commissioner appointed by the Mayor. He holds office for four years. The incumbent during the year was Charles H. T. Collis. Active work on the widening of Elm Street was carried on. The commissioners (Joel B. Erhardt, Charles H. Truax, succeeded by William G. Davies and William G. Choate) appointed in 1895 to assess the value of property condemned reported in April that 150 parcels of property were affected by the improvement. They reported \$5,108,847 as the value of the property condemned and \$291,565 as the value of benefits that will accrue to property formerly in block centers, but which is now changed to corner lots. The site selected for the new building for the Hall of Records is the eastern part of the block bounded by Chambers Street on the south, Broadway on the west, Center Street on the east, and Reade Street on the north. The block so bounded will be cut in two by the extension of Elm Street from Reade Street to Chambers Street. The area of the property to be taken for the new building is 31,000 square feet. The appropriation of \$500,000 for the new wing of the American Museum of Natural History became available in May, and work on the building was begun. The improvement will make this museum the largest structure of its kind in the world. More than \$500,000 was expended in asphaltting streets. Of great importance was the completion of the repairing of Fifth Avenue, from Washington Arch to the end of the street, together with the laying of 48-inch water mains and new sewers in that thoroughfare. This work was begun Sept. 3, 1896, and completed Dec. 31, 1897, having cost \$800,000. During Commissioner Collis's administration 60 miles of block pavements were covered with asphalt, and about 42 per cent. of the new pavement was laid in the tenement-house district. The city has now 128.87 miles of asphalt pavement, against 62.34 miles in 1895. There are





MAP OF
THE CITY OF NEW YORK
(GREATER NEW YORK)
and Vicinity.

The geographical features of this Map are produced from data furnished by the U. S. Geological Survey. The boundaries and the division of the City into Boroughs are according to the Charter of the City of New York, 1897.



three continuous routes of asphalt pavement from the Battery to Harlem river, so that every hospital has an ambulance route over smooth pavements to all parts of the city, and a bicyclist may ride from one end of the island to the other without traversing a block pavement.

Parks.—This department is under the direction of a board of four commissioners. During the year the board was composed of Stephen V. R. Cruger, president, Samuel McMillan, William A. Styles (who died Oct. 7), and Smith Ely. The secretary of the board is William Leary, and the office is in the Arsenal Building, Central Park. The Mulberry Bend Park was formally opened June 15. This was one of the first of the parks to be obtained in consequence of the passage of the small-parks act in 1887. The city paid \$1,500,000 for the land, and reclaimed for healthful purposes one of the worst and most populous tenement districts in the city. A small park at 76th Street and East river was decided on by the board at its meeting, June 18, when sites for three other parks were suggested.

Zoological Park.—The development of this park is under the care of the New York Zoological Society, of which body Levi P. Morton is president. The bill establishing the park provided that when the society raised \$100,000 the city should expend \$125,000 on improvements in preparation of the grounds for the buildings and collections. The Board of Park Commissioners in March approved the site chosen in Bronx Park by the society, which is described in the "Annual Cyclopædia" for 1896, page 531, and active measures were taken by the society to secure the necessary funds. In the report of the society for 1897 it is shown that \$66,000 has been subscribed. Meanwhile, plans for the work, including those for ten of the most important buildings, were submitted to the Park Commissioners and received their approval on Nov. 22. The Board of Managers have christened all the hills, lakes, and distinctive portions of the park. The largest lake is named Agassiz, and another is called Cope, after the American zoologist who has linked his name with the study of the great mammals that once roamed over this country. There is an Audubon Hill, a Baird Court, and a Wilson Hill. All the quarters for the future zoological population of the park have been selected. The society has a membership of 551, compared with 118 in 1896.

Botanical Garden.—The plans for buildings prepared for the managers of the New York Botanical Garden were submitted to the Park Commissioners, and that body appointed a commission consisting of Charles S. Sargent, Thomas Hastings, John C. Olmsted, and Samuel Parsons, Jr., to report on them. A plan changing the site of the conservatory and removing the director's residence from the park, but retaining the original site of the museum, was finally agreed upon by the Park Board. The Board of Estimate and Apportionment granted an appropriation of \$500,000 for the building of the museum.

The Aquarium is under the general direction of the Park Department, and occupies the old site of Castle Garden on Battery Park. The superintendent is Tarleton H. Bean, and the building is open free to the public daily except on Mondays and Tuesdays, when it is open only between the hours of 12 M. and 1 P. M. It was first open Dec. 10, 1896, and in the year ending with Dec. 9, 1897, there were 1,635,252 visitors, being an average of 6,289 persons daily.

Vital Statistics.—The Board of Health consists of the president of the Board of Police, the health officer of the port, and two commissioners, one of whom must have been for five years a practicing physician. The commissioner who is not a physi-

cian is president of the board. The officials during 1897 were as follow: President, Charles G. Wilson; Dr. George B. Fowler, Health-Officer Dr. Alvah H. Doty, and President of the Board of Police Theodore Roosevelt, who was succeeded by Frank Moss. The secretary of the board is Emmons Clark, and the headquarters are in the Criminal Court building. The vital statistics were as follow:

ITEMS.	1896.	1897.
Deaths under one year.....	10,677	10,012
Deaths under five years.....	16,807	15,394
Total deaths.....	41,622	38,887
Total reported births.....	55,623	54,089
Total reported marriages.....	20,513	20,365
Total reported stillbirths.....	3,542	3,574
Death rate per 1,000 living.....	21.52	19.54

The principal causes of death were the following: Pneumonia, 4,624; phthisis, 4,847; diarrhoeal diseases, 2,575—under five years, 2,295; Bright's disease and nephritis, 2,499; heart disease, 2,347; diphtheria, 1,377; bronchitis, 1,089; measles, 391; whooping cough, 308; scarlet fever, 500; typhoid fever, 299; eroup, 214; cerebro-spinal meningitis, 232; influenza, 196; malarial fever, 118; and small-pox, 24. Among the deaths by violence were the following: Accident, 1,784; sunstroke, 39; suicide, 436; and homicide, 63.

The use of anti-toxic serum in the treatment of diphtheria, the careful inspection and the permit system for regulating the sale of milk, the treatment of consumption as an infectious disease, the medical supervision of schools, the inspection of tenement houses and the destruction of the worst of the rear tenements, the cleanliness of the streets, and the general improvement in the sanitary administration account in a large part for the great decrease in the number of deaths.

On July 1, 1897, the estimated population of New York city was 1,990,562.

Street Cleaning.—This department is managed by a single commissioner. The incumbent during 1897 was George E. Waring, Jr. His report, which dealt largely with the separation, collection, and disposition of garbage, shows that the following cart loads of garbage were collected: By the department, 164,422; by private persons, 19,383; total, 183,805. About 800,000 cart loads of domestic ashes were collected this year, at a cost of 80 cents a load, making the total cost of collecting and delivery at the dumps \$640,000. A thorough investigation was made, looking to the possibility of developing a money value from the coal ashes of domestic fires. Repeated experimental analyses of these ashes indicated that they will yield on the average: Coal (recoverable), 20 per cent.; clinker, 15 per cent.; fine ash, 50 per cent.; coarse ash and stone, 15 per cent. These percentages give on the amount collected this year: Coal, 144,000 net tons; clinker, 180,000 cubic yards; fine ash, 600,000 cubic yards; coarse ash and stone, 180,000 cubic yards. A fair estimate of value of these materials is: Coal, 144,000 net tons, at \$2.50, \$360,000; clinker, 180,000 cubic yards, at 75 cents, \$135,000; fine ash, 600,000 cubic yards, at 28 cents, \$168,000; total, \$663,000. The new method of getting rid of worthless matter by burning has proved much more satisfactory than the old plan of dumping at sea. On this subject Col. Waring says: "To further extend this general method of disposal of refuse by burning it, plans have been prepared for a much larger plant, to be located in East 48th Street. These plans provide for a plant covering an area 85 feet by 100 feet, and having a brick furnace building 55 feet by 35. It will be ready for use early in 1898." Other plants are in course of construction at 131st Street, and at 30th Street, on the North river. Paper,

which under the old system was lost to the city, now is an important item on the credit side of the ledger. An estimate, based on twenty-one weeks of actual operation at the 18th-Street yard, gives the sales of paper for the year as 2,937,300 pounds, and the income \$6,815. The length of streets cleaned was 546 miles.

Police.—This department is managed by a board of four commissioners, appointed by the Mayor for a term of six years. The board during the year consisted of Theodore Roosevelt, president, succeeded by Frank Moss on April 21, and made president on May 5; Avery D. Andrews, Frederick D. Grant, succeeded by George M. Smith on July 31, and Andrew D. Parker. The Superintendent of Police was Peter Conlin, who resigned, and was succeeded by John McCullagh. The headquarters are at 300 Mulberry Street. March 17, Mayor Strong removed Commissioner Andrew D. Parker from office, on the ground of neglect of duty. The charges were sent to Gov. Black, who, on hearing the testimony, decided against the removal. The force, Dec. 31, 1897, consisted of a superintendent, a chief inspector, 6 inspectors, 16 surgeons, 40 captains, 173 sergeants, 50 detective sergeants, 202 roundsmen, 4,454 patrolmen, and 84 doormen, a total of 5,052, an increase of 1,206 over 1896. In the year 33 members of the force died, 42 were retired, 89 were dismissed, and 28 resigned. There were 108,033 arrests, against 112,997 in 1896. Of this number 91,234 were males and 16,799 were females. The principal crimes and misdemeanors for which the arrests were made are as follows: Intoxication, 19,783; disorderly conduct, 22,663; violation of corporation ordinances, 12,999; felonious assault, 1,071; suspicious persons, 6,479; violation of excise law, 2,889; petit larceny, 3,938; vagrancy, 6,737; and grand larceny, 1,989. The property clerk received 3,059 lots of stolen or unclaimed property, and delivered 1,131 lots, aggregating in value \$17,048.88. There was delivered from precincts property valued at \$842,034.26.

Fire.—This department is under the control of a board of three commissioners, appointed by the Mayor for a term of six years. The board during 1897 consisted of James R. Sheffield, president, Oscar H. Lagrange, and Thomas Sturgis. The chief of the department is Hugh Bonner, and the headquarters are at 157 East 67th Street. The force, Jan. 1, 1898, included 1,137 officers and men, 64 engine companies (including 3 fire boats), 22 hook-and-ladder companies, 66 steam fire engines in service, 3 water towers in service, 29 hook-and-ladder trucks in service, and 450 horses. In the year there were 4,046 fires, of which 3,912 were confined to the building and 41 extended to other buildings. Of the total number, 93 were not in buildings. The estimated loss by these fires was \$3,305,678. The average loss was \$812.08. There were 11 buildings destroyed by fire, and 1,691 fires resulted in nominal damage.

A strenuous effort was made to have the present high rate of insurance reduced, and a report was made on that subject. The average loss per fire was reduced from \$1,300 in 1874 to \$742.72 in 1892. The total loss for the first six months of the three years ending in 1894 was \$7,843,777, compared with a total of \$4,503,116 for the first six months of the last three years.

Docks.—This department is under the control of three commissioners. The commissioners during 1897 were: Edward C. O'Brien, president, Edwin Einstein, and John Monks. Office, pier A, North river. The improvements during the year included work on the construction of five new piers, from 700 to 750 feet long, with slips 250 feet wide, beginning at or near the foot of Charles Street and

extending to Gansevoort Street, making a total of 8,963 feet, or 1.7 mile, of wharfage room. Plans were adopted for the construction of seven large piers, each 800 feet long, between Bloomfield Street and West 23d Street; for two other piers, each 800 feet long, flanking the ferry slips opposite West 13th Street, and one pier, also 800 feet long and 50 feet wide, on the northerly side of Bloomfield Street, as well as a short pier and 403 feet of available bulkhead line at West 22d Street, furnishing 16,496 linear feet, or 3.12 miles, of wharfage room, exclusive of 1,960 feet used for ferries. The aggregate wharfage room covered by these improvements is 25,459 feet, or 4.82 miles, to which is to be added the room occupied by the ferry slips. The recreation pier, at the foot of East 24th Street, was formally presented to the city Sept 25. This pier is the second of its kind to be opened to the public, and contracts for three more are to be let. The 3d Street pier was opened June 26, and its success surpassed even the hopes of the Dock Commissioners. The 24th Street pier is 720 feet long, and it is estimated that it will accommodate 14,000 persons. Its cost when completed was more than \$100,000. It is the intention of the Dock Commissioners to inclose the pier in glass and have it properly heated, so that it can be used all the year round.

Education.—The board having control of this subject consists of 21 commissioners, who are appointed by the Mayor and receive no salary. The president of the board is Charles B. Hubbell. The city superintendent is John Jasper, and the headquarters are at 146 Grand Street. The lack of adequate accommodations for pupils led to energetic efforts on the part of the Board of Education to secure new sites and buildings for schools. On May 12 the Committee on Sites recommended the purchase of twelve sites, having a total valuation of \$942,000, also of 19 additional pieces of property adjacent to school buildings and considered necessary to improve the condition of these schools, having a valuation of \$567,275. This report was accepted, and maps and plans for condemnation were ordered filed in the Register's office. At this meeting John T. Buchanan, of Kansas City, Mo., and John J. Wright, of Philadelphia, Pa., were chosen principals for the new high schools. A report was received at the meeting held Oct. 20, recommending the naming of the boys' high school Clinton High School, the girls' high school Irving School, the mixed school Morris High School, and the manual training high school Stuyvesant High School. The contract for the Board of Education Hall, to be erected at the corner of Park Avenue and 59th Street, was awarded to Thomas Cochran & Sons, and bonds to the amount of \$244,900 were ordered to be issued. The school census required by the State superintendent was completed toward the close of the year, and showed that there were 391,482 children of school age, between four and eighteen years. The cost of this census was nearly \$27,000. The report of the Board of Estimate and Apportionment allowed an increase of \$1,030,905.03 over the budget for 1896, most of which was required for the salaries of teachers in the new schools. The sum of \$10,000 was allowed for the vacation schools to be established during the coming summer.

The Board of Estimate and Apportionment authorized, on Aug. 17, the trustees of the College of the City of New York to purchase land on West 138th and 140th Streets, overlooking the Hudson and Harlem rivers, as a site for the college, at \$350,000. Subsequently the land was purchased and plans for the new buildings were accepted by the college trustees. The present site of the college, 23d Street and Lexington Avenue, has been

selected for a new armory for the Sixty-ninth Regiment of the National Guard.

New York Public Library.—A bill for the erection of a library building on the site of the reservoir on Fifth Avenue between 40th and 42d Streets was passed early in the year by the Legislature, and on April 13 was approved by Mayor Strong. It provides that the directors or trustees representing the Astor, Lenox, and Tilden Libraries, which are to be merged in the Great New York Public Library, shall have the preparation of the plans for the structure, but all forms of contract for the work are to be submitted to the Park Board. It was stipulated that such material from the old reservoir as is available may be used. The work of demolishing the reservoir was begun when the 48-inch water mains were laid in Fifth Avenue below 38th Street. The bill authorizes the Comptroller to issue bonds to the amount of \$2,500,000. Eighty-six separate sets of plans were submitted in competition for the building, and from three competitors a decision was made in favor of the one submitted by Carrère & Hastings.

Rapid-Transit Railroad Commission.—This body consists of Alexander E. Orr, president, John Claflin, John H. Starin, George L. Rives, Woodbury Langdon, and Charles S. Smith, together with the Mayor and the Comptroller, *ex officio*. The office is at 256 Broadway. Delays, owing to the necessity of appealing to the courts in order to sustain the action of the commissioners, have occupied most of the year. The plans describing the proposed routes mentioned in the "Annual Cyclopædia" for 1895, page 551, encountered legal opposition, and a decision of the Appellate Court was secured, certifying to the validity of the commission. Another difficulty was met with in a failure to secure the consent of a majority of the property owners along the proposed route, and the commissioners applied to the Appellate Division for a commission. The commission examined the plans of the Rapid-Transit Commissioners, and in November reported favorably to the court. In their report they said: "We do not doubt that the road will carry as many as 300,000 passengers a day. Based upon this estimate, the gross earnings should be \$5,575,000 annually, and the net earnings \$2,290,000. Deducting interest at 3½ per cent. on the investment of \$35,000,000, and on the estimated cost of equipment, \$7,845,000, and allowing 10 per cent. for interest and depreciation, making a total of \$1,922,000, would leave a balance of \$368,000 a year. This balance is more than sufficient to meet the sinking-fund provisions of the statute." Counsel presented arguments for and against the adoption of the report, and on Dec. 17 the decision of the court was announced, confirming the report of the commissioners. On Dec. 31 the announcement was made that the Metropolitan Street Railway Company had decided to make a bid for the franchise of the proposed road, and for that purpose had instructed their engineers to prepare plans for an underground road. By obtaining control of rapid transit the directors of the Metropolitan Street Railway Company believe that they could establish a valuable auxiliary to the present surface lines, and that by the free use of transfers they could control not only the short-distance travel but also the long-distance passengers who now largely use the Manhattan Elevated Railway.

Monuments.—In 1897 several beautiful works of art were added to the monuments that grace the public thoroughfares.

On May 29 a statue in bronze of Peter Cooper, representing the philanthropist seated in an armchair, with a huge cane in his left hand, was presented to the city. The pedestal and background

are of granite, about 14 feet high. In the granite beginning at a point about midway from the base to the top, an alcove is cut, and in this alcove is the bronze figure. Below is the inscription: "Erected by the citizens of New York in grateful remembrance of Peter Cooper, founder of the Cooper Union for the Advancement of Science and Art, Anno Domini MDCCCXCVII." The sculptor was Augustus St. Gaudens, and the monument was erected under the direction of Stanford White, architect. The exercises included music by the Choral Union, the unveiling of the statue by the granddaughter and great-granddaughter of Mr. Cooper, presentation of the statue to Mayor Strong by Franklin Edson, chairman of the Statue Committee, its acceptance by Mayor Strong, who turned it over to Commissioner Stiles of the Department of Public Parks, and its acceptance by Mr. Stiles. The statue stands in Cooper Park, south of Cooper Union.

On May 7 a *Ginkgo biloba* tree was planted near the grave of Gen. Grant by Yang-Yu, representing Li-Hung-Chang. Representatives of the family of Gen. Grant and of the Department of Public Parks were present. On Dec. 30 a tablet was placed near it to commemorate the planting of the tree by order of the Department of Public Works. It bears a long Chinese inscription on the left half, while on the right is the following inscription in English: "This tree is planted at the side of the tomb of Gen. U. S. Grant, ex-President of the United States of America, for the purpose of commemorating his greatness, by Li-Hung-Chang, Guardian of the Prince, Grand Secretary of State, Earl of the First Order. Yang-Yu, Envoy Extraordinary, Minister Plenipotentiary of China, Vice-President of the Board of Censors, Kwang Hsu, 23d Year, 4th Moon, May, 1897."

On Oct. 7 a bronze tablet with the inscription, "This tablet is placed here in loving memory of the first Dutch settlers, by the Holland Dames of the New Netherlands and the Knights of the Legion of the Crown. Lavinia, Königin," was placed on the wall of the building at the southeast corner of Pearl and State Streets, which is the site of the *Stadhuis*, or City Hall of New Amsterdam that was built in 1636.

On Oct. 16 the Society of the Sons of the Revolution presented the city with a tablet commemorative of the battle of Harlem Heights. The memorial, six feet square, was placed on the Engineering Building of Columbia University, facing the Boulevard on the line of 117th Street, which is said to be the site of the historic field. It represents the death of Major Andrew Leitch and the advance of the American soldiers led by Col. Thomas Knowlton. The faces of the principal figures were made from portraits and represent leaders in the battle. James Edward Kelly is the sculptor. The exercises included prayer by Rev. Brockholst Morgan, chaplain of the society; presentation of the tablet to the society by Prof. Henry P. Johnston, of the Celebration Committee; unveiling by Frank Bailey, a great-grandson of Col. Knowlton; presentation of the tablet by Frederick S. Tallmadge, President of the Sons of the Revolution, to Columbia University; its acceptance by President Low; and addresses by Charlton T. Lewis and William M. Sloane.

An iron gate in memory of Herbert Mapes, a member of the class of 1890 of Columbia University, who was drowned in saving the life of a young woman at Fire island, has been erected at the entrance of the university grounds at 119th Street and the Boulevard. The gateway consists of an entrance for carriages in the center through double gates and two single gates for pedestrians. The total width

is 40 feet and the height in the middle is about 24 feet. The iron cornice, continuing across the entire width, supports ornamental pediments. The seals of the province and of the city of New York are incorporated in the design above the side entrances, and in the central portion is the seal of the State of New York, supported by eagles and the date of the erection of the memorial, the whole being surmounted by a free adaptation of the university seal. On one of the granite posts separating the carriage entrance from the side gates is carved: "In Memoriam, Herbert Mapes, '90 Arts, '92 Mines. Obiit, 1891." On the other is a wreath of laurel and a palm.

The design for a soldiers' and sailors' monument was selected by the Board of Commissioners appointed for that purpose. This design, which was sculptured by Frederick Macmonnies, calls for a terraced pedestal, inclosed by a railing, entrance to which is by steps. The pedestal is surmounted by a circular column about 125 feet high, the cap of which is a heroic statue of Peace. Upon three sides of the base of the column are statues, two sides having a mounted soldier and the third side a group of sailors. No site for the monument has been chosen, although it is expected that it will be erected somewhere on Riverside Drive.

The Lorelei fountain, commemorating the genius of Heinrich Heine, arrived in New York Dec. 26. The site of its probable erection was described in the "Annual Cyclopædia" for 1896.

Dedication of Grant's Tomb.—This event took place on April 27, the seventy-fifth anniversary of the birth of Gen. Grant, which date was by act of the Legislature made a public holiday. The arrangement for the ceremony began with the appointment of a committee of 200 citizens by Mayor Strong on Feb. 11. The Mayor was chosen chairman of the committee, and the Board of Estimate appropriated \$50,000 for the expenses of the celebration. Later, numerous subcommittees were appointed, and of the Committee of Military Affairs Gen. Grenville M. Dodge was named as chairman, becoming also grand marshal of the parade. The land parade was organized into three grand divisions, as follow: First, the military, under Gen. Wesley Merritt, including the West Point Cadets, United States troops numbering nearly 5,000 (forming the largest mobilization of the regular army in New York city since the civil war), and the National Guard of New York and other States. Second, the Veterans, under Gen. Oliver O. Howard, including the Grand Army of the Republic, Sons of Veterans, and similar organizations from various States. Third, civic organizations, under Charles F. Homer, including letter carriers, fire associations, public-school students, and other societies, and uniformed foreign bodies. The naval parade, under the command of Admiral Francis M. Bunce, included vessels from the North Atlantic fleet, revenue marine, lighthouse tenders, and foreign men-of-war. The line of march of the land parade was from 23d Street up Madison Avenue to 55th Street, thence west to Fifth Avenue, to 59th Street, to the Boulevard, along the east roadway to 72d Street; thence west on 72d Street to Riverside Drive, and up the Drive and around the Claremont and back to 119th Street, then by the Boulevard to a point beyond the reviewing-stand. On April 18 the body of Gen. Grant had been removed from the temporary tomb and placed in the great sarcophagus. The route of the procession was lined with stands, many of which had been elaborately decorated with bunting, the brilliant colors of which were spoiled by a severe rain on the night of the 26th. The only decoration on the tomb was double victory palms bound with purple silk on each of the columns.

On the morning of the parade the weather was clear but cold, with a piercing north wind that made it bleak, and as the day advanced the sky was overcast. The exercises at the tomb began with the arrival of President McKinley. On the grand stand was every surviving member of the Grant family, ex-President Cleveland, members of the Cabinet, the diplomatic corps, and many invited guests of national reputation. When President McKinley arrived a chorus under the direction of Frank Damrosch sang "America," in which the thousands present joined. Then followed a prayer by Bishop John P. Newman. After a hymn of thanks, Mayor Strong introduced President McKinley, who spoke briefly, beginning with the words: "A great life, dedicated to the welfare of the nation, here finds its earthly coronation." Singing of "The Star-Spangled Banner" followed, after which Gen. Horace Porter, President of the Monument Association, delivered the oration of the day, and transmitted the tomb to the custody of the city. Mayor Strong, in behalf of the municipality, accepted the trust, and the exercises closed with the "Hallelujah Chorus" from Handel's "Messiah" and the Doxology rendered by trained voices under the direction of Frank Damrosch. The land parade had set out on its march and reached the west side of the Claremont at one o'clock. The marine parade arrived simultaneously, and at the hour just named the signal from the Claremont conveyed the message, "The President is here." A salute of 21 guns acknowledged the fact, and President McKinley passed to the reviewing stand again, and the parade of nearly 60,000 persons passed before him. Late in the afternoon the presidential party withdrew, and, taking the "Dolphin" at the foot of 133d Street, the President reviewed the fleet of vessels by passing down the line to 52d Street, where he debarked and returned to the Windsor Hotel. In the evening a brilliant reception was held at the Union League Club, for which more than 1,000 invitations were issued, and at which Chauncey M. Depew presented the members and guests to President McKinley. The final event was a ball and reception given by the city of New York on the evening of April 28 at the Waldorf.

The New York and Brooklyn Bridge.—The charge of this bridge since its completion has been under the care of a board of seven trustees, whose legal existence closed with the end of the year. Their final report shows that in 1897 the receipts from tolls were \$1,240,861.24, divided as follow: Carriage ways, \$90,797.16; railroad, \$1,150,064.08. In the year 45,542,627 passengers were carried upon the railroad. The receipts from all sources, including rents, interest, etc., amounted to \$1,363,731.03. The expenditures amounted to \$1,228,143.24, leaving a balance of \$207,158.24. During the period of the bridge railway's existence 480,692,936 passengers have been carried. At the close of the year, after payment of all debts, there was a surplus sufficient to pay to New York \$43,000 and to Brooklyn \$86,000, this being in the proportion of their ownership.

On Dec. 31, at 11.30 p. m., the first trolley car crossed the bridge. As it was necessary, on account of an injunction, that the track should be completed before midnight, work had been continued all the evening.

Exchanges.—During 1897, at the Stock Exchange, there were bought and sold stocks, 77,407,447 shares; State and railroad bonds (par value), \$534,379,500; Government bonds (par value), \$10,234,030. At the Consolidated Stock and Petroleum Exchange the transactions were: Railroad stocks, 66,462,560 shares; mining stocks, 997,080 shares;

bonds (par value), \$12,165,000; wheat, 1,348,742,-000 bushels.

The transactions of the Produce Exchange were: Wheat flour, 4,346,000 barrels; rye flour, 124,500 barrels; wheat, 1,286,290,000 bushels; corn, 107,-385,000 bushels; oats, 50,578,000 bushels; rye, 3,938,-000 bushels; barley, 6,358,000 bushels; pork, 65,-250 barrels; lard, 68,098 tierces; tallow, 19,028,250 pounds.

On the Cotton Exchange the transactions by bales were: Futures, 29,489,300; spots, 445,368.

The receipts at the Sub-Treasury were \$1,103,-119,065.52, against \$1,374,985,433.27 in 1896. Payments were \$1,096,006,010.75, against \$1,393,464,-032.45 in 1896. Receipts for customs were \$122,-896,324.50, against \$99,407,892.56 in 1896. Gold withdrawals were \$41,892,441, against \$114,383,468 in 1896.

The operations of the Clearing House for the year were: Exchanges, \$33,427,027,471.39; balances, \$2,014,366,319.42.

Post Office.—The postmaster is Cornelius Van Cott. The post-office building is at the junction of Broadway and Park Row. Besides the general post office there are 28 branch offices, of which the one known as Branch I, at the corner of Columbus Avenue and 105th Street, was opened Feb. 1. There are also 91 substations, of which several were opened in 1897. In the year the total number of letters, postal cards, and packages handled was 498,-461,905. More than 275,000,000 postage stamps, 42,000,000 envelopes, and 70,000,000 postal cards were sold. The records of the registry department show a total of articles handled of about 1,200,000. The money-order transactions, compared with 1896, show an increase of \$79,508.58 in the outgoing foreign advices, and a decrease of \$2,048.30 in the incoming foreign orders. More than \$19,000,000 in gold passed through the registry department of the post office in the year, principally consigned to bankers in the United States. The receipts from all sources were \$8,146,278.67, an increase in 4½ per cent. over 1896. The increase in net revenue during the year was \$283,804.70, or 6 per cent. The first public test of the pneumatic mail service of the Tubular Dispatch Company was made on Oct. 7, when the branch line from the General Post Office to Station P, in the Produce Exchange, was opened.

Immigration.—The reception of immigrants in New York is under national supervision. Ellis island has been set apart for this purpose, and is under the direction of Commissioner Thomas Fitchie. The records for the fiscal year ending June 30 show that the number of immigrants was 180,-556, of whom 106,040 were males. Those under fifteen years of age numbered 29,976, and there were 129,672 between the ages of fifteen and forty. Of the entire number, 70,679 came to join members of their immediate families. The illiterate immigrants numbered 37,662. The hospital furnished relief to 1,223 patients. Of those excluded, 1,082 were paupers, 323 contract laborers, 5 lunatics, and 1 idiot. The authorities sent back 194 immigrants who had become public charges within one year after landing. The amount of money brought into the country by the arrivals was \$671,262, not including that brought in between June 1 and June 15, the records of which were destroyed.

Greater New York.—The birth of Greater New York was celebrated by a procession and a display of fireworks. A procession of floats sent by business houses, theaters, and societies, escorted by independent military orders, civic associations, bicyclists, and individual maskers, together with a delegation from Chicago, started from Union Square at 10.15 p. m., under the marshalship of Col. George M. Smith, and marched down Broadway to City

Hall Plaza. Meanwhile there were gathered in the plaza the united singing societies of the two cities, numbering more than 2,000 voices, together with the famous bands of the Twenty-second and Seventy-first Regiments of the National Guard. The City Hall itself was elaborately decorated with the American colors, and electric lights of red, white, and blue were hung in the park. Simultaneous with the starting of the procession a singing contest was begun, which was continued until the arrival of the carnival procession. Then masses of fireworks were set off, and the long white shafts of many flash lights added brilliancy to the scene. As midnight approached, patriotic music was sung by the societies, under the direction of the bands, and the chimes of Trinity Church were rung. At the moment of the birth of the New Year the municipal flag of the new metropolis was run up the flagstaff by an automatic arrangement that was put into action by the pressing of an electric button in San Francisco by Mayor Phelan of that municipality. A salute of 100 guns from the Second Battery, stationed in Mail Street on Government ground, was fired, and as the sound of the first gun died away echoing sounds came from a battery in Brooklyn. In Brooklyn the City Hall was illuminated, and in the Mayor's office Mayor Wurster and his living predecessors (with two exceptions) received the public until 9.25 p. m., when the final exercises were held in the Council Chamber. These included an address from St. Clair McKelway, an historical address by the Rev. James M. Farrar, a poem on "The Passing of Brooklyn" by Will Carleton, and a short address by Seth Low. At twelve o'clock the City Hall bell tolled, and the city of Brooklyn became a borough.

Political.—The election of 1897 was held Nov. 2, when the following candidates were voted for: Democratic (Tammany)—City ticket: Mayor, Robert A. Van Wyck; Comptroller, Bird S. Coler; President of the Council, Randolph Guggenheimer, also 15 members of the Council, being 3 from each of the 5 districts. County ticket: District Attorney, Asa Bird Gardiner; Register, Isaac Fromme; County Clerk, William Sohmer; Sheriff, Thomas J. Dunn; Justices of the Supreme Court, Charles H. Van Brunt and Francis M. Scott; Judges of the City Court, John Henry McCarthy and Edward F. O'Dwyer; Coroners, Borough of Manhattan, Antonio Zucca, Edward T. Fitzpatrick, Jacob E. Bausch, and Edward H. Hart; Coroners, Borough of the Bronx, Anthony McOwen and James P. Daly; Justice of Municipal Court, Eleventh District, Borough of Manhattan, William E. Stillings; Justice of Municipal Court, First District, Bronx, William W. Penfield; Justice of Municipal Court, Second District, Bronx, John M. Tierney; President, Borough of Manhattan, Augustus W. Peters; President, Borough of Bronx, Louis F. Haffen; also for 36 aldermen and 37 members of the Assembly.

Republican—City ticket: Mayor, Benjamin F. Tracey; Comptroller, Ashbel P. Fitch; President of the Council, R. Ross Appleton; also 15 members of the Council, being 3 from each of the 5 districts. County ticket: District Attorney, William M. K. Olcott; Register, George H. Von Schack; County Clerk, James R. O'Beirne; Sheriff, Thomas L. Hamilton; Justices of the Supreme Court, Charles H. Van Brunt and Thomas Allison; Judges of the City Court, Elisha K. Camp and Henry C. Botty; Coroners, Borough of Manhattan, Theodore K. Tuthill, Gustav Scholer, George W. Kram, and Moses J. Jackson; Coroners, Borough of the Bronx, John H. Gustavson and Rufus R. Randall; Justice of Municipal Court, Eleventh District, Borough of Manhattan, Francis J. Worcester; Justice of Municipal Court, First District, Bronx, Richard N. Arnow; Justice of Municipal Court, Second District, Bronx,

Douglas Mathewson; President, Borough of Manhattan, Louis Stern; President, Borough of the Bronx, Alonzo Bell; also for 36 aldermen and 37 members of the Assembly.

Citizens' Union.—City ticket: Mayor, Seth Low; Comptroller, Charles S. Fairchild; President of Council, John H. Schumann; also 15 members of the Council, being 3 from each of the 5 districts. County ticket: District Attorney, Austen G. Fox; Register, Edward F. McSweeney; County Clerk, Benjamin E. Hall; Sheriff, Edward F. McSweeney; Justices of the Supreme Court, Charles H. Van Brunt and George P. Andrews; Judges of the City Court, Joseph Fettech and S. Stanwood Menken; Coroners, Borough of Manhattan, Alfred E. Thayer, Cyrus John Strong, William Henry Terry, and Levi F. Warner; Coroners, Borough of the Bronx, Emery L. Ernhoop and Patrick J. Byrne; Justice of Municipal Court, Eleventh District, Borough of Manhattan, Francis J. Worcester; Justice of Municipal Court, First District, Bronx, William W. Penfield; Justice of Municipal Court, Second District, Bronx, John J. Brady; President, Borough of Manhattan, Robert J. Hoguet; President, Borough of the Bronx, Samuel McMillan; also for 36 aldermen and 37 members of the Assembly.

Jeffersonian Democrat.—Those Democrats who were unwilling to accept the nominees of Tammany Hall and equally unwilling to accept the conditions of the Citizens' Union placed in nomination the following city ticket: Mayor, Henry George; Comptroller, Charles W. Dayton; President of the Council, Jerome O'Neill.

The sudden death of Henry George, Oct. 29, led to the substitution of his son, Henry George, Jr., for the first place on the ticket. For the most part the nominees of the Citizens' Union for the county ticket were supported by this party. The Prohibitionists, the People's party, the Socialist-Labor party, the National Democrats, and the United Democracy had each a complete or partial ticket in the field. The canvass was lively. The result was a victory for the candidates of Tammany Hall, as shown by the following vote for Mayor: Boroughs of Manhattan and Bronx—Van Wyck, 146,666; Tracy, 55,834; Low, 77,210; George, 13,076; Van Wyck's plurality, 66,456. Borough of Brooklyn—Van Wyck, 76,185; Tracy, 37,611; Low, 65,656; George, 6,938; Van Wyck's plurality, 10,529. Borough of Queens—Van Wyck, 9,275; Tracy, 5,639; Low, 5,876; George, 1,096. Borough of Richmond—Van Wyck, 4,871; Tracy, 2,779; Low, 2,798; George, 583. The total vote was 526,566, of which Van Wyck received 233,997; Tracy, 101,863; Low, 151,540; George, 21,693. Van Wyck received 82,457 votes more than Low. The votes on the remaining candidates on the city and county tickets were similar. The elections for members of the Municipal Assembly resulted as follows: Council—Democrats, 23; Republicans, 3. Board of Aldermen—Democrats, 47; Republicans, 10; Citizens' Union, 3. In New York County there were returned to the Assembly 30 Democrats, 2 Republicans, and 1 each Independent Republican and National Democrat, against 23 Democrats and 12 Republicans in 1896.

Events.—On May 6 the bicentennial jubilee of Trinity Church was celebrated with elaborate services. On May 16 the new service of the Pennsylvania Railroad, landing its passengers at West 23d Street, went into effect. On June 15 the immigrant buildings on Ellis island were destroyed by fire. On Oct. 18 the new station of the New York Central and Hudson River Railroad, at 125th Street, was opened. On Oct. 31 the Astoria, the largest hotel in the city, was opened with a series of charitable entertainments. On Nov. 1 Mills Hotel No. 1, a model building for poor men, was opened. On

Nov. 4 the electric cars began their regular trips on the Fourth Avenue street-car line. On Nov. 14 the corner stone of the new building of Bellevue Hospital Medical College was laid. On Dec. 31 the resolution of the Board of Aldermen turning over the Hall of Records to the National Historical Society for a museum was signed by the Mayor.

NICARAGUA, a republic in Central America. The Congress is a single Chamber composed of 48 members elected for four years by the 12 provinces, 2 representatives by the people of each province, and 2 members by the provincial Legislature. The President is elected for four years by direct popular suffrage. The President for the term ending Jan. 31, 1898, was Gen. José Santos Zelaya. His Cabinet in the beginning of 1897 was composed as follows: Minister of the Interior, Justice, Police, Fomento, and Ecclesiastical Affairs, Gen. Erazmo Calderon; Minister of Foreign Affairs, Dr. Manuel C. Matus; Minister of War and Marine, Gen. Domingo Silva; Minister of Finance and Commerce, Dr. Luciano Gomez; Minister of Communications and Public Works, Dr. Leopold Ramirez.

Area and Population.—The area of Nicaragua is 49,200 square miles. The civil population is about 380,000, and the number of uncivilized Indians 40,000.

Armed Forces.—The military forces consist of the active army, the reserve, in which all able-bodied citizens are counted from the age of eighteen up to that of forty-five years, and the National Guard, which embraces those above thirty-five and under forty-five years of age. The number of active troops is variable, but does not exceed 3,500 men except in times of war. There is no naval force except some armed steamers on the Lake of Managua.

Finances.—No reports of revenue and expenditure have been published since 1892, when the receipts were \$1,764,000 and expenditures \$2,984,000. There is a foreign debt of £285,000 sterling and an internal debt which amounted in 1894 to \$7,000,000.

Commerce.—The values of the imports from and exports to the different countries in 1896 are given in the following table:

COUNTRIES.	Imports.	Exports.
Germany.....	\$930,000	\$2,286,000
Great Britain.....	1,427,000	730,000
United States.....	676,000	1,009,000
France.....	478,000	387,000
Other countries.....	219,000	1,235,000
Total.....	\$3,730,000	\$5,647,000

Communications.—The railroads have a length of 96 miles, and the projected lines, if built, will add 525 miles. The length of telegraph lines is 1,255 miles.

Political Affairs.—On Feb. 1, 1897, President Zelaya issued a decree of amnesty to the revolutionists who took part in the insurrection of 1896. On Sep. 17 another revolt was started by the enemies of Zelaya simultaneously in the city of Granada and in the town of Jinotepec, among the mountains of Granada province. The Conservatives of Carazo also arose in arms against the Government. Outside of these Conservative strongholds the people of the country came to the support of the Government, which threw a strong military force into the disturbed district, where the authority of the Government was restored in a few days and the rebels took to flight, pursued by the troops. After this rising was quelled the country was still kept in a state of siege, for the causes of dissatisfaction remained and malcontents were numerous. Before the end of September the Cabinet was re-

constituted as follows: Minister of War and Marine, Gen. Erasmo Calderon; Minister of the Interior, Manuel C. Matus; Minister of Public Works, José C. Romero; Minister of Finance, Enrique C. Lopez. The President's proposal to sell the national railroad and steamboats roused strong opposition.

The Costa Rican consul, Eduardo Beeche, was arrested on a charge of complicity in the rebellion. Considerable ill feeling existed between Costa Rica and Nicaragua on account of the boundary dispute, which had been referred to the arbitration of the United States Government. President Cleveland appointed E. P. Alexander, of South Carolina, to act with a Nicaraguan and a Costa Rican engineer on a boundary commission. In the spring both governments strengthened their military forces on the frontier. Their relations became more strained later, in consequence of a decree of the President of Costa Rica admitting imports free of duty by way of the San Juan river, which forms the boundary between the republics and the common harbor of Greytown. Colombia revived a claim to the Mosquito coast, but this the Nicaraguan Government refused to discuss. The American commissioner decided the boundary dispute with Costa Rica in favor of Nicaragua by tracing the boundary from the harbor head of Greytown. The line according to the treaty of April 15, 1858, is the channel of the Rio San Juan del Norte at its exit into the ocean. This channel has shifted several leagues to the south since the treaty was made, and if Costa Rica's claim to the old exit was sound the whole harbor of Greytown and the entrance to the Nicaraguan Canal would be in Costa Rican territory. The minister of the Greater Republic of Central America early in the administration of President McKinley made overtures looking to the consummation of a treaty for the construction of the Nicaragua Canal. He had already made similar proposals during the presidency of Mr. Cleveland, but received no answer from the Government, which had declined to recognize him as the representative of the Greater Republic, but only as the representative of the individual republics of Central America leagued together in the Greater Republic. His communication to Secretary Olney assumed that the Nicaragua Canal Company was unable to raise the money to fulfill its contract unless the United States Government should come to its aid. He proposed that the governments of the United States and of the Greater Republic of Central America should come to a direct understanding on the basis of the Zavala-Frelinghuysen treaty, with such modifications as might be agreed upon, and that a just arrangement should be made with the Maritime Canal Company of Nicaragua so that it might renounce a concession whose conditions it was unable to fulfill. By the treaty negotiated at Washington during the administration of President Arthur by Dr. Joachim Zavala, the special commissioner of Nicaragua, and Secretary Frelinghuysen the United States Government was to have the exclusive right of way across Nicaragua on a strip 2½ miles broad, and in return was to give to the Government of Nicaragua a specified share of any net canal earnings and a guarantee to protect its territory from any external aggression, besides lending it \$4,000,000 to be expended upon public improvements. This treaty, when submitted to the United States Senate in December, 1884, failed to receive a two-third majority. When Mr. Cleveland became President a few weeks later he withdrew the treaty for re-examination and never sent it back in any form. Instead of doing so, he said in his annual message that he disapproved of securing for the Government paramount privileges of ownership or right outside of its own territory coupled with ab-

solute and unlimited engagements to defend the territorial integrity of states where such interests lie. One objection to the Zavala treaty, which had been promptly ratified by the Nicaraguan Government, was that it might embroil the United States with England, since it practically set aside the Clayton-Bulwer treaty providing for the joint protection by the United States and Great Britain of any waterway that may be constructed across the isthmus. In April, 1897, on information given by the President of the Maritime Canal Company that the Government of Nicaragua contemplated the revocation of the concession, the State Department at Washington instructed the diplomatic representative at Managua to make whatever representations were necessary to prevent such forfeiture. On authority given by Congress a commission was appointed to make a new survey of the Nicaragua Canal route and report to the United States Government. The bill provided that the commission should consist of not more than five nor fewer than three persons, and that at least one engineer should be selected from the army and one from the navy. The previous commission estimated the cost of a canal 30 feet deep and 100 feet wide at bottom, 169 miles from ocean to ocean, including the part running through Lake Nicaragua, permitting transit of vessels in twenty-eight hours, to be \$133,473,000.

NORTH CAROLINA, a Southern State, one of the original thirteen, ratified the Constitution Nov. 21, 1789; area, 52,250 square miles. The population, according to each decennial census, was 393,751 in 1790; 478,103 in 1800; 555,500 in 1810; 638,829 in 1820; 737,987 in 1830; 753,419 in 1840; 869,039 in 1850; 992,622 in 1860; 1,071,361 in 1870; 1,399,750 in 1880; and 1,617,947 in 1890. Capital, Raleigh.



DANIEL L. RUSSELL, GOVERNOR OF NORTH CAROLINA.

Government.—The following were the State officers during the year: Governor, Daniel L. Russell, Republican; Lieutenant Governor, C. A. Reynolds, Republican; Secretary of State, Cyrus Thompson, Populist; Treasurer, W. H. Worth, Populist; Auditor, H. W. Ayer, Populist; Attorney-General, Z. V. Walser, Republican; Adjutant General, A. D. Cowles, Republican; Superintendent of Instruction,

C. H. Mebane; Commissioner of Agriculture, S. L. Patterson, succeeded in April by J. M. Mewborne; Labor Commissioner, J. Y. Hamrick; Railroad Commissioners, J. W. Wilson and S. O. Wilson, succeeded by L. C. Caldwell, J. H. Pearson, and D. H. Abbott; Chief Justice of the Supreme Court, W. T. Faircloth, Republican; Associate Justices, Robert M. Douglas and D. M. Furches, Republican, Walter Clark, Democrat, and W. A. Montgomery, Populist; Clerk, T. S. Kenan, Democrat.

Finances.—The receipts for 1895-'96 were \$1,620,285.59; the expenditures, \$1,885,698.52.

The interest-bearing bonded debt of the State stands as follows: 4-per-cent. consolidated bonds, \$3,366,250; 6-per-cent. North Carolina Railroad construction bonds, \$2,720,000; total, \$6,086,250.

The annual income to the State from its stock in the North Carolina Railroad Company has been, under the old lease, \$180,012; is to be for six years, under new lease, \$195,013; is to be for ninety-four years, under new lease, \$210,014.

Under the act to "compromise, commute, and settle the State debt," \$3,366,250 new 4-per-cent. bonds have been issued in exchange for the old valid debt. To complete the work begun in this line will require \$249,520 more to carry the new debt to its utmost possible limit, \$3,615,770. The time in which this may be done expires Jan. 1, 1899.

The State holds, as an investment, 30,002 shares of stock in the North Carolina Railroad Company, 12,666 in the Atlantic and North Carolina Railroad Company, and \$136,750 in the new 4-per-cent. consolidated bonds.

The State Board of Education holds, as an investment, \$143,250 of the 4-per-cent. and \$2,000 of the 6-per-cent. bonds.

In January the United States Supreme Court affirmed the opinion of the Supreme Court of North Carolina in the cases of *Baltzer vs. the State* and *Baltzer and Taaks vs. the State*. The first involved the validity of the constitutional amendment of 1880, which prohibited the General Assembly from paying or assuming any of the State bonds commonly known as special-tax bonds, of which there are about \$12,000,000 outstanding. The other case involved a claim of \$297,000 against the State growing out of the dealing between the State and the Chatham Railroad Company, when the State issued \$2,000,000 of its bonds in exchange for mortgage bonds of the railroad. The decision of the United States Supreme Court was in favor of the State in both cases.

There were this year on the pension list 5,273 names and \$102,000 in the fund.

The appropriations for 1897 and 1898 for State institutions were: Institution for the Deaf, Dumb, and Blind, \$137,500; School for the Deaf and Dumb, at Morganton, \$90,000; Normal and Industrial School, \$50,000; university, \$50,000; Agricultural College, \$25,000; Western Hospital, \$180,000; Central Hospital, \$110,900; Hospital for Colored, \$80,000; Agricultural College for Colored, \$25,000; normal and training schools for colored, \$36,000; Department for Criminal Insane, \$6,000; orphan asylum for white, \$20,000; for colored, \$6,000; total, \$186,400.

Education.—The school population is 634,185. An apportionment of 9 cents *per capita* was made in September from the school fund. The average attendance in 1896 was 204,203. In August the townships not already levying a special tax for schools voted on the question of taxing themselves \$500 for the purpose, and nearly all voted against the tax. By an act of the Legislature the State board is to pay \$500 more to every township raising the \$500 by tax. A paper read at the University Summer School made the following comparison of

educational statistics of North Carolina and of other States: More than a third of our people over ten years of age can not read. Of the white people, 1 in 4 is illiterate. Of 49 States and Territories, North Carolina has the shortest school term, pays teachers least, expends for each child at school less than all but one (South Carolina), has the lightest school tax of all but six, the most illiterate population of all but six, the most illiterate white people of all except the Territory of New Mexico.

The Normal College graduated 23 young ladies in May. The school has more than 400 students.

The one hundred and second commencement exercises of the university, at Chapel Hill, were held June 2, and 42 were graduated. On the opening day in September 405 were registered. The post-graduate courses were opened this year to women. An alumni hall is to be built at a cost of \$25,000.

The enrollment at the Agricultural College for the year ending in June was 247, of whom 21 were in the graduating class.

Wake Forest College had a registration, Sept. 15, of 207.

The Penitentiary.—There are more than 1,200 convicts, most of whom are kept at work on the farms and railroads. In October there were but 66 in the prison, exclusive of the criminal insane. In consequence of bad business management, slack discipline, and a scandal in the department for the criminal insane, the directors in October took the control from the superintendent and gave it to an executive committee of three.

Banks.—According to a statement by the Treasury Department in October, there are 94 banks in the State with total resources amounting to \$19,621,582.45. There are 27 national banks in the State with resources amounting to \$10,486,739.65; 45 State banks with \$6,477,051.45; 16 private banks with \$1,284,299.76; 6 saving banks with \$1,373,491.59.

The amount of loans and discounts in the 94 banks July 23, 1897, was \$12,912,465.34; overdrafts, \$181,535.47; United States bonds, \$758,500; State bonds, \$281,942.50; premium on bonds, \$63,398.04; stocks, securities, etc., \$480,588.43; banking house, furniture, etc., \$587,122.66; other real estate and mortgages owned, \$269,016.20; gold coin and certificates, \$541,882.97; silver coin and certificates, \$306,788.70; all other currency, \$576,153.74; checks and other cash items, \$177,753.84; due from banks and bankers, \$2,410,216.45; due from the United States Treasury, \$35,581.21; current expenses, \$38,636.90.

The First National Bank of Asheville failed July 31. In October the president, the cashier, and one of the directors were arrested, charged with embezzlement and conspiracy. The Western Carolina Bank, of Asheville, failed Oct. 12, and the National Bank, of the same place, Oct. 22.

The Bank of Louisburgh and the Bank of Nashville, private banks under the same management, closed Oct. 19. The president was arrested in November, charged with rendering a false statement of the condition of the banks, and also obtaining deposits by falsely representing his banks to be solvent.

The Railroad Commissioners.—By a law of 1891 it is made the duty of the Governor to suspend from office any Railroad Commissioner who shall be the holder of "any stock or bond of any railroad company, or be the agent or employee of any such company, or have any interest in any way in such company, or in case any one of them shall be disqualified to act." In August the Governor summoned two of the commissioners—J. W. Wilson and S. Otho Wilson—to appear before him on or before Sept. 1, and show cause why they should not be sus-

pended from office, both being charged with interest in a certain piece of hotel property, known as Round Knob, on the line of the Southern Railroad, which is worth little or nothing except as a hotel, and is worthless for this purpose except when designated by the Southern Railroad as an eating house for their passenger trains. The commissioners appeared with their counsel, declared that the act under which the Governor was proceeding was unconstitutional, and also denied the truth of the charges. The Governor appointed L. C. Caldwell and John H. Pearson to succeed the two commissioners, who refused to surrender the offices. Suit was brought, and decisions were rendered against them in the Superior and the State Supreme Court. From the latter decision, given in December, they have appealed to the United States Court.

Railroads.—The State is credited with 32 miles of new track in 1897. The mileage was given in July as 3,654. The valuation of the roads for taxation was raised from about \$26,000,000 to \$29,000,000.

There was a movement to secure from the Railroad Commissioners a reduction in both passenger and freight rates; but they decided to make no reduction, as it appeared that there had been a gradual reduction. The average passenger rate for 1891, the year of the establishment of the commission, was 2.88 cents, the average freight rate per ton per mile 1.66 cent. In 1896 the average passenger rate per passenger per mile was 2.21 cents, and the average freight rate per ton per mile 1.39 cent. In September the rates for hauling raw cotton were reduced by the commission, and the roads protested.

The Atlantic and North Carolina Railroad, also owned in part by the State, resisted amendments to its charter made by the Legislature, and an injunction was granted to the private stockholders to restrain the Governor from appointing a State's proxy and prevent the accomplishment of the plans with regard to it, until the validity of the acts could be tested in the courts.

Telegraphs.—The assessment of telegraph property for taxation was raised this year. The principal increase was on the Western Union, which was fixed at about \$380,000.

In July the Railroad Commission issued an order cutting down the toll on telegrams of 10 words over the Western Union line from 25 cents to 15 cents, when sent from one point in the State to another. The toll on other lines was made 20 cents. From this order the Western Union Company appealed to the Federal courts, and later the Postal joined in the appeal. This case was in the courts at the close of the year.

State Monuments.—Two statues were unveiled, July 4. One was the bronze statue to William Hooper, a signer of the Declaration of Independence, unveiled on Guilford battle ground; the other was the statue to the men who were massacred following Gen. Rutherford, unveiled at Newton.

Industries.—There are about 200 factories in the State, including hosiery and knitting and woolen mills; but they are mostly small; two thirds of them have fewer than 10,000 spindles, fewer than half a dozen operate more than 25,000, and the largest has fewer than 40,000. When the last census of mill operatives was taken there were employed in all the textile mills of the State 23,437 men, women, and children. Of these there were 10,567 women who are over eighteen years of age. The highest rate of wages paid to skilled men is \$2 a day. The average for the State at large is: Skilled men, \$1 a day; unskilled men, 67 cents; skilled women, 66 cents a day; unskilled women, 47½ cents. The average of wages for children is 31 cents.

During the year ending Nov. 30 North Carolina

tobacco manufacturers made 26,929,242 pounds of plug and 6,300 of snuff, 4,029,326 cigars, and 30,091,300 packages of cigarettes.

The value of the gold product was reported at \$44,300.

The cotton crop, as reported in April, was 424,090 commercial bales.

An exposition car has been fitted out to show the resources of the State; it will be taken through the Southern States in winter, and through the Northern States in summer. The car, the "City of Charlotte," is built of North Carolina woods, and is divided into an exhibition room and a living room. It contains specimens of marbles, gems, gold, silver, and copper ores, and other mineral products, natural-history specimens, fruits, vegetables, and grains, 102 specimens of timber, and other exhibits showing the products of the State. The outer and inner walls of the car are decorated with maps and paintings of North Carolina scenery.

Mob Violence.—There was but one lynching in the State this year. On Thanksgiving day, a negro, Nathan Willis, was arrested on the charge of murdering a young white man in Brunswick County. A mob was raised by the farmers in the country near the Waccamaw river. Willis was taken from the sheriff, carried into the woods, and chained between two pine trees. Lightwood was then piled around him, and he was burned to death.

Legislative Session.—The General Assembly met Jan. 6, and adjourned March 9. The Senate was presided over by Lieut.-Gov. Reynolds, and A. F. Hileman was Speaker of the House. There was a question as to the time when the new State officers should come in, the Constitution being contradictory on this point, in one place making their term begin Jan. 1, in another directing that the inauguration take place after the election returns shall have been counted by the Legislature. The contradiction arose from the change of time for the meeting of the Legislature from November to January. The new officers were installed Jan. 12.

In politics the Legislature stood: Republicans, 66; Populists, 58; Democrats, 45.

The term of United States Senator Jeter C. Pritchard was about to expire, and there was an excited contest over the choice of his successor. He was elected in 1895 as a free-silver man; but is said to have changed his views somewhat during the presidential canvass, and to have advocated international bimetallism and not the free coinage of silver by this country alone. On this account or some other, he was not acceptable to the majority of the Populists; but after his nomination by the Republicans 19 Populists who were in his favor bolted the caucus of their party, whose nominee was Cyrus Thompson. The choice of the Democrats was Rufus A. Doughton. At the election, Jan. 20, Pritchard was chosen, receiving 88 votes to 43 for Thompson, and 33 for Doughton.

A committee of the Senate was appointed to investigate charges of extravagance in the office of A. L. Swinson, enrolling clerk of the House. The House had passed a resolution to dismiss him on this charge. His version of the affair was that he refused to put on the list two negro clerks at \$5 each a day, at the request of some of the members, because there was nothing for them to do. He said it had already (in February) cost \$1,500 to do \$6 worth of copying, estimated at the usual charge per sheet.

Later, in March, the Lieutenant Governor and the Speaker were arrested on a warrant sworn out by Swinson, setting forth that they broke into the enrolling clerk's office, and also "broke open the private drawer of Swinson, all of which breaking and entries were against the will of Swinson, who was

present and forbidding, and against the statute and dignity of the State." They were acquitted.

A new revenue law was passed. Among other provisions, it makes a failure to pay poll, property, license, or privilege taxes a misdemeanor, punishable by a fine of not more than \$500 or imprisonment for not more than six months. By an error, the law placed the State tax at 46 cents and the poll tax at \$1.29. This conflicts with the Constitution, which provides that the poll tax shall be three times the property tax on the \$100. It was decided in court that the poll tax must be increased to \$1.38. On appeal to the Supreme Court the law was declared void, and the levy of 1895, which was 43 cents, was reinstated.

Of the 3 cents thus taken from the property tax, 1 cent was for general State purposes and 2 for schools, leaving for the general fund $21\frac{1}{2}$ cents, for the schools 18 cents, and for pensions $3\frac{1}{2}$ cents, which was not changed from the law of 1895.

The appropriations aggregated \$1,023,890.86. The estimated revenue was \$801,359.25. The Treasurer notified the heads of the various institutions that he would not pay special appropriations until he should find that he had a surplus after paying the running expenses of the government and the interest on the bonds.

A law was made for regulating the appointment of minority county commissioners, providing that, on the affidavit of 12 of any county, half of whom shall be freeholders, that the elected board of commissioners have mismanaged the affairs of the county, the judge of the district shall examine, and if he find the charges true, it shall be his duty to appoint two honest and discreet electors and citizens of said county, who shall be of a political party different from that of a majority of the said board of commissioners, to be members of the board until the election of their successors.

Some changes were made in the election law. A thorough revision of the school laws provides for State examinations of teachers, and by uniting weak districts is intended to make possible a four-months' term all over the State.

Among the acts affecting railroads were: To allow express matter to be carried on Sunday trains; repealing the fellow-servant act, making railroad companies liable for employees' injuries; requiring companies to redeem unused mileage tickets; amending the charter of the North Carolina and Atlantic Railroad, and subjecting it to State control; increasing the power of the Railway Commission.

The fishery laws were so amended as to make the license fee \$2,500 for foreigners who use seines in the sounds. The use of certain kinds of nets was prohibited in Albemarle Sound and its tributaries, and the use of Dutch or pond nets in Neuse river.

Acts affecting convicts prohibit the working of women on public roads or in chain gangs, allow tramps to be sent to the roads, provide for furnishing 250 convicts to the Winston-Salem Railroad, and allow convicts to be worked on public roads between July 15 and March 1.

Dispensaries for liquors, after the South Carolina plan, were provided for in five localities.

An act was passed to fix fire insurance rates on farm risks not to exceed those in Virginia.

Among other general laws were:

To locate the line between Tennessee and North Carolina, appropriating \$300.

To exempt all fraternal benevolent associations from taxation.

To buy a portrait of Zebulon B. Vance, appropriating \$500.

To prohibit adulteration of turpentine with kerosene.

Prohibiting liquor selling near churches.

To make land grants valid even when not registered by created counties.

To prevent minors from entering bar and billiard rooms and bowling alleys.

To protect coal miners and provide for inspection of coal mines.

To prohibit the use of fillers in commercial fertilizers.

To purchase Morris creek battle ground for \$200.

To prevent "overhead" fire insurance.

To regulate the procuring of bodies for dissection.

To repeal the assignment act of 1895.

To promote the oyster industry.

Political.—The State committee of the People's party issued an address in August, from which are taken the following extracts:

"We have secured to the citizen the right to cast one vote at all public elections, and to have that vote counted as cast. We have taken the public schools out of the hands of partisan politicians and restored them to the people. We have given the right of local self-government to each county in the State. We have removed the judiciary of the State to a safe distance from the arena of partisan politics. For a more effective and equitable control and reduction of the encroachments of railroad corporations we suggest that the Railroad Commissioners should be elected by a direct vote of the people."

A mass convention of negroes was held at Raleigh, Nov. 4, and the "Lincoln Republican League" was formed. The convention was called in protest against the giving of all offices, save 10, to the 30,000 white Republicans, and it is said this insulted the 120,000 negro voters. Resolutions were adopted calling on all negro Republicans hereafter to vote for no man opposed to giving the negro full recognition; that in future before any man is nominated negroes should exact a written pledge that he will give half of his clerical force to the colored Republicans; that all nominees shall give a pledge in favor of negro education, and that colored men who are willing to trade their race off for office shall not be nominated.

NORTH DAKOTA, a Northwestern State, admitted to the Union Nov. 3, 1889; area, 70,795 square miles. The population in 1890 was 182,719. Capital, Bismarck.

Government.—The following were the State officers during the year: Governor, Frank A. Briggs; Lieutenant Governor, J. M. Devine; Secretary of State, Fred Falley; Treasurer, George E. Nichols; Auditor, N. B. Hannum; Attorney-General, J. F. Cowan; Superintendent of Education, J. G. Halland; Adjutant General, Elliott S. Miller—all Republicans. Commissioner of Agriculture and Labor, H. U. Thomas; Land Commissioner, G. H. Winters, succeeded by H. J. Watt in August; State Examiner, H. A. Langlie; Oil Inspector, William Badger; Railroad Commissioners, George H. Keyes, L. L. Walton, and John R. Gibson; Superintendent of Irrigation and Forestry, W. W. Barrett; Insurance Commissioner, F. B. Fancher; Game Warden, G. E. Bowers; Chief Justice of the Supreme Court, Guy C. H. Corliss; Associate Justices, Alfred Wallin and J. M. Bartholomew; Clerk, R. D. Hoskins—all Republicans.

Finances.—The Treasurer's statement for the six months ending June 30 shows that the balance at the beginning of the year was \$182,797.17; the receipts brought the total to \$993,579.66; the disbursements were \$623,763.90; leaving a balance of \$369,815.76, of which \$213,181.23 was in the permanent school fund.

The total real-property valuation, as equalized by

the board in August, was \$64,024,911, a reduction of \$948,844 from the returns of the counties.

The valuation of railroad property was increased by the addition of \$250 to the valuation of every mile of road in the State for franchise. Heretofore the franchises of the roads have not been taxed. The total mileage of railroad in the State is 2,507. The total valuation of railroad property is about \$8,500,000.

The total value of the personal property in the State, as returned by the county boards of equalization, is \$20,187,448.

Education.—The school population is 72,132. The November apportionment was \$98,099.52, giving \$1.36 for each child.

A charter has been granted for the incorporation of the Northwestern College of Osteopathy of Fargo.

State Institutions.—The committee of the Legislature to visit the State institutions reported that they found them in good condition and managed economically. The amount of appropriations asked was \$573,213; but in view of the financial condition of the State the committee recommended that in all \$300,000 be appropriated. The only new building regarded as absolutely necessary was a hospital for the Penitentiary; but the Legislature provided for a warden's residence.

The Legislature decided to bond the lands given for the Reform School, at Mandan, for \$20,000, and use the money for buildings. Heretofore the State has sent refractory boys to the South Dakota Reform School, paying more than \$300 a year for each.

The biennial report of the Soldiers' Home, at Lisbon, showed that the whole number cared for was 52, and the average number present was 20.

New buildings were provided for at the Hospital for the Insane and at the School for the Deaf.

Banks.—Report was made to the Comptroller of the condition of the 26 national banks in the State, July 23. Comparison with the condition of the 29 in existence in July, 1896, and the 27 in May this year, showed that there was proportionally a material increase in the individual deposits and loans and discounts, but a reduction of 16.29 per cent. in the average reserves held by the banks since May. The individual deposits in July last year were \$4,549,228, which declined to \$3,692,829 in May, and have increased to \$4,003,118. The loans and discounts are \$4,447,534, and while this is slightly below the figures of last year, it is largely in excess of those reported in May, which were \$2,919,716.

The report of the State banks showed a marked improvement between July 23 and Oct. 5, this year. According to the examiner's statement, the resources at the former date were \$4,499,626.49; on Oct. 5 they were \$5,779,941.73. The individual deposits subject to check increased from \$1,495,956.45 to \$2,639,050.91, or over 76 per cent., the total increase being \$1,143,094.46. The reserve on July 23 was \$905,817.82; on Oct. 5 it was \$2,098,778.84, being over 31 per cent. on July 23, and over 50 per cent. on Oct. 5.

The Merchants' National Bank, at Devil's Lake, closed Jan. 4. In March the Federal grand jury, in session at Bismarck, investigated the methods of the suspended banks and found indictments against L. F. Booker, ex-State Treasurer and President of the Grand Forks National Bank, and H. F. Salyards, president of the First National Bank, of Minot. When Booker's case was called in November he failed to respond, and his bonds were forfeited.

Products.—Following is a statement issued by the Commissioner of Agriculture in September: "From statistics gathered from official sources and estimates carefully and conservatively made, the resources of North Dakota for 1897 are found to be as follow: 40,000,000 bushels of wheat, \$35,000,000;

4,500,000 bushels of flax, \$4,500,000; 9,000,000 bushels of barley, \$3,000,000; 28,000,000 bushels of oats, \$7,500,000; 3,000,000 bushels of potatoes, \$1,500,000; 2,000,000 pounds of wool, \$240,000; poultry and eggs, \$1,800,000; milk and milk products, \$2,500,000; livestock sold and meat products, \$10,000,000; total, \$66,040,000. This gives us about \$280 *per capita* for every man, woman, and child in North Dakota, or about \$1,500 for the head of each family in the State. This does not take into consideration the finished products of manufactories, or the revenues from the extensive coal mining in the western part of the State."

Immigration.—From the reports of county auditors the Commissioner of Agriculture made a compilation showing the increase of the population of the State through immigration in 1895 and 1896. The total increase is given at 16,793, of which 11,774 were added in 1896. In the spring several colonies of Dunkards from various sections in the East came into the State. Other colonies of the same sect had previously immigrated to the State; those in Cando, Towner County, and adjacent territory, numbered about 3,500. The immigrants of this year settled principally in Towner, Ramsey, Benton, Pierce, and Bottineau Counties. The railroads are contributing largely to the settlement of the vacant lands.

Lands and Timber.—The report of the General Land Office for the year ending June 30 shows that 10,659 acres in the State were patented to the Northern Pacific. There are 11,960,433 acres of unoccupied surveyed land and 9,424,860 unsurveyed.

The Commissioner of Forestry reported to the Legislature that the Indians were cutting trees in large quantities, many of which are young, sound, and growing. The trees are being sold for firewood. For years it has been asserted by citizens of the Turtle mountain region that the Indians living there, many of whom are aliens, set fires to the timber for the purpose of killing the trees, in order that they may cut them as dead timber. Besides burning and destroying this wood material, so much needed by the residents of the State for domestic purposes, the fires destroyed all young trees and seeds, and much of the soil of the mountains.

The Superintendent of Forestry sent to the children in the spring 1,500,000 seeds of box elder and white ash, to be planted on or about Arbor Day, and 500,000 seeds to be used in starting the Sylvan Home, School, and Church Nurseries.

The report of the Game Warden says that he issued licenses to 3,502 residents of the State and 60 licenses to nonresidents to hunt. The total amount of fees received was \$2,155.27 to the 53 deputy game wardens and \$1,075.13 to the State Game Warden. Although the game laws of the State are very defective, the game birds and animals were better protected last year than in any previous season.

Lawlessness.—In February the family of Thomas Spicer, a Methodist circuit rider, consisting of six members, was found murdered with circumstances of atrocity. Officers arrested an Indian half-breed named Alexander Coudot and a negro half-breed named Black Hawk on suspicion. Rings and jewelry that had disappeared from the Spicer house were found in the possession of a young full-blooded Indian, Paul Holy Track, and he, with a companion, Philip Ireland, was arrested. The two boys made a confession, implicating Black Hawk, Coudot, and an Indian named George Defender. Coudot was tried, found guilty of murder, and sentenced to be hanged; but the Supreme Court granted him a new trial. Under the law no conviction for murder could be had on uncorroborated

testimony of accomplices. The State maintained it had presented enough corroborating testimony to warrant a conviction, but in the opinion of the Supreme Court not a single feature of the corroborating testimony comes within the requirement of the statute. The new trial was granted Nov. 8. On Nov. 14 Holy Track, Ireland, and Coudot were taken from the county jail at Williamsport and hanged by a mob of 25 or 30 men. The other accused men were in jail in Burleigh County. The death of Holy Track and Ireland left the State without evidence against them, and they were discharged and taken to the reservation under a guard of Indians.

Legislative Session.—The fifth legislative session began Jan. 5 and ended March 6. E. A. Williams was Speaker of the House and C. B. Little president *pro tem.* of the Senate.

Senator Hansbrough's term in the United States Senate expired, and he was nominated for re-election by the Republican caucus by a vote of 49 against 15 for O. W. Francis, and was elected by a vote of 24 in the Senate and 43 in the House. William A. Bentley, the candidate of the Democrats and Populists, received 7 votes in the Senate and 17 in the House.

The total number of bills passed was 161, of which 152 became laws. The Governor vetoed 19, and 10 of these were passed over the veto, being appropriation bills that were passed on the last day of the session, as follow: Agricultural college, \$22,000; agricultural college, \$10,000; normal school, Valley City, \$20,455; normal school, Mayville, \$20,900; deaf school, \$19,250; insane hospital, \$109,750; university deficit, \$8,500; university, \$50,720; Penitentiary, \$48,350; Soldiers' Home, \$12,200. The reasons given for the veto were the lack of time to consider the amounts and the fact that the aggregate was largely in excess of the probable revenue that would be applicable to the purpose. As the caucus conference committee was unable to agree on a plan to reduce the appropriation and the Governor would not withdraw the vetoes, the bills were again passed.

A bounty on the destruction of wolves was provided for; a levy of one tenth of a mill is to be made for the purpose.

A new revenue law was enacted making many changes in the manner of levying and collecting taxes and correcting the conflicting and ambiguous provisions of the former law. A retroactive tax law provides for taxation of all property on lands not owned by the owners of the buildings which has escaped taxation since 1889. This is designed to tax property located on the railroad right of way.

An act to facilitate the collection of delinquent taxes for 1895 and preceding years is estimated to involve about \$670,270 in the counties and \$350,000 to \$500,000 from railroad companies.

It was provided that grain commission men or dealers must file a bond in the sum of \$10,000 with the Secretary of State to guarantee their payment of sums due to farmers who ship grain.

A law was made to compel insurance companies to pay taxes of 5 per cent. on gross premiums for 1897 and 2½ per cent. after that year. The law taxing insurance was omitted from the revised codes of 1895, and this bill provides for the 1896 tax now unpaid.

The law limiting loans by State banks to three times the amount of capital was repealed.

The election laws were so amended that hereafter a candidate's name can not go on the official ballot more than once. If nominated by more than one party, he must choose the one on whose ticket he wishes to appear. The new law also provides for a

separate ballot for all constitutional amendments, which must appear in full on the ballot, and for any other question other than the selection of public officers.

The Edwards precinct law was repealed. A new bill provides for a residence of ninety days in a precinct as a qualification.

It was provided that any district veterinarian may inspect any cattle, horses, or sheep that may be brought into his district from another State and unloaded to graze and run at large, and charge a fee of 5 cents for each sheep, 15 cents for each head of cattle, and \$1 for each head of horses.

A new railroad law was enacted under which the Commissioners of Railroads are required, within sixty days of the time the law takes effect, to fix maximum rates for the common carriers of the State. The law also makes provisions for various other matters in the regulations of common carriers.

A tax commission was appointed to adjust the delinquent taxes of the Northern Pacific. The following concurrent resolution passed both houses: "It being evident that railroad property within the State is returning good revenue on capitalization, ranging from \$24,000 to \$60,000 per mile, while paying taxes on mere nominal valuation, and the necessity for revenue for State institutions being apparent, the State Board of Equalization is hereby directed to assess all railroad property at a just and fair valuation, which in no case in future shall be less than \$5,000 per mile."

A bill to forbid the use of convict labor for manufacturing or other purposes was amended so as to permit the sale of convict farm products and brick, and was passed in that form. One proposing to employ convicts in mining coal for State institutions was defeated. The educators of the State in conference prepared a bill, which was passed, making changes in the school laws, which are not radical, but tend to simplify the work of the State Department of Instruction.

The laws in regard to the appointment of Penitentiary and reform school boards were amended.

A memorial to Congress was adopted, asking the reduction of the price of school lands to \$5 an acre.

Concurrent resolutions were carried expressing sympathy with the Cubans, and requesting the Superintendent of Instruction to take measures to secure appropriate celebration of Lincoln's Birthday in the schools.

The constitutional amendment proposed by the session of 1895, giving the Legislature power to impose penalties for failure to vote at general elections, was also passed at this session and now goes to the people.

The salaries of the Railroad Commissioners were reduced to \$1,200, and it was provided that they should have \$200 a year for expenses.

A committee that was appointed to examine the workings of the prohibitory law submitted the testimony taken, reporting that the law was fairly well enforced in several localities where public sentiment was in favor of doing away with the liquor traffic; but that in other places there were open violations of the law; that officers were elected with the understanding that they would not enforce it; that licenses were issued under city ordinances to sell "soft drinks" or run "shooting galleries," which were in effect licenses to sell intoxicating liquors.

A bill returned without approval was one changing the penalty clause in the prohibitory law so as to make it read "fine or imprisonment" instead of "fine and imprisonment." This bill caused much excitement through the State, and it was alleged that \$20,000 had been spent by the liquor interest to carry it through. It was defeated the day before

the final adjournment, but was brought up again the last day and "railroaded" through both houses under suspension of the rules. It was vetoed.

A bill to resubmit the prohibition clause of the Constitution to popular vote was defeated.

Among other enactments were:

Refunding the bonded indebtedness of the State, and funding other indebtedness.

Requiring meetings of stockholders of domestic corporations to be held within the State.

Providing for forfeiture of corporate franchises on failure to comply with the laws as to meetings and employment of agents.

Providing for a Trans-Mississippi Fair Commission.

For making estates pay the cost of keeping patients in the insane asylum.

Repealing the Russian-thistle law, and refunding to counties unexpected moneys collected under it.

Allowing discretion as to the foreclosure of contracts for the sale of school lands so as to give relief to purchasers who have been unable to keep up their payments.

Offering bounties for the arrest and conviction of stock thieves.

Providing for a school of forestry at Bottineau.

For the organization of children's home societies.

To prevent the adulteration of candy.

Permitting bicycles to be taken as luggage.

Regulating the practice of osteopathy.

Providing for an issue of bonds to raise funds for building for the Industrial School, at Ellendale, and the Reform School, at Mandan.

Making Lincoln's Birthday a legal holiday.

Providing for the appropriation by counties of a sum for the purchase of game birds to stock the woods and fields of the State.

NORTHWEST TERRITORIES OF CANADA. Constitutional Changes.—The year 1897 was all important for these vast geographical portions of the Dominion. They were given the self-governing status of a province, and they shared generally in the results of the gold discoveries in the Klondike—a region forming part of their extreme north-western borderland.

The step by which effect has been given to an act passed by the Dominion Parliament in June for the better government of the Northwest Territories is an interesting illustration of the growth of constitutional powers under the liberal institutions of the British Empire. The Territories do not as yet pay their own expenses, and therefore do not enter into the full dignity of rights equal to those of the other provinces of the Dominion; but they will for the future enjoy the privileges of responsible self-government, subject to certain limitations, and take something like provincial rank. The effect of the act, as defined by the Minister of the Interior, is to "give to the people of the Territories a government which shall not have the full powers of a provincial government, but in so far as they have power to deal with subjects they shall do so in the same way as the other provinces. They will have ministers who are responsible to the Legislature, and the rules and precedents that apply to the provincial governments will apply to the Government of the Territories."

Government.—The Government sworn in at Regina during the summer was practically the same as the old Executive Council. Mr. Mackintosh remained Lieutenant Governor, and Hon. F. W. G. Haultain became Premier and Attorney-General, Hon. J. H. Ross Provincial Secretary and Commissioner of Public Works. Hon. H. Mitchell, Hon. C. A. Magrath, and Hon. H. G. V. Bulvea were the other ministers, without portfolio. The

third session of the third Legislature was opened Oct. 28.

Gov. Mackintosh, in his speech from the throne, congratulated them upon the many evidences of prosperity to be seen all over the Territories as a result of a bountiful harvest and the sound condition and good prospects of all the important industries. The wonderful discoveries of mineral wealth in hitherto unexplored parts of the Territories, and the almost absolute certainty of establishing ready means of access to the new gold fields from the settled portions of the country, promised, he thought, most beneficial results in the way of opening up new markets for staple products; while the building of the Crow's Nest Railway would enable stock raisers and agriculturists to avail themselves of the constant and increasing demand for food supplies of all kinds from the rich mining regions of the neighboring province of British Columbia. Continuing, he said:

"Since the last meeting of the Legislature important changes in the Constitution of the Territories have been made by the act passed at the last session of the Federal Parliament. In accordance with the provisions of that act I have chosen an Executive Council, and can now congratulate the Territories upon having obtained a completely responsible system of government. In consequence of this change, a reorganization of the offices of the Government and the creation of public departments for the carrying on of the public service will be found necessary, and measures having those ends in view will be submitted for your consideration."

A deputation composed of the Premier went to Ottawa later to ask for a larger subsidy, and to urge that the rich Yukon districts be left under Territorial control and not transferred to Manitoba, as had been suggested.

NOVA SCOTIA, PROVINCE OF. The Legislature convened on Jan. 21, 1897. Lieut.-Gov. M. B. Daly, in his speech from the throne, said:

"An abundant harvest has rewarded the labor of the farmers in all departments, though in horticulture the prices, owing to the large production throughout the world, have been low. The fisheries likewise have been generally successful, and the catch has been large, though in this important industry prices have not been so remunerative as could have been desired.

"The mining industry gives tokens of continued improvement. I have much pleasure in announcing to you that the output of coal for 1896 was the largest in the history of the province, and the increase has been confined very largely to the coal mines of Cape Breton. The prospects for the present year are also most encouraging. The gold-mining operations for the year show an increase over the preceding year, and the industry generally seems to give promise of more permanent progress by reason of the introduction of scientific methods and the systematic working of low-grade ores.

"During the recess the Judicial Committee of the Privy Council, the highest court of appeal in the empire, has given judgment in a case involving the rights and privileges of the Legislature of this province, and incidentally involving the rights and privileges of all provincial legislatures throughout the Dominion, and the judgment sustains in the fullest degree the rights and powers of provincial legislatures to maintain order and uphold their dignity.

"My Government, very soon after the last meeting of the Legislature, appointed a commission to make a thorough investigation into the working of the Victoria General Hospital, which commission devoted considerable time and attention to making exhaustive inquiries into all branches of the

administration of that important institution. Their report will be laid before you.

"The Coast Railway Company, with whom a contract had been made for a narrow-gauge railway, have applied during the year for an alteration in the terms of the contract whereby they could construct a standard-gauge railway and obtain the usual subvention of \$3,200 per mile. A new contract has accordingly been entered into on that basis, which will be submitted to you. Considerable progress has been made in the construction of this road during the past year. The other railway companies which were either under contract or proposing to construct lines of railway in different parts of the province have made no substantial progress in the work of construction.

"The difficulty in disposing of the excessive fruit crop during the past season has called special attention to the question of cold storage, which is becoming an important element in the agricultural and fishing industries of the country, is being largely adopted in other countries, and is receiving encouragement from the Federal Government. I invite your attention to the subject, with a view of securing to this province the advantages of a system so vitally important to its various industries.

"The subject of land titles has been engaging the attention of the governments of various countries for some years past. The desirability of having land held by the most certain tenure and upon easy terms of transfer has been recognized as a matter of the greatest importance. A measure has been prepared looking to the introduction of the system of the registration of land titles.

"The subject of the probate court, which engaged your attention at the last session of the Legislature, will be again submitted to you in the form of a measure looking to changes and reforms in the administration of estates.

"Among other measures to be submitted will be amendments in relation to the mining laws; a change in the act relating to succession duties, whereby reciprocity is to be obtained with the Imperial Government in respect to property of Nova Scotians situate in Great Britain, and of property of the inhabitants of the United Kingdom situate in Nova Scotia; and a measure touching the road and bridge service."

During the session, on March 1, a joint address of the Legislative Council and House of Assembly of Nova Scotia to the Queen was passed amid much enthusiasm.

The Legislature adjourned on March 1 after passing many measures, of which the following were the most important:

To amend the judicature act.

To incorporate the Dominion Eastern Railway Company, limited.

Respecting the magistracy.

To incorporate the Cape Breton Iron Company, limited.

To incorporate the Equitable Savings' Loan and Building Association.

To amend the law respecting mines and minerals.

To amend chap. viii of the acts of 1896 entitled "An Act to prevent the spread of diseases affecting fruit trees."

To incorporate the Touquoy Gold Mining Company, limited.

To incorporate the Maritime Young Men's Christian Association.

To amend the game act of 1896.

To incorporate the Oriental Gold Mining and Development Company, limited.

To revive and amend chap. cxlii of the acts of 1889 entitled "An Act to incorporate the Nova Scotia Mining and Prospecting Company, limited."

To amend the town's incorporation act, 1895.

To authorize the granting of aid toward providing cold storage for agricultural and other products.

To amend the liquor-license act of 1895.

To incorporate the Cape Breton Oil Company, limited.

To incorporate the Dominion Granite Company, limited.

Respecting the Golden Group Mining Company, limited.

To provide for licensing boarding houses for infants under twelve years of age.

To amend an act to incorporate the North Sydney Mining and Transportation Company, limited.

To incorporate the Cow Bay Gold Mining Company, limited.

The elections were held on April 20, and the government of Hon. G. H. Murray was sustained by an immense majority. The Conservatives, under J. F. Stairs, were almost annihilated politically—only four being returned to the provincial Legislature. The main issue presented by the Opposition was the charge of extravagance, piling up of debt, and annual deficits. This was largely denied, and was certainly not accepted by the electorate.

Finances.—The assets of the province as announced on Sept. 30, 1896, were as follow: Counties road service, \$101,329.81; county of Halifax, education, \$13,127.73; Dominion of Canada provincial debt account, \$1,056,179.21; education, county loan, \$18,777; Hospital for Insane—due by municipalities, \$18,721.37; due by private patients, \$6,385.73; due counties, old accounts, \$32,622.06; department of mines, royalty, etc., \$86,827.39; balance of sinking fund in National Provincial Bank of England, \$85.70; total, \$1,334,056.

The liabilities were as follow:

Provincial debentures payable in Halifax.....	\$2,043,500 00	
Provincial debentures payable in London.....	£200,000	
Less canceled by sinking fund.....	4,000	
	£196,000	953,866 66
Special loans:		
In England..... (£40,000)	\$194,666 66	
In Halifax.....	120,000 00	
		314,666 66
Banks in Halifax.....		118,879 39
Total.....		\$3,430,912 71

The province is also liable on a guarantee of interest on £50,000 sterling debentures of the Windsor and Annapolis Railway.

The provincial treasurer's statement of the expenditure of the province chargeable to revenue for the year ending Sept. 30, 1896, was as follows: Windsor and Annapolis Railway, \$14,641.25; commutation road tax, Guysboro, \$250; Miner's Relief Society, \$2,896.19; salaries, \$22,152.91; electoral lists, \$102.05; estreats, \$275; private bills, \$150; game licenses, \$880. Works departments, \$17,011.48; Crown lands, \$1,816.46; public charities, \$128,721.79; legislative library, \$1,965.70; miscellaneous, \$22,401.08; legislative expenses, \$46,466.88; importation of horses, \$5,159.72; sinking fund, \$4,866.66; agriculture, \$20,911.07; school of agriculture, \$987.15; succession duties, \$30; interest, \$15,687.76; packets and ferries, \$35,851.30; debenture interest, \$124,434.24; criminal prosecutions, \$6,548.08; Crown lands, \$7,520.34; medical college, \$800; public printing, \$8,777.67; mines, \$16,813.85; provincial engineer's office, \$11,234.40; education, \$243,308.64; road grant, \$91,232.16; total, \$853,893.83.

The following was the revenue for the same period: Fees, mines, \$426; mines, \$276,602.90; Windsor and Annapolis Railway, \$12,401.09; commutation

road tax, Guysboro, \$250; subsidy, \$432,810.08; fees, \$881.19; gazette office, \$1,898.45; estreats, \$2,606.06; private bills, \$1,210; marriage licenses, \$5,387.94; game licenses, \$700.68; miscellaneous, \$18,488.23; importation of horses, \$3,303.36; succession duties, \$18,253.04; agriculture, \$653.41; Victoria General Hospital, \$5,685.36; interest, \$353.35; Crown lands, \$16,932.70; provincial engineer's office, \$23.02; education, \$963.72; Hospital for Insane, \$44,298.55; sinking fund, \$30.66; balance, \$12,734.04; total, \$853,893.83.

Education.—The number of schools increased from 2,305 to 2,312; the pupils enrolled from 100,555 to 101,032; the number of trained teachers from 616 to 690; and the total day's attendance made by pupils from 10,773,255 to 11,061,572.

The amount of money raised by sectional assessment was less than that of the previous year by a comparatively small amount, a little more than \$2,000; but the total provincial grants were greater by more than \$3,500, making the total expenditure for public education about \$1,500 greater than in 1895. On account of the increased attendance at school, however, the cost of education per pupil was reduced about 3 cents. The total cost this year, including all assessments on the school sections, the county assessment, and all payments from the provincial treasury to teachers and for the general administration was for each pupil enrolled \$8.05, or for each pupil "daily present on an average" \$15.06.

The high-school work as tested by the provincial examination has rapidly accommodated itself to the new standard. Nothing will show this more clearly than the series of results of the examinations from the last year of the teachers' examination. The popularity of the present system is indicated by the rapidly growing number of candidates presenting themselves from year to year.

According to the annual report of the chief superintendent the Normal School, with its additional

facilities, re-enforced by the neighboring School of Agriculture, "is giving a better training to the teachers graduating. Attendance for the minimum time prescribed is not sufficient to win a diploma from the institution."

The Coal Trade.—The coal-trade returns for the twelve months ended Sept. 30, 1896, were as follow: Sold in Nova Scotia, 666,403 tons; New Brunswick, 252,293 tons; Prince Edward's Island, 94,236 tons; Newfoundland, 63,000 tons; Quebec, 795,060 tons; West Indies, 1,222 tons; United States, 174,919 tons. The total production was 2,235,472 tons, compared with 2,089,245 tons in 1895.

Gold.—For the year ending Sept. 30, 1896, the production was, in ounces, as follows: Wine Harbor, 501; Gold river, 432; Fifteen-Mile Stream, 3,151; Renfrew, 389; Stormont, 5,076; Brookfield, 4,683; Caribou and Moose river, 2,864; Uniacke, 3,732; Sherbrooke, etc., 2,796; Waverley, 534; Central Rawdon, 531; Cow Bay, 240; Tangier, 85; localities unproclaimed and other districts, 577; total, 25,596.

Railroads.—The aggregate traffic for the twelve months ending Sept. 30, 1896, was as follows: Dominion Atlantic Company, 269,653.10 passengers, 219,112.03 tons of freight; Cumberland Coal and Railway Company, 8,447.29 passengers, 63,201.72 tons of freight; Sydney and Louisburg Railway, 20,882.33 passengers, 217,160.50 tons of freight; Nova Scotia Central Railway, 24,120.20 passengers, 22,063.04 tons of freight; Canada Coals and Railway Company, 2,964.40 passengers, 21,403.92 tons of freight; total, 326,067.32 passengers and 542,941.21 tons of freight.

Agriculture.—The number of agricultural societies in the province that have qualified for participation in the Government grant for 1896 and are now in active operation is 85. The number of members is 4,888. The subscription paid by members amount to \$5,675.30. The Government grant is \$8,000.



OBITUARIES, AMERICAN. **Adams, William Taylor** (known as **OLIVER OPTIC**), author, born in Medway, Mass., July 30, 1822; died in Boston, Mass., March 27, 1897. In youth he worked on a farm in summer and attended school in winter, and when eighteen years old he began teaching, subsequently becoming principal of the present Harris Grammar School, in Dorchester. After engaging in the hotel business with his father for a few years, he resumed teaching, and was so employed till 1865, when, at the request of Messrs. Lee & Shepard, the publishers, he resigned to apply himself wholly to story writing. In this he was eminently successful. He visited Europe a dozen times and traveled through nearly every country there, making his last trip in 1896, when he went round the world, stopping in China, Japan, and other Eastern countries. For his domestic stories he traveled through each of the United States and each of the British North American provinces and acquired a noteworthy familiarity with American history. He published his first book, "Hatchie, the Guardian Slave," in 1853, and on his seventy-fourth birthday, in 1896, he had written 100 books, besides several hundred stories in periodicals. In the course of his long career he was also editor of "Oliver Optic's Magazine," "The Student and Schoolmate," and "Our Little Ones," and from 1893 he was an editor of "The Whole Family." Many of his works were issued in series, and among these

were "The Boat-Club Series" (6 vols.); "The Riverdale Stories" (12 vols.); "The Woodville Stories" (6 vols.); "Young America Abroad" (2 series of 6 vols. each); "The Starry Flag Series" (6 vols.); "The Lake-Shore Series" (6 vols.); "The Onward and Upward Series" (6 vols.); "The Yacht-Club Series" (6 vols.); "The Great Western Series" (6 vols.); "The Boat-Builder Series" (6 vols.); and "The All-over-the-World Series" (8 vols.).

Allen, Frederick De Forest, philologist, born in Oberlin, Ohio, in 1844; died in Cambridge, Mass., Aug. 4, 1897. He was educated at Oberlin College and the University of Leipsic; was a professor in the University of Tennessee in 1866-'68 and 1870-'73; became a tutor at Harvard in 1873; held a chair in the University of Cincinnati in 1874-'79; and then spent a year as professor at Yale. In 1880 he accepted the chair of Classical Philology at Harvard, which he held till his death. His publications include an edition of the "Medea" of Euripides (1876); "Remnants of Early Latin" (1880); a revision of "Hadley's Greek Grammar" (1884); "Greek Versification in Inscriptions" (1888); and a large number of volumes of the ancient classics which he edited.

Allen, Harrison, anatomist, born in Philadelphia, Pa., April 17, 1841; died there, Nov. 14, 1897. He was graduated in medicine at the University of Pennsylvania in 1861, became an assistant surgeon

in the regular army in 1862, and resigned with the brevet rank of major in 1865. He was called to the chair of Comparative Anatomy and Medical Zoölogy at the medical school of the University of Pennsylvania, which he held till 1878, when he was transferred to the chair of Physiology. He remained in the last chair till May, 1895, and was then retired as professor emeritus. In 1878 he also became Professor of Anatomy and Surgery at the Philadelphia Dental College, and for several years after 1870 he was surgeon to the Philadelphia Hospital. He was President of the American Laryngological Association in 1886, and President of the American Anatomical Society in 1891-'93. He was the author of numerous monographs and books, including "Outlines of Comparative Anatomy and Medical Zoölogy" (1867); "Studies in the Facial Region" (1874); "An Analysis of the Life Form in Art" (1875); and "System of Human Anatomy" (1880).

Alvord, Thomas Gold, lawyer, born in Onondaga, Onondaga County, N. Y., Dec. 20, 1810; died in Syracuse, N. Y., Oct. 26, 1897. He was graduated at Yale in 1828, admitted to the bar in 1832, and practiced till 1846. In 1844 he entered active political life as a Democrat and was elected to the State Assembly, where he served through fourteen terms, the last one being that of 1882. In 1861 he became a Republican; in 1858, 1864, and 1879 he was Speaker of the House; in 1864 he was elected Lieutenant Governor of the State; in 1867-'68 he was a member of the Constitutional Convention; in 1878 he was chairman of the Apportionment Committee of the House; and in 1894 he was vice-president of the Constitutional Convention. For many years he was engaged in the manufacture of salt. He was considered a high authority on parliamentary law.

Atkinson, John, clergyman, born in Deerfield, Salem County, N. J., Sept. 6, 1835; died in Haverstraw, N. Y., Dec. 8, 1897. He entered the old New Jersey Conference of the Methodist Episcopal Church in 1853, and in 1858 was assigned to the newly created Newark Conference. Subsequently he was attached to the Rock Island Conference of Illinois, the Detroit Conference of Michigan, and again to the Newark Conference of New Jersey. He held pastorates in Newark, Jersey City, Chicago, Bay City, Adrian, and lastly in Haverstraw. He was a frequent contributor to the denominational press; was the author of the hymn "Shall we meet beyond the River"; and among other works had published "The Living Way" (1856); "Memorials of Methodism in New Jersey" (1860); "The Garden of Sorrows" (1868); "The Class Leader" (1874); "Centennial History of American Methodism" (1884); and shortly before his death a work on the "Wesleyan Movement in America."

Babcock, James Francis, chemist, born in Boston, Mass., Feb. 23, 1844; died in Dorechester, Mass., July 20, 1897. He was graduated at the Lawrence Scientific School, where he applied himself wholly to chemistry, in 1862, and established himself in Boston as an analytical chemist and chemical expert. In 1869 he was elected Professor of Chemistry in the Massachusetts College of Pharmacy, where he remained till 1874, when he was called to the similar chair in the Boston University. In the following year he was appointed State assayer and inspector of liquors. He held this office till 1885, when he became city inspector of milk in Boston, serving as such till 1889. While State assayer he secured the insertion in the liquor statutes of the definition of the term "intoxicating liquor" known as the 3-per-cent. limit, and while inspector of milk he secured the suppression of the use of coloring matter in milk and largely increased the efficiency of the office. He invented

the fire extinguisher bearing his name, was widely known as a lecturer on scientific subjects, published numerous reports on sanitation and the chemistry of food, and was an expert chemical witness in important trials.

Bacon, John Edmund, jurist, born in Edgefield, S. C., March 3, 1832; died in Columbia, S. C., Feb. 19, 1897. He was graduated at South Carolina College in 1851, studied law at the Litchfield (Conn.) Law School, and was admitted to the bar in 1854. He also became an accomplished linguist early in life. In 1858 he was appointed secretary of the United States legation at St. Petersburg, and for a time was acting as *chargé d'affaires*. While at this post he married the daughter of ex-Gov. Pickens, then United States minister to Russia. On the election of Abraham Lincoln to the presidency he resigned his office, returned to South Carolina, and entered the Confederate army, serving till the close of the war and rising from the ranks to the grade of major. In 1866 he was selected to accompany Gov. James L. Orr to Washington to negotiate for the restoration of South Carolina to the Union; was elected district judge of Edgefield in 1867, and officiated till removed by the Federal military commander; and in 1872 removed to Columbia and was the unsuccessful Democratic candidate for Congress. The reopening of South Carolina College by act of the Legislature in 1873 was due in the largest measure to his efforts. In 1884 he was a Democratic presidential elector, and in 1886 was appointed United States *chargé d'affaires* in Uruguay and Paraguay.

Baker, William Spohn, author, born in Philadelphia, Pa., April 17, 1824; died there, Sept. 8, 1897. He acquired a private-school education and studied conveyancing, which he practiced till 1880, afterward applying himself wholly to special historical research and writing. He was one of the most enthusiastic and thorough students of Washingtoniana, and made the largest and finest collection of biographies, sketches, portraits, medals, and private papers of Washington in existence. Among his special publications are "Engraved Portraits of Washington," "Medallie Portraits of Washington," "Character Portraits of Washington," "Washington's Itinerary," and "Washington after the Revolution." At the time of his death he had in press "Washington in Philadelphia." His other publications included "American Engravers and their Works," "William Sharp, Engraver, and his Works," and "The Antiquity of Engraving and the Utility and Pleasures of Prints."

Bateman, Newton, educator, born in Fairfield, N. J., July 27, 1822; died in Galesburg, Ill., Oct. 21, 1897. He accompanied his father's family to Illinois in 1833; spent his early youth at hard manual labor; worked his way through Illinois College, being graduated in 1843; studied for the ministry at Lane Theological Seminary; and became a traveling agent for an historical chart. After nearly two years spent in traveling in the United States he began his noteworthy career as an educator as principal of a private school in St. Louis. From 1847 till 1851 he was Professor of Mathematics in St. Charles College, and in the last year was placed in charge of the public free school in Jacksonville, having also to discharge the duties of principal of the high school, superintendent of the city schools, and school commissioner of the county. In 1858 he was elected State Superintendent of Public Instruction. During 1863-'64 the State was in Democratic hands, and then failing of re-election he was employed in the office of the provost marshal general of Illinois. His tenure of the office of superintendent was marked by a series of official reports of high value, in which the various phases of public

education were ably discussed, and much of the excellence of the present school laws of Illinois is due to his sagacity. He was President of Knox College, Galesburg, Ill., from 1875 till 1892, when impaired health caused him to resign. Dr. Bateman was also a member of the Illinois State Board of Health from 1877 till his death.

Bates, Newton Lemuel, physician, born in Parma, Monroe County, N. Y., Nov. 16, 1837; died in Washington, D. C., Oct. 18, 1897. He received his medical degree from the Buffalo University in February, 1861, and in June entered the navy with the rank of assistant surgeon. He was promoted passed assistant surgeon, June 22, 1864; surgeon, Sept. 16, 1865; medical inspector, Jan. 15, 1881; and medical director, Sept. 1, 1888; was placed in charge of the Naval Museum of Hygiene, May 28, 1895; and was appointed surgeon general of the navy about two weeks before his death. Dr. Bates had served on sea duty more than ten years, and on shore or other duty nineteen years. He was at the New York Naval Laboratory in 1864-'67, was fleet surgeon of the South Atlantic station in 1873-'76, and subsequently of the European station.

Beasley, Mercer, jurist, born in Philadelphia, Pa., in 1815; died in Trenton, N. J., Feb. 19, 1897. He was a son of the Rev. Frederick Beasley, provost of the University of Pennsylvania in 1813-'28, took a partial course in Princeton College, and studied law in Trenton and Elizabeth. He was admitted to the bar in 1833, settled in Trenton, and soon became distinguished for the extreme care with which he prepared his pleadings. In 1864 he was appointed Chief Justice of the Supreme Court of New Jersey, and he was reappointed in 1871, 1878, 1885, and 1892. As a practitioner he was foremost in the examination of cases usually submitted to the appellate court, and when he became Chief Justice he brought to that office great experience in these cases. He had a remarkable memory and a quick, analytical mind; was mild and helpful in disposition; and was strongly averse to technicalities. During his official career he swore nine governors into office.

Beecher, Eunice White, widow of Henry Ward Beecher, born in West Sutton, Mass., Aug. 26, 1812; died in Stamford, Conn., March 8, 1897. Her father was Artemas Bullard, a physician of English descent, who, besides attending to an extensive practice, owned one of the largest farms in New England. Eunice was educated in her native town and at Hadley, Mass., and while she was studying in the last town a brother became a classmate of Henry Ward Beecher at Amherst College. During a vacation young Beecher accompanied the brother to the farm, and there met Eunice. An engagement of marriage resulted, which was not fulfilled till after Mr. Beecher was installed as pastor of a church in Lawrenceburg, Ind., more than seven years afterward. The wedding took place at the home of the bride's parents, and immediately afterward the couple went to their new Western home. After two years' service at Lawrenceburg, Mr. Beecher resigned his charge, and went to Indianapolis, whence in 1847 he removed to Brooklyn, N. Y., there spending the remainder of his life. Ten children were born of this union, of whom four survive the mother. From the time of their settling in Brooklyn till Mr. Beecher's death, in 1887, the life of Mrs. Beecher was closely interwoven in that of her distinguished husband, and yet it had a strong individuality, which developed a great personal influence for good. After her husband's death she lived quietly in Brooklyn. In 1891 she made a trip to the Pacific coast to visit her youngest son; in 1895 she went alone to Port Townsend, Wash., to celebrate her eighty-third birthday with a son's

family; and shortly before her death she went to Stamford, Conn., to visit her daughter, and there met with an accident which proved too severe for her remarkable vitality. Her last appearance in public was at the unveiling of the statue of her husband in Brooklyn, in 1891. Mrs. Beecher was for many years a regular contributor to periodicals, principally on domestic topics, and had published "From Dawn to Daylight: A Simple Story of a Western Home" (1859); "Motherly Talks with Young Housekeepers" (1875); "Letters from Florida" (1878); "All around the House: or, How to make Homes Happy" (1878); and "Home" (1883).

Bell, Isaac, benefactor, born in New York city, Aug. 4, 1814; died there, Sept. 30, 1897. He began his business career when fourteen years old in a banking house, and in 1836 was sent South to look after important cotton interests, first in Charleston, S. C., and afterward in Mobile, Ala., where he established himself in business, and remained till 1856. While in Mobile he became active in politics, and held several offices, and was also vice-president and chairman of the Southern Bank of Alabama. On his return to New York in 1856 he interested himself in large financial and other concerns, with many of which he was connected until his death. He also entered on a career of public benefaction. His business operations yielded him a large fortune, of which he gave liberally to charitable and philanthropic enterprises. Soon after his return he was appointed one of the ten governors of the almshouse, and when that institution was merged into the Department of Charities and Correction he was appointed one of the commissioners, and acted as president from 1857 till 1873. Chiefly through his exertions Bellevue Hospital was established, as well as the Bellevue Hospital Medical College, of whose trustees he was president for many years. In connection with the work of the hospital he established the system of ambulance service. He also was largely instrumental in establishing the Normal College, and became responsible for the school ship "Mereury," under control of the Department of Charities and Correction, and of the "St. Mary," loaned to the Department of Education. During a large part of this period Mr. Bell was a member of the Department of Education. Throughout the civil war he was conspicuous among the business men of New York who composed the Union Defense Committee, by whom steamers were chartered for Government use, regiments were raised for the National army, and several million dollars collected and disbursed for the benefit of New York volunteers and the relief of soldiers' wives, widows, and orphans. After the draft riots of 1863 he, with Paul Forbes and Leonard Jerome, organized the Police Riot Relief fund, and he was custodian of the fund till within a few years. Mr. Bell was also a Commissioner of Immigration for several years.

Biddle, Arthur, lawyer, born in Philadelphia, Pa., Sept. 23, 1852; died in Atlantic City, N. J., March 8, 1897. He was graduated at Yale in 1873, studied law, and was admitted to the bar in 1878. Subsequently he became a member of his father's firm, and applied much of his time to research in certain branches, the results of which appeared in his publications: "Treatise on the Law of Stock Brokers" (1881); "Treatise on the Law of Warranties in the Sale of Chattels" (1884); and "The Law of Insurance" (2 vols., 1893).

Birch, William, minstrel, born in Utica, N. Y., Feb. 26, 1831; died in New York city, April 20, 1897. He began his career as a negro minstrel when thirteen years old as "end man" of a company playing in New Hartford, and after following the road for six years joined the Fellows combination in New York, where he and George Christy

alternated as end men in two minstrel halls night after night. His first marked success was made in California, whither he went to dig for gold, and where, with Wambold, Bernard, and Backus, he organized the long-famous San Francisco Minstrels. This combination was exceptionally fortunate, and remained on the Pacific coast for six years. In 1857 the troupe established themselves in the hall on Broadway, opposite Niblo's Garden, in New York, where they had another long period of success. From this hall the troupe moved uptown to a house built for them, but the change was unfortunate. Soon Bernard and Wambold retired, then Backus died, and Birch was left to hold the house alone. Speculation in stocks wrought his financial ruin.

Bliss, George, lawyer, born in Springfield, Mass., May 3, 1830; died on Shadow Farm, near Wakefield, R. I., Sept. 2, 1897. His grandfather and father were well-known lawyers, and the latter was also president of several railroad corporations. The son was graduated at Harvard in 1851, continued his studies for two years in Berlin and Paris, and on his return studied law in Springfield and New York and at the Harvard Law School. After his admission to the bar he established himself in practice in New York. In 1859-'60 he was private secretary to Gov. Edwin D. Morgan, in 1861 was appointed to his staff, and in 1862 was appointed paymaster general of New York, with the rank of colonel, and also a captain in the 4th New York Heavy Artillery, and was detailed to the military staff of Gov. Morgan, who had been commissioned a major general of volunteers. In 1862-'63 Col. Bliss, under instructions from the Secretary of War, organized the 20th, 26th, and 31st Regiments of United States colored troops. After the war he resumed his law practice. In 1866 he was appointed attorney for the Metropolitan Board of Excise and the Metropolitan Board of Health, in 1873 President Grant appointed him United States attorney for the Southern District of New York, and in 1881-'83 he assisted the United States Attorney-General in the prosecution of the Star Route postal cases. For more than twenty years prior to 1893 he was active in Republican political affairs. He drew up the New York charter of 1873 and several important amendments afterward made to it, was one of the three commissioners appointed to compile the special and local acts relating to the city of New York in 1879-'80, and subsequently drew up the "New York city consolidation act." He also drew up and procured the passage of the first tenement-house act for the city. While an undergraduate he was associated with David A. Wells in the compilation of the "Annual of Science Discovery" and "Things not generally known," and later in life he published three editions of the "Law of Life Insurance" and four editions of the "Annotated Code of Civil Procedure."

Bluejacket, Charles, Shawnee Indian chief, born in Michigan in 1816; died in Bluejacket, Cherokee Nation, Indian Territory, Oct. 30, 1897. He was the last of a long line of Shawnee chiefs, and hereafter the remnant of that tribe will be ruled by an executive council. Shortly before his death he accepted an invitation of the Wyandotte County (Kansas) Historical Society to revisit the Shawnee township and locate the grave of Ellskwatawa, the "Prophet," that it might be marked with a monument. The fatigue of the journey and the excitement caused by the enthusiastic greetings he received while passing through Kansas City proved too severe for the old man and occasioned his death.

Brittan, Harriet G., missionary, born in England about 1823; died in San Francisco, Cal., April 30, 1897. She was the daughter of a clergyman, who removed his family to Brooklyn, N. Y., during

Harriet's childhood. After acquiring a general education she went to the African missionary field under the auspices of the Domestic and Foreign Missionary Society of the Protestant Episcopal Church, and spent two years teaching in Liberia. While there she wrote a book on "Scenes of Everyday Life in Africa." A severe prostration with African fever caused her to return to her home. In 1862 she became connected with the Woman's Union Missionary Society of America for Heathen Lands, and by it was sent to India, then having but few American missionaries. She reached Calcutta in 1863 with several missionaries who were to work under her directions, and, as superintendent of the Zenana Mission, remained in that field more than fifteen years. Miss Brittan is said to have been the first American admitted to the private apartments of high-caste Indian women, and her sympathy for the women of India generally prompted her to write the books "Kardoo, the Hindoo Girl," and "Shushone, the Hindoo." The proceeds of the sale of her books were applied to missionary work. In 1880 Miss Brittan went to Yokohama, Japan, where she was superintendent of the large mission established for the benefit of Eurasian children till 1893, and was then placed in charge of the Home for Missionaries. At the time of her death she had reached San Francisco on her way to New York.

Brush, Charles Benjamin, civil engineer, born in New York city, Feb. 15, 1848; died there, June 3, 1897. He was graduated as a civil engineer at the University of the City of New York, and his first professional service was with the engineer corps of the Croton Aqueduct Department in 1867-'69. In the last year he established himself in independent practice. He was appointed Adjunct Professor of Civil Engineering in the University of the City of New York in 1874; became full professor and dean of the school of engineering there in 1888; was elected an associate of the American Society of Civil Engineers in 1871, a member in 1877, a director in 1888, and vice-president in 1892; and was for many years a member of the Charity Organization Society. Professionally he was widely known for his work in designing and constructing waterworks throughout the United States and for his connection as engineer with the Washington Bridge over Harlem river in New York, the Hudson River Tunnel, the projected bridge over the Hudson at New York, and the Hoboken Land and Improvement Company. His last important work was as chief engineer of the Hackensack Water Company of New Jersey.

Butler, Charles, philanthropist, born in Kinderhook Landing, Columbia County, N. Y., Feb. 15, 1802; died in New York city, Dec. 13, 1897. He was a son of Medad Butler, the first judge of Columbia County, and a brother of Benjamin Franklin Butler, Attorney-General of the United States in President Jackson's Cabinet. Charles was graduated at Greenville (N. Y.) Academy; studied law with his brother and Martin Van Buren, who had become law partners; was admitted to the bar in 1824, and established himself for practice in Lyons, N. Y. Soon afterward he removed to Geneva, N. Y., and became assistant district attorney of Genesee County and attorney for a New York life insurance company. While acting in the last capacity he was influential with John Jacob Astor, Isaac Bronson, and others, in building up that portion of the State. In 1833 he went to Chicago, then known as Fort Dearborn, and as a town was being laid out there he made large investments in land that was afterward comprised within the limits of the city. He placed his brother-in-law, William B. Ogden, in charge of this property, and the latter became the first mayor of Chicago after its incorporation as a city, in 1837. Subsequently he bought much land

in what is now the city of Toledo, Ohio, and gave the ground on which stand an industrial school and two churches. In 1835 he removed to New York, where among his first successes was the adjustment of the debts of the States of Michigan, Indiana, and Illinois to the satisfaction of the creditors. He was afterward interested in large railroad enterprises in the West. His various operations yielded him wealth and enabled him to accomplish works of beneficence for which he will long be remembered. He was one of the founders of Union Theological Seminary in New York, to which he gave \$100,000, and with which he held official relations till his death. In 1836 he was elected a member of the council of the University of the City of New York, which he served officially till his death, and to which he gave \$100,000. He was also a founder and officer of the Protestant Half-Orphan Asylum of New York, and of the Westchester Temporary Home for Friendless Children. He received the degree of LL. D. from Wabash University and the University of the City of New York.

Butler, Thaddeus J., clergyman, born in Limerick, Ireland, in 1833; died in Rome, Italy, July 16, 1897. He studied in Rome, where he joined the papal choir and became a favorite of Pope Pius IX. After graduation he remained in Rome till he and his three brothers were ordained to the priesthood, and then the brothers came to the United States as missionaries. They settled in Chicago and remained near each other till the outbreak of the civil war. Father Thaddeus became Professor of Theology in the seminary of St. Mary of the Lake, and, on the succession of Bishop Duggan to the episcopal see, secretary to the bishop and chancellor of the diocese. At the beginning of the civil war he went to the field as chaplain of Col. James A. Mulligan's regiment. While he was at Lexington, Mo., a Confederate field hospital was fired on by mistake, and two wounded men were killed. Soon afterward Chaplain Butler and Surgeon William H. Winer, of the same regiment, were captured, tried by drumhead court-martial, and sentenced to be shot, in retaliation for the firing on the hospital. As they were about to be led out for execution an officer on Gen. Price's staff recognized Dr. Winer as an old schoolmate, and, pleading with the Confederate commander, secured a respite, and then a discharge on parole for both captives. Dr. Butler then returned to Chicago, resumed his priestly functions, and built up a prosperous parish in the north side. After serving for some time in Rockford, Ill., he was transferred to Chicago, and placed in charge of St. John's Church, of which he remained pastor till his death. Early in 1897 he was appointed Bishop of Concordia, Kan., and was to have been consecrated on the day following that of his death. He was widely known for his oratorical and vocal accomplishments.

Cameron, Angus, lawyer, born in Caledonia, N. Y., July 4, 1826; died in Milwaukee, Wis., March 30, 1897. He was educated at the Genesee Wesleyan Seminary, Lima, N. Y.; studied law in Buffalo, and was graduated at the National Law School, Ballston Spa, N. Y.; and removed to La Crosse, Wis., to practice in 1857. In 1863, 1864, 1871, and 1872 he was a member of the State Senate, in 1866 and 1867 was a member of the Assembly, and he was Speaker of the House in the last year. In 1864 he was a delegate to the National Republican Convention at Baltimore, and in 1866-'75 was a regent of the University of Wisconsin. He was elected United States Senator in 1875, and again in 1881 for the term ending March 3, 1885. In the Senate he served as chairman of the Committee on Claims and as a member of the Committees on Indian Affairs, Privileges and Elections, and Public Buildings.

Carleton, Charles Arms, soldier, born in Brooklyn, N. Y., May 27, 1835; died in New York city, April 1, 1897. He was a brother of George W. Carleton, the New York publisher, and was associated with him in business at the beginning of the civil war. On April 21, 1861, he enlisted as a private in the 12th New York State Engineer Corps, and he spent the three months' term at Washington and Arlington Heights and in the Virginia and Maryland fields. On the expiration of his term he re-enlisted, became a 2d lieutenant in the 4th New Hampshire Volunteers, and in April, 1862, was appointed acting adjutant of the battalion sent to garrison Fort Clinch, at Fernandina, Fla. He accompanied the battalion to James island, S. C., and took part in the preliminary skirmishes and the assault there, June 16. In April, 1864, he was appointed acting assistant adjutant general on the staff of Gen. Adelbert Ames, with whom he served to the close of the war. He was engaged in the operations at Bermuda Hundred, Va.; was in the battles of Swift Creek, Weir Bottom Church, Falling Creek, Drury's Bluff, Walthall Junction, Cold Harbor, and Chapin's Farm. At Fort Fisher he distinguished himself in the first and final attacks, and was slightly wounded. Honorable mention in official reports was followed by the bestowal on him by President Lincoln of the brevets of lieutenant colonel "for distinguished conduct at the storming of Fort Fisher," and colonel and brigadier general "for gallant and meritorious services during the war." He participated in 21 engagements and sieges. He was mustered out Dec. 19, 1865, and was afterward engaged in business in New York.

Cheever, Henry Theodore, clergyman, born in Hallowell, Me., April 17, 1807; died in Worcester, Mass., Feb. 13, 1897. He was a brother of the Rev. George Barrell Cheever, and was graduated at Bowdoin College in 1834, and, after visiting Europe, at the Bangor (Me.) Theological Seminary in 1840. For several years he was associate editor of the New York "Evangelist," and in the interest of that periodical he visited the South Sea islands. He held several pastorates, and from 1859 till 1864 was secretary and agent of the Church Antislavery Society, but he was best known for his numerous publications. He edited "Memoirs of Nathaniel Cheever, M. D.," his father (1853); "Autobiography and Memorials of Capt. Obadiah Congat" (1855); "Life and Writings of the Rev. Walter Colton, U. S. N." (1856); "Autobiography and Memorials of Ichabod Washburn" (1878); and "Correspondencies of Faith and Views of Madame Guyon" (1886); and wrote "The Whale and his Captors" (1849); "A Reel in a Bottle for Jack in the Dol-drums" (1851); "The Island World of the Pacific" (1852); "Life and Religion in the Sandwich Islands" (1854); "Short Yarns for Long Voyages" (1855); and "Waymarks in the Moral War with Slavery between the Opening of 1859 and the Closing of 1861" (1862).

Christy, Charles, minstrel, born in New York city in 1828; died in Kansas City, Mo., Feb. 13, 1897. He came of a family of actors, and was one of the original Christy Minstrels, founded by his uncle, Edwin P. Christy, joining the *troupe* as a balladist in 1845. He was also an actor in the drama, and had played in support of Edwin Forrest and William Maeready. When the palmy days of the Christy Minstrels were over Charles managed similar combinations in various parts of the country, and was the chief attraction in the one organized by "Coal-Oil Johnny" Steele, soon after the discovery of petroleum in Pennsylvania. For about twenty years he had lived in Texas, managing *vaudeville* shows. In 1892 he went to Kansas City, Mo., with Pain's Novelty Company.

Clark, Alvan Graham, astronomer, born in Fall River, Mass., July 10, 1832; died in Cambridge, Mass., June 9, 1897. He was a son of Alvan Clark, the famous optician and manufacturer of telescopes, and after acquiring a grammar-school education became associated with his father under the firm name of Alvan Clark & Sons. The superiority of the lenses made by the firm was first brought to the attention of astronomers by the Rev. W. R. Dawes, who introduced several of the instruments abroad. Forty years ago the largest telescope that had been made was a 15-inch achromatic instrument made in Europe, and the United States had produced nothing to compare with it. In 1859 the Clarks began work on an object glass with an aperture of 18½ inches, for the University of Mississippi, but the civil war prevented its sale to that institution, and it became the property of the Astronomical Society of Chicago. With this instrument Alvan Graham Clark discovered the companion of Sirius, for which the French Academy awarded him a medal. The next largest instrument was the one made for Princeton College Observatory. In 1870 the firm contracted with the United States Government for a telescope for the Naval Observatory, to be the largest in existence. The original contract called for an instrument with a 24-inch aperture, but as an English instrument of 25 inches had just been completed the contract was changed to 26 inches. On the completion of this telescope, with which Prof. Asaph Hall discovered that Mars had two satellites, the firm made another of the same size for the University of Virginia, known as the McCormick telescope. Then came the great 30-inch instrument for the imperial observatory at St. Petersburg, for which the Emperor presented Mr. Clark with a gold medal weighing half a pound. In 1886 an order for the most powerful telescope in the world was completed for the Lick Observatory, at Mount Hamilton, Cal., with the great aperture of 36 inches. With this instrument the fifth satellite of Jupiter was discovered. Afterward Mr. Clark had made a 20-inch lens for Denver University, one of 24 inches for Percival Lowell, one of similar size for the Harvard Observatory station at Arequipa, Peru, and, the greatest of all ever completed, the wonderful Yerkes lens of 40 inches, a gift of Charles T. Yerkes to the Chicago University, formally installed in the observatory at Lake Geneva, Wis., in 1897. Mr. Clark was a member of the expedition to observe the eclipse of the sun at Shelbyville, Ky., in 1869, and of the eclipse expeditions to Jerez, Spain, in 1870, and to Wyoming in 1878, and had made many discoveries of double stars.

Clark, James Gowdy, balladist, born in Constantia, N. Y., June 28, 1830; died in Pasadena, Cal., in September, 1897. He became favorably known as a concert singer, song writer, and poet early in life, and in his career was closely associated with Ossian E. Dodge, George P. Morris, Nathaniel P. Willis, and other poets of the day. He had a charming voice and sang his own compositions with great effectiveness. Among his most popular songs were: "The Old Mountain Tree," "The Evergreen Mountains of Life," "Freedom's Battle Hymn," "The Children of the Battlefield," "The Beautiful Hills," "The Awakening," and "Star of my Soul," which was sung at his funeral. Mr. Clark served through the civil war in a New York regiment.

Clark, Lewis George, ex-slave, born in Kentucky, about 1811; died in Lexington, Ky., Dec. 16, 1897. He was a son of Daniel Clark by a mulatto woman; was brought up in slavery; escaped to Oberlin, Ohio, in 1841; and spent many years in lecturing through the North against slavery. About four years ago he returned to Lexington, and for some time he was supported by charity. Clark had claimed for many years that he was the origi-

nal of the character of George Harris, in "Uncle Tom's Cabin." His claim, in brief, was set forth as follows: "I came to Maine, where I stayed nearly two years lecturing against slavery. In 1844 I was sent for to come to Cambridgeport. My home was at Mr. A. H. Safford's. During her vacation Mrs. Stowe and her father, who was President of Lane Seminary, at Walnut Hill, Cincinnati, came East and made the Safford house their stopping place. Mrs. Safford was a radical abolitionist. Mrs. Stowe would sit in the parlor and ask me questions. When she got through she would go off to her room and note down what I had said, and then she would come again. She told me afterward that her reason for so doing was that it was generally very hard to get anything from a slave, but that I was inclined to talk, and she was glad to learn many things that I could tell her. She further said that she collected the facts, thinking that they might become useful at some time." After many denials of this claim, Mrs. Stowe, in 1895, said respecting it: "I wish to say that George Harris has no living prototype. I created him." Clark, however, persisted in his claim, and impressed so many with its truthfulness that after his death his body lay in state in the Auditorium in Lexington, the first time that a negro had been so honored in Kentucky.

Clingman, Thomas Lanier, lawyer, born in Huntsville, N. C., July 27, 1812; died in Morgantown, N. C., Nov. 3, 1897. He was graduated as first-honor man at the University of North Carolina in 1832, studied law, and entered political life as a Whig member of the Legislature when twenty-three years old. In 1836 he removed to Asheville, N. C., where he was elected to the State Senate four years afterward. At this period he was known as a brilliant speaker and a remarkably able debater. In consequence of a memorable debate with Charles G. Memminger, of South Carolina, afterward Secretary of the Confederate Treasury, he became one of the foremost of Southern Whigs. In 1843 he was elected to Congress, and, with the exception of one term, he served continuously till 1858. During this service he was one of the most active and constant members of the House. He took part in the discussion of all important measures, frequently provoking personal encounters by his caustic language, and was particularly outspoken against the Bulwer-Clayton treaty. His appointment to the chairmanship of the Committee on Foreign Affairs gave him a powerful influence, and brought him to his feet whenever an international question was under discussion. He was an intense admirer and supporter of Henry Clay, and his comments on his friend's defeat led to a harmless duel between himself and William L. Yancey, of Alabama. In 1858 he was appointed United States Senator to fill the vacancy caused by the appointment of Senator Asa Biggs as United States judge for the district of North Carolina, and afterward he was elected for the term beginning March 4, 1861; but in January of the last year he withdrew from the Senate, and in July was expelled therefrom with other Southern members who had withdrawn without sending in resignations. Soon after withdrawing from the Senate he entered the Confederate army as a colonel; in 1862 was commissioned brigadier general and given command of four regiments of North Carolina infantry; and in April, 1865, he surrendered with Gen. Joseph E. Johnston. His last participation in national politics was as a delegate to the National Democratic Convention of 1868. In his last years adversity overtook him. Gen. Clingman gave much attention to scientific and literary pursuits. He measured the highest point of the Black mountain, since known as Cling-

man's peak, in 1855; determined the highest point of the Smoky mountain, now designated as Clingman's Dome, in 1858; and discovered a variety of rare minerals and opened several important mines of mica in his native State. His principal publications were a volume of his speeches (1878), "Follies of the Positive Philosophers" (1878), and many pamphlets that were intended to prove the efficacy of preparations of tobacco in the treatment of diseases and injuries.

Clitz, John Mellen Brady, naval officer, born in Saekett's Harbor, N. Y., Dec. 1, 1821; died in Washington, D. C., Oct. 10, 1897. He was a son of Capt. John Clitz, of Fort Erie fame; was appointed a midshipman in the navy, April 12, 1837; was promoted passed midshipman, June 29, 1843; master, Aug. 16, 1850; lieutenant, April 6, 1851; commander, July 16, 1862; captain, July 25, 1866; commodore, Dec. 28, 1872; and rear admiral, March 13, 1880; and was retired Oct. 16, 1883. He was on sea service twenty-five years and nine months, and on shore or other duty thirteen years and one month. He served on the "St. Mary's" in the Mediterranean squadron in 1844-'45, and on the bomb-brig "Hecla," of the home squadron, at the capitulation of the castle of San Juan d'Ulloa and the capture of Tuspan in the Mexican War. In 1863 he commanded the "Penobscot," of the North Atlantic blockading squadron, and the "Juniata," of the East Gulf squadron, and in 1864-'65 commanded the steamer "Osceola," of the North Atlantic squadron, took part in both attacks on Fort Fisher, and was commended by Admiral Porter. After the war his principal services were in the ordnance department of the Brooklyn Navy Yard, 1870; as commander of the naval station at Port Royal, S. C., 1876-'77; and as commander of the Asiatic station, 1881-'83.

Coke, Richard, jurist, born in Williamsburg, Va., March 13, 1829; died in Waco, Texas, May 14, 1897. He was a son of Richard Coke, a Representative in Congress in 1829-'33; was graduated at William and Mary College in 1848, and immediately after his admission to the bar removed to Waco, Texas, where he was engaged in practice, when not in public service, till his death. On the outbreak of the civil war he entered the Confederate army as a private, and, after distinguishing himself on several occasions, was mustered out at the close of the war with the rank of captain. In 1865 he was appointed a district judge, and in 1866 was elected a judge of the Supreme Court of the State, where he served one year and was then removed by Gen. Sheridan on the ground of being an impediment to reconstruction. He was elected Governor of Texas in 1873 and 1876. In April, 1877, he was elected United States Senator to succeed Morgan C. Hamilton, Republican, and in 1883 and 1889 was re-elected, serving till 1895, and declining a renomination. In his last term he was chairman of the Committee on Fisheries, and a member of the Committees on Commerce, the Judiciary, Revolutionary Claims, and the Transportation and Sale of Meat Products.

Colby, Charles Edwards, chemist, born in Lawrence, Mass., Oct. 18, 1855; died in New York city, Oct. 15, 1897. He removed to New York with his parents in 1868, was graduated at Grammar School No. 35 in 1872, studied a year in Germany, and was graduated in engineering at Columbia College in 1877. Immediately afterward he became assistant to Dr. Charles F. Chandler, Professor of Analytical Chemistry at Columbia, and was associated with him till 1889, when the chair of Organic Chemistry was created for him. He was a careful, thorough investigator, and was author of numerous contributions to technical periodicals and cyclopædias.

Colgate, Samuel, manufacturer, born in New York city, March 22, 1822; died in Orange, N. J., April 23, 1897. He was a son of William Colgate, who established the soap and perfumery house of Colgate & Co., in New York, in 1806, and after completing his education Samuel joined the firm, and subsequently succeeded his father as its head. Another son of William, James Boorman Colgate, became a banker and head of the firm of J. B. Colgate & Co. The father was one of the organizers of the American Bible Union, and he and both sons became deeply interested in the Baptist Church. Much of the large wealth of the Colgate families was applied to religious, educational, and charitable enterprises. The brothers erected the Colgate Academy building, at Hamilton, N. Y., at a cost of \$60,000, and in recognition of their munificent gifts to Madison University, at that place, the name of the institution was changed to Colgate University in 1889. Samuel was a contributor to every charity in Orange, N. J.; was one of the founders and main supporters of the North Orange Baptist Church; and was for many years an officer of the Baptist Missionary Union, the American Tract Society, the Baptist Home Missionary Society, the New York Baptist Educational Society, and the New York Society for the Suppression of Vice. (See GIFTS AND BEQUESTS.)

Colhoun, Edmund R., naval officer, born in Chambersburg, Pa., May 6, 1821; died in Washington, D. C., Feb. 17, 1897. He was appointed a midshipman in the United States navy, April 1, 1839; was promoted passed midshipman, July 2, 1845; master, Jan. 6, 1853; lieutenant, June 27 following; commander, Nov. 17, 1862; captain, March 2, 1869; commodore, April 26, 1876; and rear admiral, Dec. 3, 1882; and was retired, May 6, 1883. He was on sea service for sixteen years and seven months, and on shore or other duty for twelve years and seven months. While serving on the frigate "Cumberland," of the home squadron, in 1846-'47, he was present at the first attack on Alvarado, Mexico, and at the capture of Tabasco. From 1853 to 1861 he was out of the service. He commanded the steamers "Shawsheen" and "Hunchback," of the North Atlantic blockading squadron, in 1861-'62, and was in the engagements at Roanoke island and Newbern, and on the Blackwater river below Franklin, Va.; commanded the steamer "Ladona" and the monitor "Weehawken" in 1863, and took part in the actions between July 10 and Sept. 15, including those of Forts Sumter, Wagner, and Beauregard; and as commander of the monitor "Saugus," in 1864-'65, he engaged Howlett's battery on James river and participated in the two attacks on Fort Fisher. In 1866-'67 he was fleet captain of the South Pacific squadron; in 1873-'74 commanded the "Hartford" on the Asiatic station, and also for part of the time the station; in 1877-'81 was commandant of the Mare Island Navy Yard, San Francisco, Cal.; and in 1881-'82 was inspector of vessels in California.

Cope, Edward Drinker, naturalist, born in Philadelphia, Pa., July 28, 1840; died there, April 12, 1897. He was a great-grandson of Caleb Cope, a Quaker of Lancaster, Pa., and a grandson of Thomas Pym Cope, whose line of ships made regular trips across the Atlantic, and who founded a great linen house in Philadelphia, which on his death passed into the hands of his sons Henry and Alfred. Alfred, the younger of the brothers, was the father of Edward Drinker, and although a member of the firm was not actively engaged in the business. His leisure and literary tastes had much to do with the mental development of the son. At the age of seven Edward made drawings of jellyfish, grampuses, and other natural objects

seen during a sea voyage to Boston, and a year later his journal makes record of a visit to the Museum of Natural Sciences in Philadelphia. As a boy he showed an "incessant activity in mind and body, reaching in every direction for knowledge, and of great independence in character and action." His school education was obtained in the Friends' Select School in Philadelphia and in the Westtown Academy, after which, in 1858-'59, he studied anatomy in the University of Pennsylvania, and then joined the group of young naturalists who were associated in the Smithsonian Institution under Spencer F. Baird. During 1863-'64 he was in Europe, and devoted much attention to the great museums; in 1864 he accepted the chair of Natural Sciences in Haverford College, which he held for three years; in 1868 he was employed by the Geological Survey of Ohio to determine the characters of the air-breathing vertebrates in the coal deposits; in 1871 he conducted an expedition to Kansas, where he investigated the Cretaceous beds and collected their fossils; a year later he joined the geological survey of the Territories under Ferdinand V. Hayden, as palæontologist, and he served in the field in Wyoming in 1872 and in Colorado in 1873; he then entered the geographical survey of the Territories of the United States west of the one hundredth meridian, under Lieut. George M. Wheeler, and continued with that service until its consolidation with the United States Geological Survey in 1879. During these years he explored the United States from the Missouri river to the Pacific Ocean, and from the Gulf of Mexico to the British line, discovering nearly a thousand new species of extinct, and as many recent vertebrata. His investigations relate chiefly to herpetology, ichthyology, mammalogy, and palæontology. "He found herpetology an art, he left it a science; he found it a device mainly for the naming of species, he left it the expression of the co-ordination of all structural features. The reformations he effected in the classification of the anurous amphibians and the saurian reptiles were especially notable." Of his researches in ichthyology Prof. Gill says: "His work on the extinct fishes was incomparably better than any that has been done before in the United States. He far surpassed all his predecessors, not only by his knowledge of morphological details manifest in the extinct as well as in living forms, but by his keen philosophical instinct and taxonomic tact." His work in mammalogy was most potent. During his connection with the Government surveys he discovered, classified, and described many new forms. The discovery of the *puereo* was his greatest geological achievement, and practically the whole fauna of the Wasatch was discovered and described by him. The titles of his many papers, about 400 in number, form a systematic record of the development of palæontology in the United States. Among his larger works in this branch of science, most of which are contained in Government reports, are the following: "Systematic Arrangement of the Lacertilia and Ophidia" (1864); "Primary Groups of the Batrachia Anura" (1865); "History of the Cetacea of the Eastern North American Coast" (1866); "Synopsis of the Extinct Cetacea of the United States" (1867-'68); "Systematic Arrangement of the Extinct Batrachia, Reptilia, and Aves of North America" (1869-'70); "Systematic Relations of the Fishes" (1871); "Systematic Relations of the Tailed Batrachia" (1872); "Extinct Vertebrata of the Eocene Formations of Wyoming" (1873); "Cretaceous Vertebrata of the West" (1877); "Tertiary Vertebrata" (1885); "Catalogue of the Batrachians and Reptiles of Central America and Mexico" (1887); "The Batrachia of North America" (1889); and "The Snakes and Lizards of

North America" (1896). On the death of Leidy, in 1891, Prof. Cope was called to the chair of Geology and Palæontology in the University of Pennsylvania, which place he held until his death. In other ways he was active in his native city, and he was for many years secretary and curator of the Academy of Natural Sciences; also he was chief of the department of organic material of the permanent exhibition in Philadelphia. In 1878 he purchased the "American Naturalist," which he removed to Philadelphia, and he devoted most of his time to its publication, continuing as its senior editor until his death. The Bigsby gold medal of the Geological Society of London was conferred on him in 1879, and in 1872 he was elected to the National Academy of Sciences. He joined the American Association for the Advancement of Science in 1868, presided over the section in biology in 1884, and was elected its president in 1896. The doctrine of evolution received earnest and careful study from him, and he was recognized as the leader of the Neo-Lamarckian school in the United States. His works on this subject include: "The Origin of Genera" (1868); "Hypothesis of Evolution, Physical and Metaphysical" (1870); "Methods of Creation of Organic Types" (1871); "Evolution and its Consequences" (1872); "Consciousness in Evolution" (1875); "On the Theory of Evolution" (1876); "The Origin of Will" (1877); "The Relation of Animal Motion to Animal Evolution" (1878); "A Review of the Modern Doctrine of Evolution" (1879); "Origin of Man and Other Vertebrates" (1885); "The Energy of Life Evolution and how it has acted" (1885); "The Origin of the Fittest" (1886); and "The Primary Factors of Organic Evolution" (1896). His home in Pine Street was stored from cellar to garret with his collections. His own room was piled waist high with pamphlets, fossils, and alcoholic specimens. Occasionally an aged tortoise would wander out from beneath a saurian, and one of his latest pets was a Gila monster, which, contrary to the popular belief, was perfectly harmless and loved to be handled by its owner. Even after death his love for science manifested itself by his curious will. He directed that his body be cremated, but his brain and skeleton were bequeathed to the Wistar Museum of the University of Pennsylvania. The School of Biology received his library and osteological collections, while his palæontological collections were ordered to be sold and the proceeds devoted to the endowment of a professorship of vertebrate palæontology in the Academy of Natural Sciences, "on condition that the professor shall be an original investigator of merit, who shall be elected by the council of the academy, and shall have the approval of the National Academy of Sciences." Osborn speaks of him as "a great naturalist, certainly the greatest America has produced." Gill compares him to Cuvier, Owen, and Huxley, and says: "Cope covered a field as extensive as any of the three. His knowledge of structural details of all the classes of vertebrates was probably more symmetrical than that of any of those with whom he is compared; his command of material was greater than that of any of the others; his industry was equal to Owen's; in the clearness of his conceptions he was equaled by Huxley alone; in the skill with which he weighed discovered facts, in the aptness of his presentation of those facts, and in the lucid methods by which the labor of the student was saved, and in the conception of the numerous propositions facilitated, he was unequaled." (See GIFTS AND BEQUESTS; and see his portrait in the "Annual Cyclopædia" for 1896, page 31.)

Corson, Juliet, domestic-science writer, born in Roxbury, Mass., Feb. 14, 1842; died in New York

city, June 18, 1897. In 1876 she established the New York School of Cookery, and until 1883 she superintended its management. Her writings on dietetics have been widely popular and of great benefit to her generation. Her book "Fifteen-Cent Dinners" was prepared for the use of the poor, and at the time of the railroad strike in 1877 she gave away an edition of 50,000 copies. Her other works are: "Cooking Manual of Practical Directions for Economical Every-Day Cookery" (New York, 1877); "Cooking School Text-book and House-keeper's Guide" (New York, 1878); "Twenty-five-Cent Dinners for Families of Six" (New York, 1878); "Meals for the Million: The People's Cook Book" (Boston, 1882); "Miss Corson's Practical American Cookery and Household Management" (New York, 1886); "Family Living on Five Hundred a Year" (New York, 1887); and "Sanitary Living."

Couch, Darius Nash, soldier, born in South-east, Putnam County, N. Y., July 23, 1822; died in Norwalk, Conn., Feb. 12, 1897. He was graduated at the United States Military Academy in 1846, and entered the army as a second lieutenant in the 4th Artillery. His first service was in the Mexican War, where he gained the brevet of first lieutenant for gallantry at Buena Vista, and promotion to full rank in 1847. He was on duty in Mexico in 1848; in Florida during the Seminole War in 1849-'50; on the Mississippi, in New York harbor, in North Carolina, and at Fort Mifflin in 1851-'54; and resigned from the army to engage in manufacturing in 1855. In 1853 he obtained a leave of absence and made an exploring expedition into Mexico at his own expense, in the course of which he found valuable *aërolites* and gathered a large number of important zoölogical specimens, which he presented to the Smithsonian Institution. In June, 1861, he re-entered the military service as colonel of the 7th Massachusetts Volunteers, and in August was commissioned a brigadier general. He served in the defense of Washington till the reorganization of the Army of the Potomac, when he was given command of a division with which he distinguished himself in the battles of Williamsburg, Fair Oaks, Oak Grove, and particularly at Malvern Hill. In July, 1862, he was promoted to major general of volunteers, and participated in Gen. Pope's retreat and in the battle of Antietam. Soon afterward he was placed in command of the 2d Army Corps, with which he took part in the operations at Fredericksburg and Chancellorsville. In 1863-'64 he commanded the Department of the Susquehanna, and in July, 1863, organized the Pennsylvania militia to resist the Confederate invasion under Gen. Lee. From December, 1864, till May, 1865, he commanded the 2d division of the 23d Army Corps, and took part in the battle of Nashville and in the operations in North Carolina. Horses were shot under him at Malvern Hill, Chancellorsville, and Nashville, and he was wounded several times. He resigned from the army May 26, 1865; was the unsuccessful Democratic candidate for Governor of Massachusetts in the same year; was collector of the port of Boston in 1866-'67; subsequently removed to Norwalk, Conn., and was quartermaster general on the staff of Gov. Hubbard in 1876-'78. He was adjutant general of the State in 1883-'84.

Crooks, George Richard, educator, born in Philadelphia, Pa., Feb. 3, 1822; died in Madison, N. J., Feb. 20, 1897. He was graduated at Dickinson College in 1840, and entered the ministry of the Methodist Episcopal Church and engaged in missionary work in Illinois. In 1842 he was appointed classical and mathematical tutor in Dickinson College; in 1843 principal of the Collegiate Grammar School; and in 1846 adjunct Professor of Ancient

Languages. During 1848-'60 he was engaged in the ministry in Philadelphia, Wilmington, New York, and Brooklyn, and in 1860-'75 was editor of the "Methodist." In 1880 he became Professor of Historical Theology in Drew Theological Seminary, where he remained until his death. He was the founder of Children's Day in the Methodist Episcopal Church, and of the children's fund for the encouragement of education among Methodist youth. In collaboration with Prof. McClintock he prepared "The First Book in Latin" and "The First Book in Greek" (1846 *et seq.*); with Prof. Sehem, a "Latin-English School Lexicon" (1858); and with Dr. Hurst, an adaptation of Hagenbach's "Theological Encyclopædia and Methodology" (1884; new edition, 1893); and published independently an edition of Butler's "Analogy," with life, analysis, and notes (1852); "Life of Rev. Prof. Dr. John McClintock" (1876); and "Life of Bishop Matthew Simpson" (1890); and edited "Sermons of Bishop Simpson" (1885).

Crowninshield, Caspar, soldier, born in Boston, Mass., in 1837; died there, Jan. 10, 1897. He was graduated at Harvard College in 1860, and entered the National army as a captain in the 20th Massachusetts Infantry, July 10, 1861, transferring to the 1st Massachusetts Cavalry in November. His service with the cavalry in Virginia and South Carolina was so efficient that on the organization of the 2d Massachusetts Cavalry in 1863 he was made senior major, and within a short time he succeeded to the command of the regiment. He was promoted lieutenant colonel, March 1, 1864, and colonel on the death of Col. Charles R. Lowell at Cedar Creek, Oct. 21. He succeeded Col. Lowell as commander of the Reserve Brigade in the first cavalry division of Gen. Sheridan's command; served with Sheridan through the campaigns in the Shenandoah valley and in that of Appomattox, and was present at the surrender of Gen. Lee. For meritorious services through the war he was brevetted brigadier general, May 20, 1865. A month afterward he retired to private life.

Dahl, Olaus, educator, born in Nannestad, Norway, Sept. 15, 1859; died in Chicago, Ill., March 10, 1897. He came to the United States in childhood, was graduated at Luther College, Decorah, Iowa, in 1885, and at Yale divinity school in 1891, was tutor in the Danish and Swedish languages in the academical department of Yale in 1890-'94, and from 1894 till his death was lecturer on Scandinavian literature in the University of Chicago.

Dallas, Mary Kyle, author, born in Philadelphia, Pa., about 1840; died in New York city, Aug. 25, 1897. She began writing at an early age. At twenty she married Jacob A. Dallas, an artist well known in his day in New York and Philadelphia art circles, who survived less than two years. Mrs. Dallas was a regular contributor of poems, short stories, and sketches to the "New York Ledger" for more than fifteen years, and to "Lippincott's Magazine" for ten years, and also contributed largely to other periodicals.

Dana, Malcolm McGregor, clergyman, born in Brooklyn, N. Y., in 1838; died there, July 26, 1897. He was graduated at Amherst College in 1859, and at Union Theological Seminary in 1863, and began his career as a clergyman at Winsted, Conn. In 1864-'74 he was pastor of the Second Congregational Church in Norwich, Conn.; in 1874 he founded the Park Congregational Church in the same city, with which he remained till 1878; in 1878-'88 he was pastor of Plymouth Church, St. Paul, Minn., and in 1888-'94, of the Kirk Street Church, Lowell, Mass. While at St. Paul he was sent to Europe by the State Board of Corrections and Charities to inspect prison systems, especially

the British; was a vice-president of this board, and several times chaplain of the lower house of the Legislature, and was chairman of the Congregational Missionary Board of Minnesota and a founder and president of the State Congregational Club. In late years he was active in temperance and sociological reforms, and at the time of his death he was the first vice-president of the International Board of Corrections and Charities. Dr. Dana was for some time one of the editors of "The Advance." He wrote a history of Carleton College, Northfield, Minn., of which he was a trustee, and "The Norwich Memorial," a history of Norwich, Conn., during the civil war.

Daniels, Charles, jurist, born probably in New York city about 1826; died in Buffalo, N. Y., Dec. 20, 1897. He was born of Welsh parents, but he never knew definitely in what part of the world he was born nor when, nor how many brothers and sisters he had. His earliest recollections were of a home in New York city and of a little shop in which his father made shoes. When ten years old he accompanied his parents to Toledo, Ohio, and was at once put to work at his father's trade. His early education was very limited. He was left an orphan when sixteen years old, and, after wandering through several cities and towns in western New York, he settled in Buffalo. Living in a room over the shop, spending all the money he could spare from food for books, reciting to a sympathetic lady at night what he read during the day, and obtaining one winter's schooling at the Batavia Academy, he educated himself while working at his trade. He was admitted to the bar in 1848; practiced in partnership with Eli Cook till 1850, and alone till 1863; was elected a justice of the Supreme Court of New York in 1863, 1869, and 1877, the last term being for fourteen years, and with the exception of five years he was also an associate justice of the General Term of the Supreme Court of the New York district from 1873 till his retirement from the bench in 1891. In 1886 he was the unsuccessful Republican candidate for judge of the New York Court of Appeals, and in 1892 and 1894 he was elected to Congress. His decisions were rarely overruled, his opinions would fill more than 100 printed volumes, and during his long term on the bench he was honored by governors of each of the great political parties. His most effective service as a jurist in behalf of the State and city was rendered in the causes growing out of the Tweed and Erie Canal frauds. He tried Henry W. Genet, one of the leaders of the "ring," who was convicted but escaped. Judge Daniels sent the sheriff and his deputy to jail for thirty days for official carelessness, and on Genet's return from Europe, ten years afterward, sentenced him to pay a fine of \$10,000 and to be imprisoned for four months. During Gov. Tilden's war on the Erie "Canal ring" he had Judge Daniels transferred to Albany to preside at the trial of George D. Lord, a contractor, who was convicted of fraud.

Davis, Daniel Franklin, lawyer, born in Freedom, Waldo County, Me., in 1843; died in Bangor, Me., Jan. 9, 1897. He was brought up on a farm and in a sawmill, and under most unfavorable circumstances became self-educated. During the two last years of the civil war he served as a private in the 1st Maine Cavalry. After the war he studied law, and was admitted to the bar in 1869. In 1874 he was elected to the lower house of the Legislature; in 1876 and 1878 to the State Senate; and in 1879 was chosen Governor of the State as a Republican. At the close of his term he was appointed collector of the port of Bangor.

Day, David A., missionary, born in Pennsylvania, about 1847; died at sea, Dec. 17, 1897. He was

educated at the Susquehanna Lutheran University, Selinsgrove, Pa.; took a full course in medicine; and with his bride went to the Muhlenberg Mission, 30 miles from Monrovia, Liberia, Africa, where he labored incessantly for twenty-three years. He combined the evangelical, educational, and industrial elements; acquired and brought to a high state of cultivation a tract of 10,000 acres, which he divided into small farms and allotted to the people of the mission; and made the mission one of the most successful on that continent. He was known for hundreds of miles along the west coast, and frequently acted as arbitrator between warring tribes. He was on his way to the United States to recuperate his health at the time of his death.

Dayton, William Lewis, jurist, born in Trenton, N. J., April 13, 1839; died there, July 28, 1897. He was a son of William Lewis Dayton, the Republican candidate for Vice-President of the United States on the ticket with John C. Frémont in 1856, and United States minister to France in 1861-'64. He was graduated at Princeton in 1858; was assistant secretary of legation at Paris in 1861-'65; was admitted to the bar in 1866; and was private secretary of Gov. Marcus L. Ward in 1866-'69. In 1879, 1888, and 1889 he was city solicitor of Trenton; in 1882-'85 was United States minister to the Netherlands; and from 1896 till his death he was a judge of the New Jersey Court of Errors and Appeals.

Dean, George Washington, astronomer, born in Freetown, Mass., Nov. 4, 1825; died in Fall River, Mass., Jan. 23, 1897. In 1847 he was appointed to the engineering and astronomical department of the United States Coast Survey, and he remained in that service till 1885. He conducted determinations of meridians of longitude between the United States and Europe by astronomical and telegraphic observations, and invented many instruments and methods by which his department of the service was greatly improved. He represented the Coast Survey at the landing of the Atlantic cable at Heart's Content, Newfoundland, in 1869; had charge of the Government observation of the eclipse of the sun at Shelbyville, Ky., in 1869, and of the total-eclipse expedition to Jerez, Spain, in 1870; and at the time of his retirement was determining an arc across the continent to connect the surveys of the Atlantic and Pacific coasts.

Derby, Perley, genealogist, born in Murfreesboro, Tenn., in 1823; died in Salem, Mass., March 28, 1897. He removed to Salem about 1837; learned the jeweler's trade, and worked at it for several years in Pawtucket, R. I.; and, returning to Salem, became an accomplished portrait painter. During the past thirty years he applied himself almost wholly to genealogical research, and had been employed in nearly every State in the Union in compiling family records.

De Trobriand, Philippe Regis, soldier, born near Tours, France, June 4, 1816; died in Bayport, Long Island, N. Y., July 15, 1897. He was a son of Gen. Joseph de Trobriand, commander of the military district of Tours, and in his youth was one of the pages of Charles X, King of France. His father wished him to acquire a military education, and he undertook preparation for St.-Cyr; but after the revolution of 1830 his father, then commander at Rouen, resigned from the army, and the son's education was completed at Orleans and Poitiers, where he was graduated in 1834 and 1838. In 1841, on the death of his father and his succession to the family estates and the title of Baron de Trobriand, he came to the United States for a period of travel. Here he became acquainted with Mary Mason Jones, daughter of the President of the Chemical Bank, and in 1843 they were married. For several years they lived in Italy, attached to the court of the

Comte de Chambord, the Bourbon heir to the throne of France. In 1848 they returned to New York, where Philippe began the publication of the "Revue du Nouveau Monde," which he discontinued in 1851, when he returned to France. In 1854 he again made his home in New York, and was one of the editors of the "Courrier des États Unis" till August, 1861, when he entered the National army as colonel of the 55th New York Volunteers. He was engaged in the operations of the Army of the Potomac to the close of the battles at Gettysburg, and was promoted brigadier general of volunteers in January, 1864. In the second day's struggle at Gettysburg he commanded the brigade that held the peach orchard till it was no longer tenable, then held the north bank of Plum creek till dislodged by the Confederate charge, and ultimately formed a part of Gen. Birney's new line, which drove the enemy through the wheat field to the stone fence. During a part of 1864 he commanded the defenses of the city of New York, and afterward commanded a brigade in the 2d Army Corps, which he led at Deep Bottom, Petersburg, Hatcher's Run, and Five Forks. In the operations leading to the surrender of Gen. Lee he commanded the 3d division of the corps, and on the day of the surrender, April 9, 1865, he was brevetted major general of volunteers. On the reorganization of the regular army in 1866 he was commissioned colonel of the 31st Infantry, and in March, 1867, he was brevetted brigadier general, United States army. Subsequently he commanded the districts of Dakota, Montana, and Green River; was transferred to the 13th Infantry; was in command at Salt Lake City in 1870-'75, and at New Orleans in 1875-'79; and was retired at his own request, March 20, 1879. His course at New Orleans won him the respect of all parties, and he maintained a residence there till within a few months of his death. While a student at Poitiers he published a novel, "Les gentils-hommes de l'ouest," and in 1867 his reminiscences of the civil war, under the title "Quatre ans de Campagnes à l'armée du Potomac," of which an English translation was published in Boston.

Deutsch, Solomon, philologist, born in Gleiwitz, Prussia, in 1816; died in New York city, Jan. 27, 1897. He came of a noted family of philologists; was a cousin of Emanuel Oscar Menahem Deutsch, the distinguished Talmudic scholar; and was educated at the Universities of Breslau and Göttingen. In 1857 he accepted a call to a synagogue in Philadelphia, and subsequently held the office of rabbi in Syracuse, Baltimore, and Hartford. About 1885 he retired from religious labor and applied himself to literary and philological work. His publications include "Letters for Self-Instruction in German," "Medical German," "Hebrew Grammar," "Drill Master in German," "Key to the Pentateuch," and "Biblical History in Biblical Language." He left unfinished the manuscript of two works on the study of languages.

Dixon, Maria E., painter, born in Sag Harbor, Long Island, N. Y., in 1849; died in Brooklyn, N. Y., Jan. 7, 1897. She was a member of the Brooklyn Art Association and of several women's clubs, and had achieved a high reputation by her painting. For many years her daughter had acted as her model, and the last picture that Mrs. Dixon painted was "Youth and Old Age," for which the daughter posed for the principal figure.

Dixon, Nathan Fellows, lawyer, born in Westbury, R. I., Aug. 28, 1847; died there, Nov. 8, 1897. He was graduated at Brown University in 1869, studied law, and in 1871 was admitted to practice in the courts of New York, Connecticut, and Rhode Island. In 1877 he was appointed United States attorney for the district of Rhode Island, and he

was reappointed in 1881. He was elected to the State Senate in 1885, and annually thereafter to and including 1889, when he was elected to Congress, and shortly afterward to the United States Senate. He was counsel for several corporations and president of a manufacturing concern and a bank.

Doane, Thomas, civil engineer, born in Orleans, Mass., Sept. 20, 1821; died in West Townsend, Vt., Oct. 22, 1897. He studied civil engineering with Samuel M. Felton in Charlestown, Mass., and was first employed as chief engineer of a division of the Vermont Central Railroad. In 1849 he established an office in Charlestown, which he retained till his death. At one time or another he had been connected with all the railroads running out of Boston, and he was particularly identified with the Boston and Maine road. Probably his most important work was that in connection with the construction of the Hoosac Tunnel. He was appointed chief engineer of the work in 1863; built the dam in Deerfield river to furnish water power; introduced nitroglycerin and electric blasting for the first time in the United States; also introduced compressed air and invented the machinery for it; and had a share in inventing the pneumatic drills. In 1869 he went to Nebraska, where he built 240 miles of railroad for the Chicago, Burlington and Quincy Company, and in 1873 returned to the Hoosac Tunnel as consulting engineer, and also had charge of the reconstruction of the whole of the Troy and Greenfield Railroad. On the opening of the tunnel, Feb. 9, 1875, he ran the first locomotive through it. While in Nebraska he promoted the agitation for the establishment of a college, and secured for its site a square mile of ground at Crete, 20 miles east of Lincoln. For his services the institution was named Doane College. Mr. Doane was president of the Boston Society of Civil Engineers. (See GIFTS AND BEQUESTS.)

Dolph, Joseph Norton, lawyer, born in Dolphs-burg, N. Y., Oct. 19, 1835; died in Portland, Ore., March 10, 1897. He took a partial course at Genesee Wesleyan Seminary, taught a school while studying law, and was admitted to the bar at Binghamton, N. Y., in 1861. In 1862 he enlisted in Captain Crawford's "Oregon Escort," a company raised for the protection of immigrants to the Pacific coast against hostile Indians, and the same year he settled in Portland, Ore. He was elected city attorney and appointed United States attorney for the district of Oregon in 1864; elected to the State Senate in 1866, 1868, 1872, and 1874; and elected United States Senator as a Republican in 1883 and 1889. In his last term he was a member of the committees on Coast Defenses, Commerce, Foreign Relations, Public Lands, Relations with Canada, and University of the United States (select), and was active among the opponents of the free coinage of silver.

Doolittle, James Rood, jurist, born in Hampton, N. Y., Jan. 3, 1815; died in Edgewood, R. I., July 27, 1897. He was graduated at Geneva (now Hobart) College in 1834, was admitted to the bar in 1837, and after practicing in Rochester and Warsaw, N. Y., and serving as district attorney of Wyoming County, N. Y., removed to Racine, Wis., in 1851. In 1853-'56 he was judge of the first judicial circuit of Wisconsin, and in 1857 and 1863 was elected a United States Senator as a Democrat-Republican. While in the Senate he was an energetic supporter of the policies of Presidents Lincoln and Johnson. He served on the Committees on Indian Affairs, Foreign Relations, Commerce, Military Affairs, and the one appointed to investigate John Brown's raid. In the last committee he united with Senator Collamer, of Vermont, in presenting a minority report to the effect that the raid

was not an act of rebellion, but merely an incident of proslavery lawlessness in Kansas. Judge Doolittle was a delegate to the Peace Convention of 1861; was one of the nineteen Senators who voted "No" at the impeachment trial of President Johnson; and presided over the National Union Convention in Philadelphia in 1866 and the National Democratic Convention in Baltimore in 1872.

Douglas, Robert, arboriculturist, born in Gateshead, England, in 1813; died in Waukegan, Ill., June 1, 1897. He removed to Canada in 1836, and to Whitingham, Vt., in 1839; drove across the country and settled on Lake Michigan, 30 miles beyond what is now Chicago, a few years afterward; and there worked at the tailor's trade and in the nursery business till the gold excitement of 1849 took him to California. He was unsuccessful as a miner and returned to the States, and thereafter applied himself solely to the propagation of plants. He is said to have been the first man to raise forest-tree seedlings by the million. He planted large forests near Farlington, Kan., and elsewhere; had charge of the selection and planting of trees on the grounds of Leland Stanford University in California and of George W. Vanderbilt's estate at Biltmore, N. C.; assisted Prof. Sargent in preparing his forestry report for the tenth census; and selected many of the most valuable specimens in the collection of woods presented by Morris K. Jesup to the American Museum of Natural History in New York.

Dow, Neal, reformer, born in Portland, Me., March 20, 1804; died there, Oct. 2, 1897. He was educated at public and private institutions, including Portland Academy and the Friends' Academy at New Bedford, Mass.; entered his father's tannery when fifteen years



old, and on attaining his majority became a partner in the business under the firm name of Josiah Dow & Son. He remained a member of this firm for fifty-one years, and at times was connected with other business concerns. In 1839 he was appointed chief engineer of the Portland Fire Department. In this office he displayed notable courage and tact. His experiences as a fireman

led him to undertake the temperance reform, which subsequently made his name familiar throughout the world. A steady private advocacy of prohibition was followed by the inauguration of a public agitation, which was greatly promoted by his popularity and earnestness. In 1839 he induced the board of aldermen of Portland to submit the question of license or no license to popular vote, and the result showed a majority of 35 votes for license. Four years afterward the question was again submitted to the people, when the no-license party won by a majority of 400. During this interval he was greatly stimulated in his efforts by his attempts to reclaim a high public official who had become a confirmed dipsomaniac and was threatened with open exposure. In 1841 he retired from active participation in business and began traveling through the State—in his sleigh in winter, in his carriage in summer—holding public meetings, speaking indoors and out, wherever he found auditors, and distributing an immense amount of original temperance literature. This missionary work for absolute prohibition was carried on at his own expense for ten years, and,

after his election to the mayoralty of Portland, in 1851, he immediately drafted "a bill for the suppression of drinking houses and tippling shops," containing most radical and repressive provisions. This measure was deemed too extreme by his friends; but he took it to the Legislature, discussed its provisions at a public hearing, secured its acceptance by the committee, and on the following day saw it adopted and approved by the Governor. The law was repealed in 1856; was reenacted through his efforts in 1858; was made the subject of a constitutional amendment in 1884; and was further strengthened in 1891. Mr. Dow was re-elected mayor in 1854; was a member of the Legislature in 1858-'59; went to England on the invitation of the United Temperance Societies of Great Britain, and delivered many public addresses in 1857, 1866, and 1874; and was the Prohibition candidate for President of the United States in 1880. His ninetieth birthday, March 20, 1894, was fittingly observed by temperance organizations throughout christendom. Early in 1861 he offered his services to Gov. Washburn, and after raising nearly two full regiments he was commissioned colonel of the 13th Maine Volunteers, Dec. 31, and joined Gen. Butler's expedition to New Orleans in the following February. In April, 1862, he was commissioned a brigadier general of volunteers, and commanded at Fort St. Philip, at Pensacola, Fla., and at the defenses of New Orleans, north of the city. He took part in the attack on Port Hudson, May 27, 1863, where his conduct elicited the commendation of his division commander, and where he received two wounds. While convalescing within the Federal line he was captured by a party of Confederate cavalry, and was held a prisoner at Mobile and in Libby prison till the following March, when he was exchanged. Because of his kindness to Confederate prisoners while at New Orleans his own restraint was made as comfortable as possible. Impaired health caused him to resign his commission, Nov. 30, 1864. As a military officer he was one of the first to recognize the propriety of employing colored soldiers, and he refused to return any escaping slave to bondage.

Drake, Jonathan, abolitionist, born in Hampton, N. H., June 22, 1804; died in Leominster, Mass., Jan. 17, 1897. He settled in Leominster in 1839, and when the antislavery movement was at its height he conducted public meetings and turned his home into an "underground-railway" station. In 1851 he received into his home the fugitive slave Shadrach after his escape from the Boston courthouse, dressed him in woman's clothes, and assisted him in his flight to Canada. He also befriended James Jackson, one of Jefferson Davis's slaves, in a similar manner. Mr. Drake was widely known as a strong no-license and antitobacco advocate.

Drew, Louisa Lane, actress, born in London, England, Jan. 10, 1820; died in Larchmont, N. Y., Aug. 31, 1897. She was the daughter of an actor named Lane and his wife (subsequently Mrs. Kinloch, a popular actress), and, accompanying her mother to Philadelphia in 1827, made her first appearance on the stage at the Walnut Street Theater, Sept. 26, in the character of the little Duke of York, with Junius Brutus Booth as Gloster. In the following year she appeared at the Park Theater, New York, in "Little Pickle," and then for five years played in the large cities as an "infant phenomenon," her repertory including "Twelve Precisely," "The Heir at Law," "The Road to Ruin," "The Four Mowbrays," and "The Actress of All Work." In 1833 she joined a stock company at the Bowery Theater, New York, and in it played with all the great stars of the day. When fourteen years old

she appeared in the character of Julia in "The Hunchback," at the Boston Theater, and when fifteen in that of Lady Teazle in "The School for Scandal," at New Orleans. In 1838 she became leading lady at the Walnut Street Theater, Philadelphia, where, on Sept. 24, 1839, she appeared as Julie de Mortimer, the part of Richeieu being taken by Edwin Forrest. After two seasons at this house she starred in other cities, played a brief engagement at the Chestnut Street Theater, Philadelphia, made another tour of the large cities, and in 1852 joined the stock company of the Chestnut Street house. In 1853 she went to the Arch Street Theater, Philadelphia, where among other parts she played as Constance in "The Love Chase," Jane Shore, Beatrice in "Much Ado about Nothing," Mrs. Oakley in "The Jealous Wife," Young Norval, Widow Cheseley, and other widely divergent parts. During the season of 1857-'58 she played with the Walnut Street company, and at the close of the season in 1861 assumed the management of the Arch Street house, which she retained for more than thirty years. In 1892 she played a short engagement in New York; in 1893 made a starring tour of the large cities; in 1895 played Mrs. Malaprop at the Coudock benefit in New York; and in 1896-'97 played the title part in "The Sporting Duchess" with a traveling company. She married Henry Hunt in 1836, George Mossop in 1848, and John Drew in 1850. Her children by her last husband are John Drew, Sidney Drew, and Ethel Barrymore, all known on the stage.

Drisler, Henry, educator, born on Staten Island, N. Y., Dec. 27, 1818; died in New York city, Nov. 30, 1897. He was graduated at Columbia College in 1839, and then became classical instructor in the grammar school of the college, under Dr. Charles Anthon. In 1843 he was appointed tutor of Latin and Greek in Columbia, and in 1845 adjunct professor of those languages. On the separation of the departments of Latin and Greek and the provision of an additional chair in 1857, he was made professor of Latin, and on the death of Dr. Anthon, in 1867, Prof. Drisler was appointed Professor of Greek. In 1889 he was made dean of the faculty of arts, and he retained this office and the title of Jay Professor of Greek till July 1, 1894, when he resigned, and was made professor emeritus. During his long connection with the college he was twice its acting president—in 1867, when President Barnard was absent as a commissioner to the Paris Exposition, and in 1888, on the resignation of the president. On his own retirement Prof. Drisler was given a reception by the Alumni Association of Columbia College, and presented with a commemorative gold medal. The trustees of the college established the Henry Drisler fellowship in classical philology, and President Low created the Henry Drisler Classical fund of \$10,000, for the purchase of equipment for the departments of Latin and Greek. Prof. Drisler's literary work was more important than voluminous. He was associated with Dr. Anthon for many years in the preparation of a series of classical text-books; personally re-edited and enlarged Liddell and Scott's edition of Passow's "Greek Lexicon"; revised and enlarged Yonge's "English-Greek Lexicon" (1870); was associate editor of the seventh revised Oxford edition of Liddell and Scott (1883); was general editor of the new classical series published by Harper & Bros.; and was a contributor to "Johnson's Universal Cyclopædia" and to "Smith's Classical Dictionary."

Duane, James Chatham, engineer, born in Schenectady, N. Y., June 30, 1824; died in New York city, Nov. 8, 1897. He was graduated at Union College in 1844, and at the United States

Military Academy in 1848; entered the army as brevet 2d lieutenant of engineers; was promoted 2d lieutenant, March 16, 1853; 1st lieutenant, July 1, 1855; captain, Aug. 6, 1861; major, March 3, 1863; lieutenant colonel, March 7, 1867; colonel, Jan. 10, 1883; and brigadier general and chief of engineers, Oct. 11, 1886; and was retired, June 30, 1888. For services in the field in the Rapidan-James campaign, and particularly for engineering services in the operations before Petersburg, he was brevetted lieutenant colonel and colonel, July 6, 1864, and, for services during the siege of Petersburg and the final campaign of the war, brigadier general, March 13, 1865. Prior to the civil war he served with the engineer corps, was an assistant instructor at the Military Academy, was employed in fortification construction, commanded the engineers in the expedition to Utah, and was instructor in engineering at the Military Academy. His first service in the civil war was at Fort Pickens, Fla. In the winter of 1861-'62 he organized the engineer corps of the Army of the Potomac, and in the last year he directed the work of bridging the Potomac at Harper's Ferry; had charge of the engineering operations in the siege of Yorktown; took part in the battle of Gaines's Mill; constructed several notable bridges besides roads and field works; was chief engineer of the Army of the Potomac in the Maryland campaign; and was appointed chief engineer of the Department of the South in November. Under the last assignment he took part in the attack on Fort McAllister, Ga., and in the operations at Charleston. From July, 1863, till June, 1865, he was again chief engineer of the Army of the Potomac. After the war he was appointed commandant at Willett's Point, N. Y., and superintending engineer of the defenses at the eastern entrance to New York harbor; superintendent of fortifications on the coast of Maine and New Hampshire; and he was chief engineer of the army in 1886-'88. On his retirement he was appointed a member of the New York Aqueduct Commission, of which he almost immediately became president, and retained the office till his death. He published a "Manual for Engineer Troops" (New York, 1862).

Duryee, George, soldier, born in Great Neck, Long Island, N. Y., June 30, 1832; died in New York city, April 1, 1897. In 1861 he was commissioned a 1st lieutenant in the 5th New York Volunteer Infantry, better known as Duryee's Zouaves, commanded by his brother, Abram. The regiment was actively engaged from the moment it reached the front, and at the battle of Gaines's Mill, when attached to Sykes's division of the 5th Army Corps, it bore the brunt of the Confederate assault. George Duryee was promoted captain soon after reaching the field; major, Dec. 4, 1862; and lieutenant colonel, Dec. 31. He was present at Big Bethel, the siege of Yorktown, Gaines's Mill, Antietam, Fredericksburg, and Chancellorsville, and for distinguished gallantry in the last action, where he was severely wounded, he was brevetted colonel. After an apparent recovery he rejoined his regiment, but soon afterward, while in front of his men, he fell from his horse, hopelessly paralyzed.

Duryee, William Rankin, educator, born in Newark, N. J., April 10, 1838; died in New Brunswick, N. J., Jan. 20, 1897. He was graduated at Rutgers College in 1856, and at the New Brunswick Theological Seminary in 1861; was ordained in the ministry of the Reformed Church in 1862; and was chaplain of the 1st Kentucky Cavalry and acting assistant surgeon through the Tennessee campaign and till after the battle of Shiloh, when a fever nearly caused his death. He organized the Reformed Church at Lafayette, a suburb of Jersey City, N. J., in 1864, and remained its pastor till

1891, when he became Professor of Ethics and chaplain at Rutgers College. Dr. Duryee was an authority on the history of the early Dutch and Huguenot settlements in America, a contributor to periodicals, and an accomplished speaker. His publications include "Sentinels for the Soul," a tract for soldiers (New York, 1862); "Our Mission Work Abroad"; "Centennial Discourses of the Reformed Church" (1876); a notable monograph on the English Bible; and a volume of poems, containing his prize song "The Kingdom of Home."

Earle, Joseph H., jurist, born in Greenville, S. C., April 30, 1847; died there, May 20, 1897. He attended school at Sumter, S. C., till the beginning of the civil war; served through the war in the artillery; was graduated at Furman University, at Greenville, in 1868; taught a school while studying law; and was admitted to the bar in 1870, beginning practice at Sumter. In 1876 he became active in political life, and took part in the uprising led by Gen. Wade Hampton. Two years afterward he was elected to the lower house of the Legislature, and in 1882 was elected to the State Senate. He was a delegate to the Democratic National Conventions of 1880 and 1884. In 1886 and 1888 he was elected Attorney-General of South Carolina. When the rupture in the Democratic party in his State occurred he united with the State officials and anti-Tillman wing. In 1890, when Benjamin R. Tillman was nominated for Governor, Mr. Earle was his opponent and was defeated. In 1891 he removed to Greenville, and in 1894 was elected judge of the 8th Circuit Court of South Carolina. Gov. Tillman supported him in this election, but he soon gave offense to the Tillman wing by declining to interpret the laws as desired. The campaign for United States Senator in 1896 was bitter, and attracted much attention outside the State. Gov. John G. Evans was the Tillman candidate for the seat, and his election was considered certain. In South Carolina the nomination is made by a majority vote of the people at a general primary. Just before the campaign for the nomination opened there was published what purported to be an exposure of the circumstances of the refunding of the State debt, which involved both Judge Evans and Senator Tillman. The publication created intense excitement, and led the Conservative Democrats to nominate Judge Earle. On Jan. 27, 1897, he was elected, having all the votes of the joint assembly excepting one.

Edgerton, Alfred P., politician, born in Plattsburg, N. Y., Jan. 13, 1813; died in Fort Wayne, Ind., May 14, 1897. He was for a short time editor of a newspaper in his native place; in 1833 removed to New York and engaged in commercial business; and in 1837 went to Defiance County, Ohio, to take the management of a land company. In 1845 he was elected to the State Senate of Ohio; in 1848 was a delegate to the Baltimore Convention; and in 1850 and 1852 was elected to Congress from the Toledo district. He was the financial agent of Ohio in New York city in 1853-'56; was chairman of the National Democratic Convention at Cincinnati in 1856. In that year also, in association with Pliny Hoagland and Hugh McCulloch, he became a lessee of the Indiana canals, and subsequently general manager. In 1864 he was a delegate to the National Democratic Convention, and in 1868 was an unsuccessful candidate for the office of Lieutenant Governor of Indiana. He declined the nomination of the O'Connor Democrats for Governor in 1872. He was appointed a United States civil-service commissioner in 1885, succeeded Dorman B. Eaton as president of the commission, and held the office till Feb. 9, 1889, when President Cleveland removed him.

Embry, James Crawford, clergyman, born in Knox County, Ind., Nov. 2, 1834; died in Philadelphia, Pa., Aug. 11, 1897. He served from 1862 till after the fall of Vicksburg on a supply boat carrying provisions for the army under Gen. Grant, and entered the ministry of the African Methodist Episcopal Church in August, 1863. In 1876 he was elected secretary of education by the General Conference; in 1878 was appointed secretary of finance and treasurer of the Church fund; and in 1884 was located in Philadelphia. He was elected a bishop of the Church, and assigned to the South Carolina district in May, 1897.

Evans, John, philanthropist, born in Waynesville, Ohio, March 9, 1814; died in Denver, Col., July 3, 1897. He was graduated at the medical department of Cincinnati College in 1838; began practicing at Ottawa, Ill.; and soon afterward removed to Attica, Ind., where he secured the erection of the first insane asylum in Indiana. He was superintendent of this institution till 1848, when he was elected to the faculty of the Rush Medical College, at Chicago. By investments in real estate in the young city he acquired large wealth, much of which he applied to philanthropic purposes. He founded the town of Evanston and the Northwestern University in that city; endowed two chairs with \$50,000 each; and was president of the board of trustees of the university for more than a third of a century. He was also one of the founders and builders of the Fort Wayne and Chicago Railroad, and was its managing director till after his removal to Colorado. Dr. Evans was a delegate to the convention that first nominated Mr. Lincoln for the presidency. In 1862 he became Governor of Colorado Territory. His first act was the organization of an effective military force, which particularly distinguished itself by repelling an invasion by 3,500 Texan rangers under Gen. Sibley. Before the expiration of his term Gov. Evans was removed by President Johnson. In 1865 the first State organization of Colorado was effected, and in anticipation of an early admission into the Union Gov. Evans and Jerome B. Chaffee were elected United States Senators. The act for admission was passed by both houses of Congress, but President Johnson vetoed it. Gov. Evans founded the University of Denver, giving \$200,000 for its construction and a subsequent large endowment, erected Evans chapel, was the principal contributor to the erection of Grace Methodist Episcopal church, and aided nearly every Methodist congregation and educational institution in the State.

Evans, Thomas Williams, dentist, born in Philadelphia, Pa., Dec. 23, 1823; died in Paris, France, Nov. 14, 1897. When fourteen years old he went to work with a goldsmith and dental plate maker. His skill in making plates led him to undertake the study of dentistry, and when eighteen years old he received a special medal for original work. He practiced dentistry in Maryland and in Lancaster, Pa., acquired a large technical knowledge of metals, and made a specialty of saving teeth by filling. He would often fill several teeth for the privilege of extracting the worst one, after filling, for a specimen of his work, and by this method he acquired a curious collection, which, with specimens of his plate work, he placed on exhibition at the Franklin Institute in Philadelphia. About this time he sought a substitute for gold foil for filling teeth, and made experiments with a view to hardening India rubber. He mixed the rubber with sulphur, baked the mass, and instead of getting the white substance he desired, obtained a black one. He laid aside his specimen, labeled "Tried to make ivory, but made ebony," and gave it no further serious thought till some time after his settlement in Paris,

when a process for making gutta-percha by his experimental plan was patented in the United States. Ever afterward he declared himself the original discoverer of gutta-percha. In 1848 he was sent for as the most skillful American dental surgeon to go to Paris to look after the teeth of President Louis Napoleon, and he made his home in that city till his death, though never abandoning his American citizenship. When in Paris he was in daily attendance on the Emperor and the Empress, and his professional services were in demand at every court in Europe. He was loaded with gifts and decorations, and by the judicious investment of the large sums received for his professional services he acquired a fortune of millions of dollars. Dr. Evans also gained an international reputation as an expert in military sanitation. He made a study of the condition of the European camps and hospitals in the Crimean War; was an organizer and an influential promoter of the United States Sanitary Commission in the civil war; and was the founder of the Red Cross Society and personal director of its ambulance corps in the Franco-Prussian War. On the night of Sept. 4, 1870, when the Empress was deserted by all the great members of the household and the high court functionaries, Dr. Evans's home became her refuge in her flight from the mob. She was driven there directly from the Tuileries. Dr. Evans had her attired in his wife's clothes, and drove her in his carriage to the Normandy coast, where he secured passage to England for her on the pleasure yacht of a friend. Dr. Evans made a brief visit to New York and Philadelphia a few weeks before his death, and authorized the announcement that he intended bequeathing the bulk of his property for educational purposes. (See GIFTS AND BEQUESTS.)

Farnsworth, John Franklin, lawyer, born in Eaton, Quebec, Canada, March 27, 1820; died in Washington, D. C., July 14, 1897. In early life he removed to Michigan, where he was admitted to the bar, subsequently settling in Chicago, Ill. From 1857 till 1861 he was a Republican Representative in Congress and a member of the Committee on Military Affairs. In 1861 he was commissioned colonel of the 8th Illinois Cavalry, afterward raised the 17th Illinois Volunteers, and on Nov. 29, 1862, was commissioned a brigadier general of volunteers. Owing to injuries received in the field, he resigned in March, 1863; removed to St. Charles, Ill.; and again served in Congress from that year till 1873, in his last term being chairman of the Committee on Post Offices and a member of the Joint Select Committee on the Insurrectionary States. Since the expiration of his term he had practiced his profession at Washington, D. C.

Fay, Joseph Story, philanthropist, born in Cambridgeport, Mass., Dec. 8, 1812; died in Boston, Mass., June 14, 1897. In early and middle life he was engaged in mercantile business, principally in Savannah, Ga., but in later years he applied himself largely to practical horticulture and forestry. He had a large estate at Wood's Holl, where he planted 100 acres with pine seed and produced a valuable forest, and cultivated rare exotics and strawberries. He was a member of the American Forestry Congress and the Massachusetts Horticultural Society. He responded liberally to appeals for the poor and needy at home and abroad, and was a notable benefactor of the Home for Little Wanderers, St. Luke's Home for Convalescents, and the Episcopal Church Home, all in Boston.

Fenn, Augustus Hall, jurist, born in Plymouth, Conn., Jan. 18, 1844; died in West Winsted, Conn., Sept. 12, 1897. He entered the 19th Connecticut Infantry as a first lieutenant, and after serving for two years, attaining the rank of brevet colonel for gallantry, and losing his right arm at Cedar Creek,

he resigned his commission, and studied law. In 1867 he was admitted to the bar, then attended the Harvard Law School, and in 1887 was appointed a judge of the Superior Court of Connecticut. After six years' service on this bench, he was appointed a judge of the Supreme Court of Errors, and he held the office at his death. Judge Fenn was for many years a lecturer at the Yale Law School, and was a member of the commission that revised the probate laws of Connecticut in 1885 and the general statutes in 1886. As a public speaker he was known beyond his State. Among his lectures were "With Sheridan in the Shenandoah," "Mistaken Identity," and "Points of Law we ought to know."

Fink, Albert, civil engineer, born in Lauterbach, Germany, Oct. 27, 1827; died near Sing Sing, N. Y., April 3, 1897. He was graduated at the Polytechnic Institute of Darmstadt in 1848; came to the United States in the following year, and entered the service of the Baltimore and Ohio Railroad Company as draughtsman. From this post he was promoted to that of chief office assistant of Benjamin H. Latrobe, then chief engineer of the company. He remained with this company till 1857, and during the greater part of his service was in charge of the design and construction of bridges and buildings, including the first important iron bridges in the country—those over the Monongahela river and Troy run—and the tunnels on the Grafton and Parkersburg section of the road. He was also for a time consulting engineer of the Norfolk and Petersburg Railroad, and designed the bridge at Norfolk. From the Baltimore and Ohio Company he went to the Louisville and Nashville as assistant engineer, and for it built the bridges over Green river, over the Cumberland at Nashville, and over the Ohio at Louisville. This road suffered severely during the civil war, and through this period he was chief engineer and superintendent of the road and machinery department. In 1865 he was made general manager, and in July, 1870, was elected vice-president. Soon after his election he began a minute investigation into the cost of railroad transportation, and suggested that rival corporations should unite their interests under a plan by which the traffic should be amicably divided. Under this plan the Southern Railway and Steamship Association was formed in 1875, and Mr. Fink assumed its management. Within two years the advantages of the pooling system became so marked that Messrs. Vanderbilt, Jewett, Garrett, and Scott, representing respectively the New York Central, the Erie, the Baltimore and Ohio, and the Pennsylvania Railroads, induced Mr. Fink to attempt the organization of a trunk-line pool of the west-bound traffic. In June, 1877, he effected an organization which within six years represented 40 of the largest railroad corporations in the country. He held the office of Commissioner of the Trunk-Line Association till June, 1889, and during this period the pool was kept intact. After his resignation, due to impaired health, he resided chiefly in Louisville. Mr. Fink invented the bridge truss bearing his name.

Flagg, George Whiting, painter, born in New Haven, Conn., June 26, 1816; died on Nantucket island, Mass., Jan. 5, 1897. He was a son of Henry C. Flagg, a lawyer of Charleston, S. C., and a nephew of Washington Allston. He studied painting with his uncle, and portraiture with Bowman in Charleston; and when sixteen years old received as much



as \$300 apiece for portraits. In 1835 he went to Europe for further study, and, after spending three years in the galleries, lived for six years in London. On his return he opened a studio—first in New Haven, and then in New York city. He was elected a member of the National Academy of Design in 1843 and an academician in 1851. Among his earliest paintings are a portrait of Bishop England, "A Boy listening to a Ghost Story," "A Young Greek," "Jacob and Rachel at the Well," and "Murder of the Princes." Those best known include "Landing of the Pilgrims," "Landing of the Atlantic Cable," "Washington receiving his Mother's Blessing," "The Good Samaritan," "Columbus and the Egg," "The Match Girl," "Haidée," "The Scarlet Letter," and "The Execution of Lady Jane Grey."

Francis, John Morgan, journalist, born in Prattsburg, Steuben County, N. Y., March 6, 1823; died in Troy, N. Y., June 18, 1897. He was apprenticed to the printer's trade, and when twenty years old became editor of the "Wayne Sentinel," at Palmyra, N. Y. In 1845 he joined the editorial staff of the "Rochester Advertiser," and in the following year that of the Troy "Budget," of which he became editor and part owner. He established the Troy "Times" in 1851, and for many years was its senior proprietor and editor in chief. In the early part of his journalistic career Mr. Francis was a Free-soiler, and from the organization of the Republican party he was a member of it. He was a member of the State constitutional conventions of 1867-'68 and 1894, and in the last-named body served on the Committees on Preamble and Bill of Rights, on Cities, and on Civil Service. In 1871 he was appointed United States minister to Greece, where he served for three years; in 1882-'84 he was minister to Portugal; and in 1884-'85 to Austria-Hungary. Under an act of the New York Legislature of 1895 he was appointed a member and elected vice-president of the incorporation of Trustees of Scenic and Historic Places and Objects.

French, George Franklin, physician, born in Dover, N. H., Oct. 30, 1837; died in Minneapolis, Minn., July 13, 1897. He was graduated at Harvard College in 1859, and at its medical school in 1862; entered the National army as an assistant surgeon, Aug. 13, 1862; was appointed a surgeon on the staff of Gen. Grant in the following year; and afterward was placed in charge of the organization of field hospitals under Gen. Sherman. When the latter was about setting out on his march to the sea Dr. French was appointed surgeon in chief of the 1st division, 15th Army Corps, and he held the post throughout the march, resigning his commission in June, 1865, and receiving the brevet of lieutenant colonel a month later. Dr. French settled in Portland, Me., to practice, became a member of the original staff of the Marine General Hospital, and in 1875 was appointed instructor in physiology and lecturer on dermatology in Portland Medical School. In 1879 he removed to Minneapolis; in 1881 was appointed lecturer on obstetrics in the St. Paul Medical College; in 1882-'85 held the same chair in the Minneapolis Hospital College; and in 1886 became Professor of Gynecology in the same institution. He was appointed President of the State Examination Board in 1887, and in 1890 was President of the Minnesota Academy of Medicine.

French, John Raymond, educator, born in Pulaski, Oswego County, N. Y., April 21, 1825; died in Syracuse, N. Y., April 26, 1897. He was brought up on a farm, and was graduated at Union College in 1849. Soon after graduation he became Professor of Mathematics in Falley Seminary, Fulton, N. Y., of which he was subsequently principal.

He resigned in 1854, and in 1855-'59 was principal of Mexico Academy. During the last period he also studied law, and on leaving the academy he was admitted to the bar, and for five years he practiced. In 1864 he was elected Professor of Mathematics at Genesee College. When that institution was removed to Syracuse, in 1871, he became dean of the College of Liberal Arts, retaining also the chair of Mathematics till within a short time of his death. For nearly three years he had been vice-chancellor of the university. He received the degree of LL. D. from Allegheny College in 1870.

Fullerton, Joseph Scott, soldier, born in Chillicothe, Ohio, in December, 1835; died in a railroad accident near Oakland, Md., March 20, 1897. He was graduated at Oxford, Ohio, Law School, and practiced till the outbreak of the civil war. He entered the National army as captain on the staff of Gen. Gordon Granger, served through the war, and at its close was a brevet brigadier general on the staff of Gen. O. O. Howard. After the war he resumed law practice in St. Louis, and during President Johnson's administration was postmaster there. At Chickamauga he rode at Granger's side when that general made a dash into the gap at the horseshoe ridge with Steedman's two brigades, reached the position on Wood's right, prevented Hindman's Confederate division from getting into Gen. Thomas's rear, and in a furious encounter of twenty minutes drove Hindman back utterly crushed. Nearly half of the men who rushed with Granger and Fullerton up the ridge were killed or wounded. Both generals escaped unhurt, though their clothing was riddled with bullets.

George, Henry, political economist, born in Philadelphia, Pa., Sept. 2, 1839; died in New York city, Oct. 29, 1897. He was the son of a publisher of Protestant Episcopal Church books, and was educated in the public schools of his native city. After working in a crockery store a year, he went to sea as a cabin boy when fourteen years old, and made the round trip from New York to London, Melbourne, Calcutta, and back again to New York, in about fourteen months. He then, at his father's desire, began to learn the printer's trade, but soon became discontented by confinement, and shipped as an ordinary seaman on a coasting vessel bound from Philadelphia to Boston. In 1858 he became interested in the gold discoveries along Frazer river in British Columbia, and shipped before the mast on a vessel bound for the Pacific coast. He worked his way to the gold region, was disappointed in all his calculations, and worked in Victoria till he earned enough money to pay for a steerage passage to San Francisco. He reached that city in 1859, penniless, did odd jobs, and, after a few months of extreme poverty, made his way to Sacramento, where he found employment in a printing office. This proved so precarious that he was glad to get a place as weigher in a rice mill, and while there he was again tempted by stories of great wealth in gold mining, and made a fruitless journey to the interior of the State. After this he went to San Francisco, and worked for some time as a compositor in a newspaper office. In 1860 he joined two other printers, and, with a few hundred dollars they had saved between them, established a paper called the "Journal." His inability to obtain news



from the Eastern States because he was not a member of a press association soon led to the suppression of the paper, and he resumed typesetting, ultimately becoming a partner in a job-printing office in Sacramento. This venture also proved unprofitable, and he again sought a newspaper composing room for a livelihood. When the attempt was made to establish an empire in Mexico under Maximilian Mr. George joined an expedition intended to aid the Mexicans, but a United States revenue cutter prevented the sailing of the force. He now began writing anonymously for the newspapers. Soon his identity was discovered by the editor of the San Francisco "Times," and he was offered an editorial place on that paper, of which he subsequently became managing editor. Afterward he was connected with the San Francisco "Chronicle," the San Francisco "Herald," and the Oakland "Recorder." While he was on the last paper his opposition to corporations and monopolies led the Central Pacific Railroad Company to buy a controlling interest in the paper and make a change in the editorship. In 1871 he published a pamphlet under the title of "Our Land and Land Policy, National and State," of which a limited number of copies were sold in California only. The following year he was a delegate to the convention that nominated Horace Greeley for the presidency, and he also established the San Francisco "Evening Post," the first one-cent paper on the Pacific coast. Various complications ultimately cost him all that he had invested in the concern. An appointment as inspector of gas meters in San Francisco yielded him a living salary, with sufficient leisure for his literary work. In 1879 he completed his book "Progress and Poverty," of which a few copies were printed privately in San Francisco, and in 1880 he removed to New York, and after much trouble secured the publication of the book in that city and in London. He went to Ireland in 1881 to write up the land question for several American newspapers. In 1883 he accepted an invitation of the Land Reform Union to deliver a series of lectures in England, and in 1884 lectured in Scotland on the invitation of the Scottish Land Restoration League. As a result of his observations, he published "The Irish Land Question" (1881); "Social Problems" (1883); and "Protection or Free Trade" (written in 1884, lost, rewritten, and published in 1886). In 1886 he was the candidate of the United Labor party for the office of Mayor of New York. His canvass was memorable because of the active participation in it of the Rev. Edward McGlynn, D. D., an eloquent Roman Catholic priest. Mr. George polled, according to the returns, 68,110 votes, but always maintained that he was really elected. In 1887 he established "The Standard," and with Dr. McGlynn organized the Anti-Poverty Society, in whose interest they both lectured extensively. He was an unsuccessful candidate for Secretary of State in 1887, revisited England in 1889, and made a lecturing tour of Australia in 1890. Meanwhile his "Progress and Poverty" had been published in the French, German, Spanish, Italian, Dutch, Swedish, Russian, Japanese, and Chinese languages, and he had published pamphlets on "The Condition of Labor," "An Open Letter to Pope Leo XIII," and "A Perplexed Philosopher." In the early autumn of 1897 Mr. George was nominated by several organizations for Mayor of the Greater New York. Subsequently these bodies, in a great mass meeting, united under the party name of the "Democracy of Thomas Jefferson," and Mr. George accepted the nomination. He entered the campaign with great earnestness, and was several times cautioned against overexertion. On the night before his death he addressed four large meetings. He retired about

midnight, was suddenly seized with apoplexy, and died before daylight. The party that had nominated him substituted his son, Henry George, Jr., at the head of the ticket, and continued the canvass. It was estimated that more than 30,000 persons viewed the remains of Mr. George in the Grand Central Palace, and the public funeral was one of the most impressive ever seen in New York. At the time of his nomination he was engaged in the preparation of a work which he intended to be his masterpiece. It was nearly finished, and it was published in 1898. It is entitled "The Science of Political Economy."

George, James Zachariah, jurist, born in Monroe County, Ga., Oct. 20, 1826; died in Mississippi City, Miss., Aug. 14, 1897. When ten years old he accompanied his widowed mother to Carrollton, Miss., where he acquired a common-school education and maintained his legal residence till his death. At the beginning of the Mexican War he volunteered as a private in the 1st Mississippi Regiment, and took part in the battle of Monterey. On his return from Mexico he studied law, was admitted to the bar, elected reporter of the High Court of Errors and Appeals in 1854 and 1860, and prepared ten volumes of the "Reports." In 1861 he was a member of the State convention that passed the ordinance of secession, and in the civil war he became a brigadier general in the Confederate army, and twice was made a prisoner. Returning home, he resumed law practice, and completed a digest of all the decisions of the Supreme Court and the High Court of Errors and Appeals from the admission of the State into the Union till the end of 1870. In 1875-'76 he was chairman of the Democratic State Executive Committee; in 1879 was appointed a judge of the State Supreme Court and elected its chief justice; and in 1881, 1886, and 1892 was elected United States Senator. Recently he had given the most of his attention to the work of the Judiciary Committee and to the legislation on bankruptcy.

Gersoni, Henry, philologist, born in Wilna, Russia, in 1843; died in New York city, June 29, 1897. He was educated at the Universities of St. Petersburg and Berlin, and for several years was a member of the Students' Society, which was eventually suppressed. In 1866 he came to the United States and preached in the Temple Emanu-El, New York city. He was also a contributor to "The Jewish Times" and other periodicals till 1874, when he was chosen rabbi of a synagogue in Atlanta, Ga. Thence he went to the Temple B'nai Sholem, in Chicago, where he established and published for two years "The Jewish Advance." Since 1883 he had resided in New York city. He was an accomplished linguist, and had written many articles on the history of the Jews in Russia.

Ginter, Lewis, manufacturer, born in New York city, April 24, 1824; died in Westbrook, Va., Oct. 2, 1897. When seventeen years old he went to Richmond, Va., where he became a successful merchant. During the civil war he served in the quartermaster's department of the Confederate army, attaining the rank of major. After the war he was a broker in New York city till ruined by the "Black Friday" panic in 1869. He then returned to Richmond, began manufacturing cigars in a small way, was one of the first cigarette manufacturers in the country, and became one of the strongest members of the American Tobacco Company, the cigarette trust. He acquired large wealth, and did much to beautify and improve Richmond.

Grace, Agnes (known in religion as **SISTER GONZAGA**), benefactor, born near Emmettsburg, Md., in 1812; died in Philadelphia, Pa., Oct. 8, 1897. She acquired a common-school education, became a Sister of Charity when fifteen years old, and had been

connected with St. Joseph's Orphan Asylum in Philadelphia since 1830, and its superioress for fifty years. During the greater part of the civil war she was an army nurse, and ministered to hundreds of soldiers on both sides. At the time of her death she was believed to be the oldest Sister of Charity in the United States.

Grace, Thomas L., clergyman, born in Charleston, S. C., Nov. 16, 1814; died in St. Paul, Minn., Feb., 22, 1897. He was educated at the Roman Catholic seminary in Charleston, the convent of St. Rose in Kentucky, and the Minerva College in Rome; entered the order of St. Dominic when sixteen years old; and was ordained in Rome, Dec. 21, 1839. He returned to the United States in 1844, and for several years was engaged in missionary labor in Kentucky and Tennessee, particularly in Memphis, where he erected the Church of SS. Peter and Paul, the convent of St. Agnes, and an orphan asylum. After holding the pastorate of the Memphis church for thirteen years, he was appointed bishop of the see of St. Paul, Minn., in 1859. In 1875 the great labor imposed on him by the vastness of his diocese was relieved by the setting off of northern Minnesota as a vicariate and the appointment of the Rev. John Ireland as a coadjutor, and further relief was given in 1879, when Dakota was placed under the care of a vicar apostolic. Bishop Grace celebrated the silver jubilee of his episcopate in July, 1884, and the same year resigned his see.

Greator, Eliza, painter, born in Manor Hamilton, Ireland, Dec. 25, 1819; died in Paris, France, Feb. 9, 1897. She was a daughter of the Rev. James Caleott Pratt; came to New York in 1840, and married Henry W. Greator, an English musician, in 1849. After her marriage she studied painting and took a course in etching. She visited England in 1857, spent 1861-'62 in Paris, and visited Germany and Italy in 1870-'73. At first she applied herself to landscape painting, but in late years she gave her entire attention to pen-and-ink work and etching. Many of her pen-and-ink sketches appeared in book form with text by her sister, Mrs. Matilda P. Despard, of which the best known are "The Homes of Ober-Ammergau" (Munich, 1872); "Summer Etchings in Colorado" (New York, 1873); "Etchings in Nuremberg" (1875); and "Old New York, from the Battery to Bloomingdale" (1876). She also made a large pen drawing of "Dürer's House in Nuremberg," which is in the Vatican. A series of eighteen of her sketches illustrative of New York was exhibited among the art collections at the Centennial Exhibition at Philadelphia in 1876. Among her best-known paintings are "Bloomingdale" (1868); "Chateau of Madame Oliffe" (1869); "Normandy" (1882); "The House of Louis Philippe in Bloomingdale" (1884); and "Bloomingdale Church," "St. Paul's Church," and "The North Dutch Church," each painted on a panel taken from St. Paul's and the North Dutch Churches (1876). Mrs. Greator was the first woman that was elected an associate of the National Academy of Design (1868), and the only woman that ever was admitted to the Artist's Fund Society of New York.

Green, Joseph F., naval officer, born in Maine, Nov. 24, 1811; died in Brookline, Mass., Dec. 9, 1897. He was appointed a midshipman in the United States navy Nov. 1, 1827; was promoted passed midshipman June 10, 1833; lieutenant, Feb. 28, 1838; commander, Sept. 14, 1855; captain, July 16, 1862; commodore, Dec. 2, 1867; and rear admiral, July 13, 1870; and was retired Nov. 25, 1872. During his active career he was on sea service for twenty years and five months and on shore or other duty for seventeen years and three months. He was attached to the ship-of-the-line "Ohio," of the

Pacific squadron, at the time of the Mexican War. In 1851-'52 he was on duty at the Boston Navy Yard; in 1853-'54 on ordnance service; and in 1855-'58 at the Naval Academy. He was again assigned to ordnance duty in 1861, commanded the steam sloop "Canandaigua" of the South Atlantic blockading squadron in 1862-'64, took part in the bombardment of Fort Wagner, was on ordnance duty at the Boston Navy Yard in 1866-'68, and commanded the Southern squadron of the Atlantic fleet in 1870-'71.

Green, Traill, chemist, born in Easton, Pa., May 25, 1813; died there, April 29, 1897. He was graduated in medicine at the University of Pennsylvania in 1835, and returned to Easton and engaged in practice. He was elected Professor of General and Applied Chemistry at Lafayette College in 1837, and of Natural Sciences at Marshall College, Mercersburg, in 1841, holding the last chair till 1847, when he returned to Lafayette College. The Pardee Scientific Department, at Lafayette, was organized by him, and he was its dean till within a few years of his death. Prof. Green built the astronomical observatory of Lafayette, and presented it to the college. He was the first President of the American Academy of Medicine, and President of the Pennsylvania Medical Society in 1868. He rendered important service under various State appointments. He received the degree of LL. D. from Washington and Jefferson College in 1866.

Groesbeck, William Slocomb, lawyer, born in New York city, July 24, 1815; died in Cincinnati, Ohio, July 7, 1897. He was graduated at Miami University, Oxford, Ohio, in 1835; studied law and settled in Cincinnati to practice. In 1851 he was a member of the State Constitutional Convention; in 1852 was appointed to the commission to codify the laws of the State; and in 1857-'59 was a Republican Representative in Congress and a member of the Committee on Foreign Affairs. He was a member of the Peace Congress in 1861, a State Senator in 1862, and a delegate to the National Union Convention in Philadelphia in 1866. His most notable public service was counsel for President Johnson in the impeachment trial in 1868. He had little sympathy for the President or his policy, but consented to be his counsel. In 1872 a convention of Liberal Republicans, dissatisfied with the nomination of Horace Greeley, put Mr. Groesbeck in nomination for the presidency, but the act was almost entirely overlooked in the excitement of the campaign, and when the electoral college met he received one vote for the vice-presidency, for which his name had not been mentioned. He was appointed a delegate to the International Monetary Congress in Paris in 1878. For many years the citizens of Cincinnati have enjoyed free park concerts as a result of his gift of \$50,000 for the purpose.

Hale, George Silsbee, lawyer, born in Keene, N. H., Sept. 24, 1825; died in Schooner Head, Me., July 28, 1897. He was a son of Salma Hale, the historian; was graduated at Harvard in 1844; taught for some time in Richmond, Va.; and was admitted to the bar in Boston in 1850. He edited the sixteenth, seventeenth, and eighteenth volumes of the "United States Digest," and with H. Farnham Smith the nineteenth, and was associated with George P. Sanger and John Codman in editing the sixteenth, seventeenth, and eighteenth volumes of the "Boston Law Reporter." His other literary work included "Memoirs of Joseph Parker," a chief justice of New Hampshire (1876); "Memoirs of Heron Metcalf," of the Massachusetts Supreme Court (1876); and the historical sketch of the charitable institutions of the city in the "Memorial History of Boston." He took an active interest in the charitable and public institutions of the city,

and had been President of the Common Council and a member of the State Legislature.

Halliday, Samuel Bryane, clergyman, born in Morristown, N. J., June 5, 1812; died in Orange, N. J., July 9, 1897. He removed with his father's family to New York, where he worked as a clerk and undertook to prepare for the ministry, but soon had to give up study on account of his eyes. He engaged in volunteer missionary work, established in the Spring Street Presbyterian Church the second Sunday-school infant class in the United States, and was appointed General Secretary of the New York City Tract Society. When compelled by failing health to retire from this work, he went to Providence, R. I., where he was employed in mercantile business and was instrumental in establishing three Congregational churches near the city. Subsequently he resumed his studies for the ministry; was ordained and installed pastor of the Congregational church at Lodi, N. J., in 1863; became superintendent of the Five Points House of Industry in New York in 1865; and removed to Brooklyn and united with Plymouth Church in 1866. A strong friendship soon sprang up between Henry Ward Beecher and Mr. Halliday, and when the trustees decided to provide an assistant for Mr. Beecher the latter selected Mr. Halliday. The office of pastoral helper was created, and in 1869 Mr. Halliday withdrew from the Five Points Mission and began his work with Plymouth Church. This relation was continued till Mr. Beecher's death, in 1887. When Dr. Lyman Abbott was chosen Mr. Beecher's successor, Mr. Halliday resigned his office, and was presented by the church with a handsome annuity. Finding a promising field in the Ocean Hill region of the city, where there was a small, struggling Congregational church, he assumed its pastorate without salary, and within three years erected a tasteful church edifice at a cost of \$26,000, and had the name changed from the Tabernacle to the Beecher Memorial Church. He held the pastorate as long as advancing years would permit.

Hardy, George E., educator, born in New York city in 1859; died in Roselle, N. J., April 15, 1897. He was graduated at the College of the City of New York in 1878; began teaching in the public schools; was appointed principal of Grammar School No. 82 and elected President of the State Teachers' Association in 1886; and was Professor of the English Language and Literature in the College of the City of New York from 1894 till his death. Prof. Hardy had become favorably known as a writer and lecturer on educational topics, and was one of the founders of the Catholic Summer School of America. Of his publications, "Five Hundred Books for the Young" is the most important. He left unfinished a "History of England" and a "History of English Literature," for schools.

Harrington, George W., soldier, born in Waterloo, N. Y., in 1837; died in Kalamazoo, Mich., June 24, 1897. He entered the United States Military Academy, but in 1853, before he had completed the course, he volunteered for service in the Indian war. He crossed the plains with Gens. Albert Sidney Johnston and Philip St. George Cooke, and acquitted himself with much credit. In the early part of the civil war he organized the 10th New York Cavalry. He was captured and was confined in Libby Prison, from which with others he escaped. In the Gettysburg campaign he distinguished himself by his bravery till seriously wounded. He was brevetted a brigadier general for this service, and soon afterward was compelled by his wounds to retire from the army. After the war he was engaged in the undertaking business in Rochester, N. Y., and in Kalamazoo. Gen. Harrington was president of the Michigan Undertakers' Association.

Harris, Henry Herbert, educator, born in Lonisa County, Va., Dec. 17, 1837; died in Lynchburg, Va., Feb. 4, 1897. He was graduated at the University of Virginia in 1860, became an instructor in Albemarle Female Institute, and served in the Confederate army through the civil war. Largely through his influence Richmond College was reopened soon after the war, and from 1866 till 1896 he was Professor of Greek there, and for four years chairman of its faculty. In 1896 he entered the faculty of the Southern Baptist Theological Seminary, in Louisville, Ky., with which he was connected till his death. Dr. Harris began his ministry in 1859 by preaching to a congregation of colored people. In 1868 he gathered a small congregation and Sunday school in the suburbs of Richmond, and when, in the following year, a church was organized there, he was ordained and became its pastor. In 1873-'76 he was editor of the "Educational Journal" of Virginia, and in 1877 of the "Foreign Mission Journal," the organ of the boards of the Southern Baptist Convention. On the organization of the Virginia Baptist Historical Society, in 1876, he was elected its secretary and treasurer. He was also for many years one of the editors of the "Religious Herald" of Richmond.

Harris, Isham Green, lawyer, born near Tullahoma, Tenn., Feb. 10, 1818; died in Washington, D. C., July 8, 1897. When fourteen years old he became a shopboy in Paris, Tenn.; before he was nineteen he went to Tippah County, Miss., where he became a successful merchant, a law student, and, by the failure of a bank, penniless, and returning to Paris he was again successful in business, continued his law studies, and was admitted to the bar in 1841. In 1847 he was a successful candidate for the lower house of the Legislature as a Democrat, against two unpopular Democrats and a Whig candidate.

From that time till his death, with three brief exceptions, he was continually in public life. In 1849 and 1851 he was elected to Congress, in 1853 was renominated, but declined, and in 1856 he made a successful canvass of his State for presidential elector at large. At the close of his second term in Congress he removed to Memphis and resumed law practice. He was elected Governor of Tennessee in 1857, 1859, and 1861. At the beginning of the civil war he instituted vigorous measures to put the State in an attitude of defense against what he characterized as an invasion by the National troops, but the successes of the Union armies soon drove the Government from the capital, and in the last three years of the war he was a volunteer aid on the staff of the commanding general of the Confederate Army of the Tennessee. At the battle of Shiloh, when Gen. Albert Sidney Johnston received his death wound he fell into the arms of Gov. Harris. After the war, though Gov. Brownlow had offered a large reward for his capture, Gov. Harris escaped into Mexico, going thence to England, and returning to Memphis in 1867. In 1876 he made a personal canvass of the State as a self-announced candidate for the United States Senate, and in the election he defeated Judge L. L. Hawkins, the Republican candidate. He was re-elected in 1883, 1889, and 1895. Senator Harris was a tireless committeeman and very punctilious in observing the rules and courtesies.



sies of the Senate. He was popular among his fellow-members, who by a large majority elected him president *pro tem.* of the Senate in 1893.

Haskell, James Richards, inventor, born in Geneva, N. Y., Sept. 17, 1825; died in Passaic, N. J., Aug. 15, 1897. He removed to Ohio with his parents in 1833, was educated at Western Reserve College, and engaged in manufacturing in New York city in 1853. In 1856 his attention was directed to the accelerating principle of heavy ordnance, originated by A. S. Lyman, of New York, and he became interested in the development of it. After a series of experiments he constructed a gun with powder pockets along its bore. A small charge of powder was placed behind the shot at the breech to start it, and as the shot passed each powder pocket the gas of combustion ignited and exploded the charge, and each one added to the velocity of the shot. The initial, or breech charge, was slow-burning powder, the pocket powder was quick burning. Mr. Haskell built several of his multicharge guns, and they showed remarkable results in velocity and penetration. The Government paid him \$100,000 for his invention, but subsequent developments in the science of gunmaking prevented its practical application, and he spent the remainder of his life in endeavoring to adapt the principle of the multicharge gun to the new conditions.

Headley, Joel Tyler, author, born in Walton, Delaware County, N. Y., Dec. 30, 1813; died in Newburg, N. Y., Jan. 16, 1897. He was graduated at Union College in 1839, and subsequently at Auburn Theological Seminary, and for a time was pastor of the Presbyterian Church at Stockbridge, Mass. In 1842 he was compelled by failing health to withdraw from the ministry. He spent a year in foreign travel, and on his return engaged in literary work. In 1846 he became associate editor of the New York "Tribune," succeeding Henry J. Raymond, but poor health soon made it necessary for him to resign the post. He lived in the Adirondacks for the greater part of several years, visited the region regularly for nearly thirty years, and published a book on the locality by which it is believed attention was first attracted to the Adirondacks as an important health resort. In 1854 he was elected to the New York Assembly, and in 1855 was the successful Know-nothing candidate for Secretary of State of New York. His publications include "Napoleon and his Marshals" (2 vols., New York, 1846); "Washington and his Generals" (1847); "Life of Cromwell" (1848); "The Adirondacks; or Life in the Woods," a collection of newspaper letters (New York, 1849); "Sacred Scenes and Characters" (1849); "Life of Washington" (1857); "Life of Havelock" (1859); "Chaplains of the Revolution" (1861); "The Great Rebellion" (2 vols., 1864); "Grant and Sherman: Their Campaigns and Generals" (1865); "Farragut and our Naval Commanders" (1867); "Sacred Heroes and Martyrs" (1865); "The Achievements of Stanley and other African Explorers" (1877); "History of the War of 1812"; "Lives of Scott and Jackson"; "Sacred Mountains"; and "History of the Riots of 1863."

Hesing, Washington, journalist, born in Cincinnati, Ohio, May 14, 1849; died in Chicago, Ill., Dec. 18, 1897. He accompanied his parents to Chicago in childhood and was educated there till 1861, when he went to Germany to study. He was graduated at Yale in 1870, and immediately afterward took a course in political economy and German literature at the University of Berlin. In November, 1871, he became connected with the "Illinois Staats Zeitung," of which his father was proprietor, and in 1880 was made managing editor. In 1872 he became a member of the city Board of Education, and took an active part in the presidential campaign,

making an effective series of speeches in English and German for the Republican party. In 1880 he was elected to the county Board of Education, and in 1882 was chosen its president. Subsequently he became a Democrat, and for several years retired from active politics. In 1890, during the controversy on the school question, he gave his influence to the liberal side. He was a member of the commission appointed to devise ways and means for improving the condition of Chicago during the World's Columbian Exposition, and also of the Intramural Commission, was appointed postmaster of Chicago in 1894, and was the unsuccessful independent candidate for mayor in the spring of 1897.

Hewit, Nathaniel Augustus (better known by the adopted Christian names of AUGUSTINE FRANCIS), clergyman, born in Fairfield, Conn., Nov. 27, 1820; died in New York city, July 3, 1897. He was a son of the Rev. Nathaniel Hewit, a founder of Hartford Theological Seminary, and was graduated at Amherst in 1839. In 1840 he entered the Theological Institute of Connecticut at East Windsor, in 1842 was licensed to preach in the Congregational Church, in 1843 was ordained a deacon in the Protestant Episcopal Church, and in 1847 was ordained a priest in the Roman Catholic Church after two years of study in Charleston, S. C. He became vice-principal of Charleston Collegiate Institute, where he remained three years. Then deciding to join a religious community, he became an associate of the New York Redemptorists, and was attached to the Church of the Holy Redeemer. In 1858 Fathers Hewit, Hecker, Walworth, Baker, and Deshon, all Redemptorists, recognizing that that order was unsuited to conditions existing in the United States, secured from Pope Pius IX a decree creating the "Institute of Missionary Priests of St. Paul the Apostle." The work of the Paulist Fathers, as these priests were called, met with immediate and large success. Father Hecker was superior of the order from its institution till his death, in 1888, when Father Hewit succeeded him. In 1865 Father Hewit gave up active missionary work and applied himself to theological and literary work, becoming Professor of Philosophy, Theology, and the Holy Scriptures in the Paulist Seminary in New York city. He was also editor of the "Catholic World" in 1869-'74. From its inception till within a year of his death Father Hewit was intimately connected with the Catholic University of America, in Washington, D. C. He was one of its lecturers, and secured the establishment by the Paulist Fathers of the College of St. Thomas Aquinas at the university. The degree of D. D. was conferred upon him by Amherst College and the Pope. He was a regular contributor to the "American Catholic Quarterly Review"; edited the "Complete Works of Bishop England" (Baltimore, 1850); and published "Reasons for submitting to the Catholic Church" (Charleston, 1846); "Life of Princess Borghese" (New York, 1856); "Life of Dumoulin-Borie" (1857); "The Little Angel of the Copts"; "Life of Rev. Francis A. Baker" (1865); "Problems of the Age, with Studies in St. Augustine on Kindred Subjects" (1868); "Light in Darkness: A Treatise on the Obscure Night of the Soul" (1870); and "The King's Highway; or, The Catholic Church the Way of Salvation, as revealed in Holy Scripture" (1874).

Hoffman, Charles Frederick, clergyman, born in New York city in 1834; died on Jekyll island, near Brunswick, Ga., March 4, 1897. He was a son of Samuel Verplanck Hoffman, a wealthy merchant, and a brother of the Rev. Eugene Augustus Hoffman, dean of the General Theological Seminary, in New York city. The brothers acquired very large wealth from the estate of their father.

Charles Frederick was graduated at Trinity College, Hartford, in 1851, took a three years' course at the General Theological Seminary, and after ordination engaged in mission work at Boonton, N. J., for three years, and then held charges at Burlington, N. J., and Garrisons, N. Y. In 1874 he was called to the Church of All Angels, New York city, and he remained its rector till his death. At his own expense he erected a handsome building 100 feet square at a cost of \$150,000, and presented it and the ground on which it stands to his congregation. The new church was dedicated in 1890, and was enlarged by him at a cost of \$200,000 to about double its former capacity in 1896-'97. In 1894 Dr. Hoffman erected a large parish house for the church and provided for both mental and manual training. He gave to St. Stephen's College at Annandale, N. Y., in money and buildings about \$200,000; presented Hobart College, at Geneva, N. Y., with a handsome endowment; erected a library building for the A. T. Porter Institute at Charleston, S. C.; and in 1896 sent a check for \$40,000 to the University of the South, at Sewanee, Tenn. Dr. Hoffman was president of the Association for furthering the Interests of Church Schools, Colleges, and Seminaries, and besides the benefactions mentioned gave most liberally to such institutions. He had received the degrees of D. D., LL. D., and D. C. L. (See GIFTS AND BEQUESTS.)

Holley, George Washington, author, born in Salisbury, Conn., Feb. 17, 1810; died in Ithaca, N. Y., June 12, 1897. He was a brother of Alexander H. Holley, a Governor of Connecticut, and an uncle of Alexander Lyman Holley, the metallurgist. He entered the United States Military Academy in 1829, but was obliged by sickness to withdraw: served for several years in the lower house of the New York Legislature, was long a resident of Niagara Falls, and was widely known as a public speaker. Besides frequent contributions to newspapers and magazines, he published "Niagara: Its History and Geology" (1872) and "Magnetism; or, The New Cosmography" (1894).

Holman, William Steele, jurist, born in Veraes-tau, Dearborn County, Ind., Sept. 6, 1822; died in Washington, D. C., April 22, 1897. He was a son of Judge Jesse Lynch Holman; took a partial course at Franklin College, Indiana; and was admitted to the bar and began practice at Aurora, Ind. When twenty-one years old he was elected a judge of probate, and after holding the office for three years he was prosecuting attorney for two years. In 1850 he was a member of the State Constitutional Convention, in 1851-'52 was in the Legislature, and in 1852-'56 was a judge of the Court of Common Pleas. He was elected to Congress as a Democrat in 1856, and, with the exception of the Thirty-ninth, Forty-fifth, Forty-sixth, and Fifty-fourth Congresses, was re-elected to each succeeding one, thus serving sixteen terms in the House of Representatives. At the outset of his congressional career Judge Holman became conspicuous as a champion of economy, and from his constant objection to new appropriations and measures that he considered extravagant he was nicknamed "The Great Objector" and "The Watchdog of the Treasury." During the civil war he was a steadfast champion of the National cause and a firm supporter of President Lincoln.

Holmes, George Frederick, educator, born in Demerara, British Guiana, in 1820; died in Richmond, Va., Nov. 4, 1897. He was educated at Durham University, England; came to the United States in 1838; taught in Virginia, Georgia, and South Carolina; and was admitted to the bar of the last-named State by special act of the Legislature before he was naturalized in 1842. In 1845 he

became a professor in Richmond College; in 1846 was elected President of the University of Mississippi; and in 1847 was made Professor of History, Political Economy, and International Law in William and Mary College. From 1857 till his death he was Professor of History and Literature in the University of Virginia, and during this long period he missed not more than five lectures. Prof. Holmes was at one time assistant editor of "The Southern Review," was the author of a series of text-books for use in Southern schools and colleges, and had written a large number of political essays.

Holmes, Samuel, benefactor, born in Waterbury, Conn., in 1824; died in Montclair, N. J., Dec. 9, 1897. He was a corporate member of the American Board of Commissioners for Foreign Missions, a member of the Executive Committee of the American Missionary Association, and for many years was treasurer, secretary, or vice-president of the American Educational Society. His gifts included four perpetual scholarships at Yale for students from Waterbury, and \$25,000 for the founding of a professorship at Yale Divinity School. (See GIFTS AND BEQUESTS.)

Hopkins, Perry, clergyman, born a slave at Eastern Shore, Md., in 1822; died in New York city, Aug. 20, 1897. After obtaining his freedom he settled in New York city, where he supported himself as a laborer and school janitor. He was converted at a mission meeting more than forty years ago, studied for the ministry of the African Methodist Episcopal Church, and after ordination organized congregations among the negro population of the city and its vicinity. His success in gathering and instructing the people of his race soon led to his election as a bishop of his church and his assignment to the diocese that includes New York, Massachusetts, and Maine.

Hosmer, Mrs. Margaret (Kerr), journalist and writer of short stories, born in Philadelphia, Dec. 1, 1830; died there, Feb. 1, 1897. In her girlhood she went with her father to California, and there married, in 1853, Granville Hosmer, chief coiner in the Philadelphia, Nevada, and California mints. She was for some years the Washington correspondent of the "Alta California" and the "Golden Era," the latter of which she edited for some time with Bret Harte. After 1882 she wrote but little and lived in semiretirement in Philadelphia. Her published books comprise "The Morrisons: A Story of Domestic Life" (New York, 1864); "The Back Court" (Philadelphia); "Catey's Three Dresses"; "Courts and Corners"; "Dismal Castle brightened"; "The Story of a Week"; "The Subtle Spell"; "John Hartman"; "Ten Years of a Lifetime" (1866); "Lenny the Orphan" (1869); "Juliet the Heiress" (1869); with Julia Hopeton, "Under the Holly" (1869); "Child Captives" (1870); "Rich and Poor" (1870); "Three Times lost" (1870); "Little Rosie Series" (1870); "Blanche Gilroy" (1871); "Lilly's Hard Words" (1871); "The Sin of the Father" (1872); "A Rough Boy's Story" (1873); and "Chumbo's Hut" (1880).

Houghton, George Hendricks, clergyman, born in Deerfield, Mass., in 1820; died in New York city, Nov. 17, 1897. He was graduated at the University of the City of New York in 1842 and at the General Theological Seminary in 1845, and after ordination in the Protestant Episcopal Church became assistant to the Rev. Dr. Muhlenberg at the Church of the Holy Communion in New York and instructor in Hebrew at the General Theological Seminary. In 1848 he organized the parish of the Transfiguration, and for nearly two years held services regularly in a private dwelling. In 1850 the congregation erected a church building on 29th Street near Fifth Avenue. For ten years the young

rector struggled hard for the benefit of his parish, giving to it all the means he had acquired before organizing it, and engaging in literary and other pursuits to aid it. The modest building was enlarged from time to time, the activities of the parish were increased and quickened, and at the time of the rector's death the property of the church was free from debt and there was an endowment of \$100,000. The parish has a free library, St. Christopher's class for the instruction of young girls, St. Ann's Guild of working women, St. Monica's Guild of colored women, an altar society, Holy Innocents' Guild, Maternity Society for helping poor women and their children, Missionary Aid Society, two Sunday schools, and a children's sewing school. Dr. Houghton introduced into New York city from the English Church the Community of St. John the Baptist, which undertakes the rescue of fallen women, and was warden of the band that has carried on work at its Midnight Mission and St. Michael's Home, at Mamaroneck. Long before the Church of the Transfiguration attained a world-wide celebrity and a new name its modest rector had made himself the friend of everybody. He labored on the one spot for nearly fifty years, refusing all preferments of his church and tempting calls to service elsewhere. In December, 1870, when George Holland, the actor, died, a committee of the old Wallack company, headed by Joseph Jefferson, waited on the rector of a fashionable church on Fifth Avenue with the request that he would conduct the funeral services. The rector declined, and referred Mr. Jefferson to "the little church around the corner." Dr. Houghton placed himself and his church at the committee's disposal, and the body of Holland was received into the church for Christian rites. Within a few days the details of the incident had spread through the country and prompted the song that was sung on two continents, "God bless the Little Church around the Corner." Since then the funerals of actors who died in New York have generally been held in this church. (See GIFTS AND BEQUESTS.)

Hovey, Charles Edward, lawyer, born in Thetford, Orange County, Vt., April 26, 1827; died in Washington, D. C., Nov. 17, 1897. He was graduated at Dartmouth College in 1852, and after a service as principal of the high school in Framingham, Mass., he removed to Peoria, Ill., and was appointed principal of the boys' high school there. In 1856 he was appointed superintendent of the newly organized public-school system of Peoria, and the same year was president of the State Teachers' Association. The organization of the Illinois Normal University was largely due to his efforts, and he was its president from 1857 till the beginning of the civil war. In August, 1861, he was commissioned colonel of the 33d Illinois Infantry, composed chiefly of college students; in 1862 he was promoted brigadier general; and for gallantry at Arkansas Post, Jan. 11, 1863, he was brevetted major general of volunteers. He served in the operations around Vicksburg and contracted an illness that forced him to resign in May, 1863. Since 1869 he had practiced law in Washington.

Howe, Albion Paris, soldier, born in Standish, Me., March 13, 1818; died in Cambridge, Mass., Jan. 25, 1897. He was graduated at the United States Military Academy and entered the army as 2d lieutenant in the 4th Artillery in 1841; was promoted 1st lieutenant, June 18, 1846; captain, March 2, 1855; major, Aug. 11, 1863; lieutenant colonel, 2d Artillery, April 10, 1879; and colonel, April 19, 1882; and was retired June 30 following. In the volunteer service he was commissioned a brigadier general, June 11, 1862; brevetted major general, July 13, 1865; and mustered out of the service

Jan. 15, 1866. During his active service he was brevetted captain, Aug. 20, 1847, for meritorious conduct in the battles of Contreras and Churubusco; major, July 1, 1862, for Malvern Hill; lieutenant colonel, May 3, 1863, for Salem Heights; colonel, Nov. 7 following, for Rappahannock Station; and brigadier general and major general, United States army, March 13, 1865, for gallant and meritorious services during the war. He was Professor of Mathematics at the Military Academy in 1843-'46; served on garrison duty and as instructor at the Artillery School at Fort Monroe from the close of the Mexican War to the beginning of the civil war; was Gen. McClellan's chief of artillery in the West Virginia campaign in 1861; commanded a brigade of light artillery in the Army of the Potomac in the Peninsula campaign of 1862; took part in the battles of Malvern Hill, Manassas, South Mountain, Antietam, Fredericksburg, Chancellorsville, Gettysburg, and Rappahannock Station; and was on duty in Washington as chief of artillery in 1864-'66.

Hubbard, Gardiner Greene, philanthropist, born in Boston, Mass., Aug. 25, 1822; died in Washington city, Dec. 11, 1897. He was a son of Justice Samuel Hubbard and his wife, Mary Anne Greene, daughter of Gardiner Greene, said to have been one of the three wealthiest men in the United States. Young Hubbard was graduated at Dartmouth in 1841, studied at Harvard law school, and in 1843 was admitted to the bar and began practice in association with Benjamin R. Curtis. On the appointment of Mr. Curtis to the United States Supreme Court Mr. Hubbard practiced for some years alone, but later formed a partnership with John M. Pinkerton. In 1870 failing health led him to abandon his profession, and in 1873 he removed to Washington, which thereafter was his home. Meanwhile he had become active in the affairs of Cambridge, which continued to be his summer residence, and he was president of a street railway connecting Cambridge with Boston, which was the first horse-car railway outside of New York city. About 1860 his daughter Mabel lost her hearing in consequence of severe illness, and Mr. Hubbard was led to study the means of preserving her speech, for he was advised that she would become dumb in three months. He became satisfied that deaf persons could be taught to speak, and for that purpose he opened a school, which he maintained at his own expense. The success of the undertaking and his persistent urging the matter upon public attention resulted in the establishing of Clarke School for the Deaf and Dumb, in Northampton, Mass., of which he was a trustee and president of the board from its inception till his death. For five years after his removal to Washington he practiced law, but in 1878 he turned his attention to the development of the telephone invented by his son-in-law, Alexander G. Bell, and became the first President of the American Bell Telephone Company. It was he who recognized the value of the Berliner crude battery transmitter and purchased it before any separate company could be formed to control it. He went to Europe and organized several telephone companies, among them the International and the Oriental. Valuable concessions were granted to him by the Russian Government, and he repaid the empire by giving it one of the best telephone systems in Europe. In 1876 he was appointed a special commissioner to investigate the subject of railway mail transportation, and he became a strong advocate of Government ownership of telegraphs. Mr. Hubbard was a commissioner from Massachusetts to the World's Fair held in Philadelphia in 1876, and was chief of the Jury of Awards at the Tennessee Centennial Exposition,

held in 1897. He was elected a regent of the Smithsonian Institution in 1895, and was a member of its Executive Committee. In 1895 he was made president of the joint commission of the scientific societies of Washington; also he was President of the National Geographical Society. Mr. Hubbard was Vice-President of the American Association of Inventors and Manufacturers. He was one of the trustees of Columbian University, and received the degree of LL. D. from that institute in 1888. At Dartmouth he founded a lectureship on important incidents in American history. Mr. Hubbard acquired a large fortune and possessed valuable collections of engravings and antiquities, and a fine library.

Ide, Horace K., soldier, born in Barnet, Vt., Jan. 15, 1842; died in Brattleboro, Vt., March 31, 1897. He enlisted as a private in Company F, 1st Vermont Cavalry; served through the war; was twice taken prisoner and twice severely wounded; took part in 42 engagements; and was mustered out with the rank of brevet major general, May 13, 1865. After the war he was active as a Republican in State politics, and served several terms in the Vermont Legislature. He resided in St. Johnsbury, Vt., but spent his winters in Florida because of impaired health, resulting from wounds.

Janssens, Francis, clergyman, born in Tilburg, Holland, Oct. 17, 1847; died at sea between New Orleans and New York, June 10, 1897. When thirteen years old he entered the seminary of the diocese of Bois-le-Duc, where he passed through the great and small departments, and then, with the intention of engaging in missionary work in the United States, continued his studies in the American College at Louvain, Belgium. He was ordained a priest of the Roman Catholic Church on Dec. 21, 1867; went to Richmond, Va., in the following year, and remained there till May, 1881. During this period he served as first assistant in the Cathedral of St. Peter, as its rector, as secretary and chancellor of the diocese, and as vicar general, and was identified with the administrations of Bishops McGill, Gibbons, and Keane. On April 7, 1881, he was appointed Bishop of Natchez, and was consecrated May 1. Aug. 7, 1888, he was promoted to the archiepiscopal see of New Orleans. At the time of his death there were under his jurisdiction 207 priests, 161 churches, 60 chapels and stations, 22 colleges and academies, 103 parochial schools, 23 charitable institutions, and a Roman Catholic population estimated at 325,000.

Jermain, James Barclay, philanthropist, born in Albany, N. Y., Aug. 13, 1809; died there, July 12, 1897. He was a son of Silvanus P. Jermain. He was educated at Middlebury and Amherst Colleges, took up the study of law, and, after the death of his father, from whom he inherited much wealth, applied himself almost wholly to the management of his property and to philanthropy. He built the Jermain Memorial Church at Watervliet, N. Y., at a cost of \$120,000, and endowed a professorship in Williams College with \$50,000. He built the Home for Aged Men in the town of Colonie and the Fairview Home for Children, the latter at a cost of \$60,000, and expended nearly \$100,000 on the building of the Young Men's Christian Association in Albany. (See GIFTS AND BEQUESTS.)

Jewett, Lyman, missionary, born in Waterford, Me., March 9, 1813; died in Fitchburg, Mass., Jan. 7, 1897. He was graduated at Brown University and at Newton Theological Institution, ordained in the Baptist Church Oct. 6, 1848, and sent to the East Indian field by the American Baptist Missionary Union immediately afterward. On April 16, 1849, he reached the Nellore Mission, which had been without American helpers for more than

three years, and at once set about reorganizing it, with the result that on Dec. 3 he delivered his first regular Telugu sermon in the chapel. The union decided in 1853 to continue this mission. Though his work did not receive the encouragement at home that he had looked for, Dr. Jewett labored the more diligently. He learned the language of the Telugus, made excursions into the neighboring villages, aroused such interest that considerable audiences gathered in the streets to listen to his preaching, and translated the New Testament into the language of the people. In 1861 and 1875 he returned to the United States for a season of rest, resuming his mission work after each visit, and continuing it till, weighted with years, he was induced to surrender his work into younger hands.

Johnson, Richard W., soldier, born near Smithland, Livingston County, Ky., Feb. 7, 1827; died in St. Paul, Minn., April 21, 1897. He was graduated at the United States Military Academy, and entered the army as brevet 2d lieutenant in the 6th Infantry in 1849; was promoted 2d lieutenant in the 1st Infantry, June 10, 1850; 1st lieutenant in the 2d Cavalry, March 3, 1855; captain, Dec. 1, 1856; major, 4th Cavalry, July 17, 1862; and was retired with the rank of major general, Oct. 12, 1867; changed to brigadier general by act of Congress, March 3, 1875. In the volunteer service he was commissioned a brigadier general, Oct. 11, 1861; was brevetted major general, March 13, 1865; and was mustered out of the service Jan. 15, 1866. During the civil war he was brevetted lieutenant colonel, Sept. 20, 1863, for gallantry at Chickamauga; colonel, Nov. 24 following, for Chattanooga; and brigadier general and major general, United States army, and major general, United States volunteers, March 13, 1865, for the Nashville campaign and for services during the war. He served at Fort Snelling, Minn., and at Forts Duncan, Terrett, Mason, and Belknap, Texas; took part in the engagement with the Comanche Indians at the head waters of the Coneho river in the Wichita expedition of 1858 and the successful action against the Indians between Kickapoo and Brady creeks; and accompanied Major Thomas on his expedition to the head waters of the Coneho and Colorado rivers in 1860. He took part in Gen. Patterson's Shenandoah campaign, and was engaged in the actions at Falling Waters, Martinsburg, and Bunker Hill. Later he commanded a brigade in Gen. Anderson's army before Louisville, Ky., and with his command, then forming a part of the Army of the Ohio, marched through northern Alabama, Tennessee, and Kentucky. He was defeated by Morgan's cavalry near Gallatin, Tenn., Aug. 28, 1862, and taken prisoner. After being exchanged he was given command of a division, which he led in the battles of Stone River, Liberty Gap, Chickamauga, and Missionary Ridge. In the Georgia campaign he commanded a division of the 14th Corps of the Army of the Cumberland; was severely wounded in the battle of New Hope Church; and, too feeble for active field work, was appointed by Gen. Sherman chief of cavalry of the Military Division of the Mississippi, and ordered to Nashville to equip and forward cavalry. From Nov. 8, 1864, till Oct. 12, 1865, he was in command of a division of cavalry, and was officially commended by Gen. Thomas for his operations at the battle of Nashville. Gen. Johnson was Professor of Military Science in Missouri State University in 1868-'69, and in the University of Minnesota in 1869-'71. He published a "Manual for Colt's Breech-loading Carbine and Navy Revolver," and a "Memoir of Major-Gen. George H. Thomas" (1881).

Jones, Charles W., lawyer, born in Ireland in 1834; died in Detroit, Mich., Oct. 12, 1897. He

came to the United States in 1844; worked as a mechanic in Alabama, Louisiana, and Mississippi till 1854; settled in Pensacola, Fla., and was admitted to the bar in 1857. In 1872 he was a delegate to the National Democratic Convention and an unsuccessful candidate for Congress, in 1874 was elected to the State Legislature, and in 1875 and 1881 was elected to the United States Senate, the first time as a Conservative Democrat, succeeding Abijah Gilbert, Republican. In his best days he was a successful lawyer, a diligent student, and an animated, pleasing speaker; but in the latter part of his life his mind became clouded.

Kenaday, Alexander McConnell, soldier, born in Wheeling, W. Va., in 1824; died in Washington, D. C., March 25, 1897. In early life he worked at the printer's trade and as a steamboat man in St. Louis and New Orleans. While he was in the last city the Mexican War broke out, and, at once enlisting, he was made a sergeant in the 3d United States Dragoons, attached to Gen. Worth's brigade. While Gens. Worth and Pillow were engaged in a conference the Mexican guns set fire to a large wagon loaded with cartridges. Sergeant Kenaday and one of his men jumped into the wagon, and, at the imminent peril of their lives, threw package after package of cartridges, covered with gunny bag that was exceedingly hot to handle without gloves, into a ditch partially filled with water, while another man turned them over in the water with his saber, extinguishing the burning coverings. The prompt unloading of the wagon probably saved the lives of Gens. Worth and Pillow and of many other officers and men. For many years Mr. Kenaday had been engaged in procuring pensions for survivors of the Mexican War.

Keyes, Emerson Willard, educator, born in Jamestown, N. Y., June 30, 1828; died in Brooklyn, N. Y., Oct. 17, 1897. He began teaching in his native county in 1844; was graduated at the Normal School, Albany, in 1848, and, after teaching in several seminaries and academies, removed to New York city in 1856. In 1857 he was appointed deputy superintendent of public instruction of New York, which office he held eight years, during which time he aided in organizing teachers' institutes. He was admitted to the bar in Albany in 1862; appointed deputy superintendent of the banking department of the State in 1865; was acting superintendent in 1865-'66; and resigned to become State bank examiner in 1870. After holding the last-named office for three years, he practiced law in New York city till 1882, and from that year till his death he was chief clerk of the Brooklyn Department of Public Instruction. The chapter on education in the Greater New York charter was prepared from ideas furnished by him. Besides many special reports, treatises, and other papers on educational topics, he published "New York Court of Appeals Reports" (4 vols., Albany, 1867-'69); "History of Savings Banks in the United States" (2 vols., New York, 1876-'78); "New York Code of Public Instruction" (Albany, 1879); and a treatise on "Principles of Civil Government Exemplified in the State of New York."

Kilgore, Constantine Buckley, jurist, born in Nennan, Ga., Feb. 20, 1835; died in Ardmore, Indian Territory, Sept. 23, 1897. He removed with his parents to Texas when eleven years old, and there acquired a common-school education. When Texas adopted the ordinance of secession, to which measure he was strongly opposed, he enlisted in the 10th Texas Regiment as a private. He rose to the rank of captain in 1861; was appointed adjutant general of Ector's brigade, Army of Tennessee, in 1862; was wounded in the battle of Chickamauga in 1863; and was captured and confined as a pris-

oner in Fort Delaware during 1864. After the war he was admitted to the bar, and began practice at Wills Point, Texas. In 1875 he was a member of the State Constitutional Convention, and in 1880 was a presidential elector on the Democratic ticket. He was elected a State Senator in 1884, and president of the Senate for two years in 1885, and a Representative in Congress in 1886, 1888, 1890, and 1892. In March, 1895, he was appointed United States district judge for the Southern District of Indian Territory, which office he held at the time of his death.

Kimball, Alonzo S., educator, born in Center Harbor, N. H., in 1843; died in Worcester, Mass., Dec. 2, 1897. He was graduated at Amherst College in 1866; established the departments of physics and electrical engineering at Worcester Polytechnic Institute, and since 1872 had been Professor of Physics there. For several years he was also a lecturer at Mount Holyoke College. Prof. Kimball was a frequent contributor to scientific publications and the "Transactions" of technical societies.

King, Horatio, lawyer, born in Paris, Me., June 21, 1811; died in Washington, D. C., May 20, 1897. He received a common-school education, and in 1829 was apprenticed to the printer's trade in the office of the "Jeffersonian," of his native place. Within two years he bought the paper, and in 1833 removed it to Portland, where he published it for five years. In 1839 he was appointed a clerk in the Post Office Department in Washington, where he remained more than twenty years. In 1850 he originated and had charge of important changes in the foreign mail service; in 1854 became First Assistant Postmaster General; in January, 1861, was made acting Postmaster General; and in February became Postmaster General. He held this office nearly a month, when President Lincoln appointed a successor. During his tenure of office he devised the official-penalty envelope. In 1862 he was appointed a member of the commission to carry out the provisions of the Emancipation Proclamation in the District of Columbia, and after retiring from that office he engaged in law practice in Washington. Throughout the civil war he was a steadfast Union Democrat, and afterward he was for many years Secretary of the Washington Monument Association. In 1896 he received the degree of LL. D. from Dickinson College. He published "An Oration before the Union Literary Society of Washington" (1841); "Turning on the Light," a review of President Buchanan's administration; and "Sketches of Travel; or, Twelve Months in Europe" (1878).

Lambert, Thomas Scott, physician, born near Boston, Mass., May 22, 1819; died in Stamford, Conn., March 21, 1897. He was educated at Williams College; took his degree in medicine at Castleton, Vt.; and became a specialist in anatomy and physiology. The greater part of his life was spent in lecturing on his specialties and on educational topics. About 1852 he published "Lambert's Anatomy," which was a text-book for many years.

Lane, George Martin, educator, born in Charlestown, Mass., Dec. 24, 1823; died in Cambridge, Mass., June 30, 1897. He was graduated at Harvard in 1846, taught there a year, and spent four years at the Universities of Berlin and Göttingen. In 1851 he was appointed Professor of Latin at Harvard, and in 1869 was elected Pope professor. He resigned this chair in 1894, and was elected professor emeritus and given the degree of LL. D. The introduction of the Latin system of pronunciation, now almost universal in the colleges and preparatory schools of the United States, was due in a large measure to his efforts. Dr. Lane co-operated in the preparation of Harper's "Latin Lexicons."

For many years he had been engaged in the preparation of a Latin grammar, but his extreme solicitude for accuracy caused so much recasting of the work that he did not live to see it published. He was the author of the once widely popular college song "The Lone Fishball."

Langford, William Speaight, clergyman, born in Fall River, Mass., April 17, 1840; died at Haines Falls, N. Y., July 2, 1897. He entered Kenyon College, Gambier, Ohio, took the collegiate and theological courses, and was ordained priest in the Protestant Episcopal Church in 1868. In 1875-'85 he was elected the first general secretary of the Domestic and Foreign Missionary Society of the Protestant Episcopal Church, and held the office till his death.

Langston, John Mercer, lawyer, born in slavery in Louisa County, Va., Dec. 14, 1829; died in Washington, D. C., Nov. 15, 1897. He was the youngest of three sons of Ralph Quarles by a negro slave, and when he was five years old his father died, after providing in his will for the freedom of the boys and the education of the youngest. John accompanied W. D. Gooch, a friend of the father's, when he removed to Chillicothe, Ohio, and lived in the family for five years. Then Mr. Gooch determined to settle in Missouri. John agreed to go with the family, but on the way Mr. Gooch was arrested on a charge of attempting to kidnap the boy and take him into a slaveholding State, and the court decided that Mr. Gooch could not take the boy beyond the jurisdiction of the court which had appointed him John's guardian. John was then placed at school in Cincinnati, where he was fitted for Oberlin College. He was graduated at the collegiate department in 1849, and at the theological department in 1852; studied law privately in Elyria, as he was unable to gain admission to any regular law school, and was admitted to the bar in 1855. For fifteen years he practiced in the courts of Ohio with success. In 1868-'70 he was inspector general of the Freedmen's Bureau; in 1869-'76 was dean of the law department of Howard University; in 1871 was appointed to the Board of Health of the District of Columbia, and was its attorney for seven years; and in 1877-'85 was minister resident and consul general to Hayti and *chargé d'affaires* in Santo Domingo. On his return he was elected President of the Virginia Normal and Collegiate Institute, where he remained three years, when he was elected to Congress as a Republican from the 4th Virginia District. His seat was contested, but was awarded to him in September, 1890. During the two last years of his service at Howard University he was vice-president and acting president of the institution. He received the degree of LL. D. from Howard University.

Lansil, Wilbor Henry, artist, born in Bangor, Me., Feb. 24, 1855; died in Dorchester, Mass., June 26, 1897. He was a younger brother of Walter F. Lansil, the Venetian painter, was educated in the Bangor public schools, and removed to Boston in 1872. After twelve years of mercantile service he went abroad with his brother to study painting. He applied himself wholly to animal work, particularly cattle. On his return he established his home and studies in Dorchester, where he kept a fine herd of cattle for continuous study. His most noteworthy paintings include "Repose near the Sea," "Sundown on the Coast," "The Hillside Pasture," "Stable Interior," "On the Seacoast," "The Return at Sundown," "The Return of the Herd," and "Banks of the Neponset."

Laurie, Thomas, clergyman, born in Edinburgh, Scotland, May 19, 1821; died in Providence, R. I., Oct. 10, 1897. He came to the United States with

his parents in 1830, and was graduated at Illinois College in 1838, and at Andover Theological Seminary in 1841. He went as missionary to the Nestorians in Kurdistan, but joined the Syrian mission in 1844, returning home in 1846. From 1848 to 1851 he was pastor of a church in South Hadley, Mass., and he was pastor at West Roxbury in 1851-'67. In 1860 he became the first pastor of the Pilgrim Church in Providence, and he was pastor emeritus there at the time of his death. His published works include "Dr. Grant and the Mountain Nestorians" (Boston, 1853); "Woman and her Saviour in Persia" (1863); "Glimpses of Christ" (1869); "The Ely Volume; or, The Contributions of Foreign Missions to Science" (1883); and "Assyrian Echoes of the Word" (1894).

Lea, Matthew Carey, chemist, born in Philadelphia, Pa., Aug. 18, 1823; died there, March 15, 1897. He was the eldest son of Isaac Lea, famous as a geologist and mineralogist. On account of chronic illness he was educated at home, and later studied law and was admitted to the bar, but never practiced. Entering the private laboratory of James C. Booth, he acquired great proficiency in chemistry, and during the remainder of his life his leisure was devoted to chemical investigations. His name is best known in connection with problems in photographic chemistry, and the younger Silliman, in his compilation of "American Contributions to Chemistry," credited him in 1875 with the titles of more than fifty papers, most of which were published in the "American Journal of Science." Mr. Lea was particularly fortunate with his researches on the action of light and other forms of energy on silver salts. He described the photo-bromide and the photo-iodide of silver, and in 1887 published a paper on the "Identity of the Photo-salts of Silver with the Material of the Latent Photographic Image." His most remarkable discovery, made in 1889, was that silver is capable of existing in three allotropic states. Mr. Lea was elected to the National Academy of Sciences in 1892. He was the author of a "Manual of Photography" (Philadelphia, 1868; 2d ed., 1871), which is a standard authority.

Lee, Samuel Phillips, naval officer, born in Fairfax County, Va., Feb. 13, 1812; died near Washington, D. C., June 5, 1897. He was a grandson of Richard Henry Lee; was appointed a midshipman in the navy, Nov. 22, 1825; promoted passed midshipman, June 4, 1831; lieutenant, Feb. 9, 1837; commander, Sept. 14, 1855; captain, July 16, 1862; commodore, July 25, 1866; and rear admiral, April 22, 1870; and was retired Feb. 13, 1873. During his active service he was on sea duty for twenty-one years and three months, and on shore or other duty ten years and four months. In the early part of his career he filled several appointments to coast-survey duty. He served in the Mexican War, and in November, 1860, was assigned to command the sloop-of-war "Vandalia" on the East Indies station. On reaching the Cape of Good Hope he learned of the outbreak of the civil war, and, risking the penalty of acting against orders, he immediately returned with his ship. He maintained an effective blockade of the harbor of Charleston till Jan. 20, 1862, when he was ordered to join the expedition against New Orleans, and commanded the sloop-of-war "Oneida." When Farragut began moving his vessels Lee was in command of the advance division below Forts Jackson and St. Philip. After the passage of the forts the vessel was one of the first three that encountered the Confederate fleet, and she saved the "Varuna" by driving off two rams. The vessel also took part in the capture of the Chalmette batteries below New Orleans, became the advance guard above the city, led the advance division below Vicksburg, and was the second in line in both passages of the bat-

teries there. For these services Capt. Lee was appointed an acting rear admiral, Sept. 2, 1862, and ordered to the command of the North Atlantic blockading squadron. He retained this command two years, taking part in 91 actions and expeditions, and capturing or destroying 54 blockade-running steamers. On Oct. 21, 1864, he was ordered to command the Mississippi squadron, and for his skill in supporting the army under Gen. Thomas he received a vote of thanks from Congress. He was detached from this command Aug. 14, 1865; was on examining-board duty till 1869; and commanded the North Atlantic squadron in 1870-'72.

Lindsley, John Berrien, physician, born in Princeton, N. J., Oct. 24, 1822; died in Nashville, Tenn., Dec. 7, 1897. He was a son of the Rev. Philip Lindsley, Chancellor of the University of Nashville, and was graduated at that institution in 1839 and attended the medical departments of the Universities of Louisville and Pennsylvania, being graduated at the latter in 1843. He then studied theology, and was ordained by the Presbytery of Nashville in 1846. For a time he was stated supply to the Smyrna and Hermitage churches, and later, for a year, preached to slaves in the Nashville district. From 1838 to 1850 he was pupil of Gerald Troost, and in 1850 succeeded his teacher as Professor of Chemistry in the University of Nashville. He was also chancellor of the university from 1853 to 1873, retaining his chair in Chemistry until 1870. The stone edifice that constitutes the main portion of the university owes its erection largely to his energy, and he himself gave over \$10,000 for its construction. He was instrumental in organizing the medical department of the university in 1850, and was its first dean. His salary for twenty-three years he gave to his assistants in the university or employed in the support of the "Nashville Journal of Medicine and Surgery," which he edited. He organized Montgomery Bell Academy in 1867 in accordance with the designs of the founder, and brought it to a high state of efficiency. In 1870 he resigned his active connection with the academy and participated in the founding of the Tennessee College of Pharmacy, in which he was Professor of Materia Medica from 1876 until his death. He was called to the chair of Chemistry and State Medicine in the medical department of the University of Tennessee in 1880, and held this place also until his death. He was a member of the Nashville Board of Education in 1856-'60, superintendent of city schools in 1860, and secretary of the State Board of Education from its inception in 1875. Dr. Lindsley was also health officer of Nashville in 1876-'80. From 1877 till his death he was secretary and executive officer of the State Board of Health. The degree of D. D. was conferred on him by Princeton in 1856. He wrote papers on prison reform and African colonization, which were reprinted and widely circulated. He edited the "Medical Annals of Tennessee" (Nashville, 1886) and the "Encyclopædia of Tennessee History."

Linton, William James, artist and author, born in London, England, in 1812; died in New Haven, Conn., Dec. 29, 1887. It is chiefly on his work as an engraver that Linton's fame depends; as a painter he never achieved a wide reputation. In 1828 he became the apprentice of G. W. Bonner, an English engraver, who in his time enjoyed a high reputation. In 1842 he became the partner of Orrin Smith, and shortly afterward he began to produce the illustrations to the "History of Wood Engraving" ("Illustrated London News," 1846-'47), perhaps the earliest of his works that attracted the attention of the public, though in 1833 he had published his "Pictorial Illustrations of the Bible." Linton was always a zealous Chartist, and early in his career became

associated with the chief political refugees of his day. It was he who helped Mazzini in drawing the attention of the House of Commons to the opening of exiled politicians' letters by Sir James Graham in 1844, and it was he who four years later carried to the French Provisional Government the first congratulatory address from British workmen. In 1851 he became the editor of the "Leader," a republican print that was written almost entirely by himself, and attracted much attention at the time, though to his extreme regret the British Government refused to pay any attention even to the most violent articles that appeared in it. He had the most advanced republican ideas, and sacrificed much in the visionary attempt to establish an European commonwealth. When he came to this country in 1867, it was not because he hoped to find here the ideal form of government that seemed to him not impossible. A republican government, in his opinion, should be a model of law and order, ours he described as an anarchical democracy. Before he came to this country he was for some years editor and manager of "Pen and Pencil," and a regular contributor of verse to the "Nation," the "Spectator," and the "Westminster Review." He also published and illustrated books. For some years after his arrival here he lived in New York, and ultimately he took up his abode in New Haven, Conn., where he spent the remainder of his life. Here he opened a large engraving establishment and printing house, the Avondale Press, whence many works of great beauty were issued. Here he printed the memorable folio, "The Masters of Wood Engraving" (1889), which has justly been described by Mr. Walter Crane, his distinguished pupil, as "in every way complete as a history, learned in technique, and sumptuous as a book." The first edition of this, one of his most important works, was not issued for profit, but merely as a work of love. No more than three copies were printed. Many others, now of almost equal rarity, were issued from the same press, such as "Love Lore," and "In Dispraise of Woman," each of which was limited to fifty copies, and the volume entitled "European Republicans: Recollections of Mazzini and his Friends," the work that Linton hoped above all others to be remembered by. But, however ably Linton argued the cause of the republicans, however interesting his reminiscences of them were, it is neither by this work nor by any other in which he appeared as their advocate that he is now remembered, but rather as one of the last and most distinguished of the old school of engravers. He was a follower of Bewick and the early English woodcutters, and had very little in common with our present day practitioners of the art. He began to work long before the introduction of photography, which has not only gone far toward depriving the wood engraver of the means of gaining a livelihood, but has vastly changed the method of such as still practice the craft. Wood engraving as practiced by Linton and his predecessors was indeed a distinct art, in which the engraver had a better chance of preserving his individuality and independence than he has to-day, when he is expected more servilely to follow the artist whose work it is his business to reproduce. Since the introduction of photography as a medium of reproduction, the engraver has become more and more subordinated to the draughtsman: Linton, on the other hand, and the engravers of his school were craftsmen who worked hand in hand with the artist. It was not the sole effort of these men to reproduce as faithfully as possible a chalk, pencil, pen, or wash drawing; the artist invariably drew direct upon the wood, and artist and craftsman combined, each making allowance for the limitation of the

other, in the production of a work of art. Linton's work was the logical development of Bewick's; our typically modern work, say Mr. Cole's, is in no sense a development of Linton's. Whether it be better or worse is a matter of individual opinion. It is something entirely different; therefore a comparison between Mr. Linton's work and what he called the "American new development" is manifestly impossible. Suffice it that Linton was the most distinguished exponent in his time of the older traditions. The objection generally raised to such work as his is that two temperaments are constantly at variance in the production of it: that of the draughtsman and that of the craftsman. A long and heated controversy arose a few years ago during Linton's residence here as to the merits of the two styles. His opponents declared that such work as his had too little of the artist's intention in it and too much of the engraver's. Linton, on the other side, as champion of the companionship of the "arts and crafts," denounced the modern men for their want of art, and because they cared so little for line and values. Clever and effective he acknowledged their work to be—almost as good, in short, as photography. Linton was a great representative of an art that is now dead, or at least dormant. His work—even if it did, as some think, possess too much of his own individuality and too little of the artist's—was always artistic and simple; it invariably showed a fine feeling for line, and was technically excellent in the highest degree. In 1858 Linton married Miss Eliza Lynn, who, as Mrs. Lynn Linton, has published many books that have been favorably received both in Europe and in this country. As an engraver, poet, and scholar, Linton achieved a fine reputation, and there is no doubt that he was one of the most remarkable men of his time. He received the master's degree at Yale, and was a member of the Society of American Painters in Water Colors and an Associate of the National Academy of Design. It is impossible to give here a complete list of his works. The titles of a few of the more important ones follow: "Claribel and Other Poems" (1865); "The Flower and the Star" (1878); "Some Practical Hints on Wood Engraving" (1879); "A History of Wood Engraving in America" (1882); "A Manual of Wood Engraving" (1884); "A Manual of Wood Engraving" (1887); "Poems and Translations" (1889); "Masters of Wood Engraving" (1889); "Life of Whittier" (1893); and his reminiscences in 1895. He edited "Rare Poems of the Sixteenth and Seventeenth Centuries" in 1882, and, in company with Richard H. Stoddard, "English Verse" in 1883. Some of his best illustrations were those to the "History of Wood Engraving" in the "Illustrated London News" (1846-'47); to the "Works of Deceased British Painters," published by the London Art Union (1860), to Dr. Holland's "Kathrina" (1869), to William Cullen Bryant's "Flood of Years" (1878), and to "Thanatopsis" (1878).

Love, John James Hervey, physician, born in Harmony, Warren County, N. J., April 3, 1833; died in Montclair, N. J., July 30, 1897. He was graduated at Lafayette College and at the medical department of the University of the City of New York. From 1857 till 1862 he was superintendent of public schools of Bloomfield, N. J. In August, 1862, he was commissioned surgeon of the 13th New Jersey Volunteers; on March 23, 1863, he was assigned to duty as surgeon in chief of the 3d brigade, 1st division, 12th Army Corps, Army of the Potomac; on Aug. 1 following he was promoted to the grade of surgeon in chief of the 1st division of the corps; and on Jan. 28, 1864, he resigned his commission and returned to Bloomfield. When Montclair was set apart from Bloomfield Dr. Love under-

took a reorganization of the public schools, and much of their high character is due to his efforts. He was instrumental in founding the Mountainside Hospital, of which he was president until his death, and was an organizer and trustee of the Presbyterian Church. Dr. Love was President of the Essex District Medical Society in 1875, and of the Orange Mountain Medical Society in 1886.

Lowell, John, jurist, born in Boston, Mass., Oct. 18, 1824; died in Brookline, Mass., May 14, 1897. He was graduated at Harvard College in 1843, and was admitted to the bar in 1846. He practiced in Boston until 1865, when President Lincoln appointed him United States district judge for the District of Massachusetts. On Dec. 18, 1878, he was promoted by President Hayes to the bench of the United States circuit court, where he remained till 1884. He published a treatise on bankruptcy.

Lunt, Orrington, philanthropist, born in Bowdoinham, Me., in 1815; died in Evanston, Ill., April 5, 1897. He removed to Chicago in 1840. In the civil war he prepared the first regiment to start from Chicago for Cairo, and subsequently raised a large amount of supplies for the soldiers. In association with John Evans (see obituary in this volume) and others, he was a founder of the present city of Evanston, Ill., of the Northwestern University, and of its theological department, the Garrett Biblical Institute. He had been a member of the Executive Committee of the university since its incorporation, and first vice-president of its trustees since 1875. He gave the institution \$200,000.

Lusk, William Thompson, physician, born in Norwich, Conn., May 23, 1838; died in New York city, June 12, 1897. He entered the class of 1859 of Yale College, but withdrew before graduation; studied medicine in Heidelberg and Berlin; and served in the National army, rising from the ranks to the grade of assistant adjutant general in 1861-'63. In 1864 he was graduated at the Bellevue Hospital Medical College, and then continued his studies in Edinburgh, Paris, Prague, and Vienna, settling in New York to practice in 1865. He was Professor of Physiology in the Long Island Hospital College in 1868-'71; lectured on the same branch in Harvard Medical School in 1870-'71; and was Professor of Obstetrics and Diseases of Women and Children and of Clinical Midwifery in Bellevue Hospital Medical College from 1871, and president of the college from 1890. In 1871 he was editor of the "New York Medical Journal." He received the degrees of A. M. and LL. D. from Yale College. Of his numerous publications, "The Science and Art of Midwifery" (New York, 1881; enlarged ed., 1885) has been translated into several European languages.

Lyman, Theodore, naturalist, born in Waltham, Mass., Aug. 23, 1833; died in Nahant, Mass., Sept. 10, 1897. He was graduated at Harvard in 1855, and at Lawrence Scientific School in 1858, after which he pursued scientific studies abroad. On his return he was appointed a volunteer aid-de-camp on the staff of Gen. George G. Meade with the rank of lieutenant colonel, Sept. 2, 1863, in which capacity he continued until April 20, 1865. In 1865 Col. Lyman was appointed the first Fish Commissioner of Massachusetts, a place which he held until 1882, during which time he made successful experiments in the cultivation and preservation of food fishes. In 1883 he was elected to Congress as an Independent, on the issue of reform in the civil service. He was active in the interests of Harvard, and was an overseer of the university in 1868-'80, and again in 1880-'87. He was also interested in the administration of charities, serving as President of the Boston Farm School and as a trustee of the National

Peabody Education fund. For a time he was a trustee of the Peabody Museum of Archæology, and later was its president. His scientific work was largely on the radiated animals, and was accomplished in the Museum of Comparative Zoölogy in Cambridge, where in 1860 he was made an assistant in zoölogy. His principal publications were: "Illustrated Catalogue of the Ophiuridæ and Astrophytidæ in the Museum of Comparative Zoölogy" (Cambridge, 1865); "Supplement" (1871); "Report on Ophiuridæ and Astrophytidæ dredged by L. F. de Pourtales" (1869); "Old and New Ophiuridæ and Astrophytidæ of the Hassler Expedition" (1875); "Dredging Operations of the United States Steamer 'Blake'; Ophiurians" (1875); "Prodrome of the Ophiuridæ and Astrophytidæ of the 'Challenger' Expedition" (Part I, 1878; Part II, 1879); and "Report on the Ophiuridæ dredged by H. M. S. 'Challenger' during the years 1873-'76" (London, 1882). He also published "Papers relating to the Garrison Mob" (1870). For several years he was a paralytic. By his will \$10,000 was bequeathed to Harvard, and a collection of scientific books to the Museum of Comparative Zoölogy in Cambridge.

McDonald, Alexander, journalist, born in Lynchburg, Va., about 1827; died there, Dec. 14, 1897. He was editor of "The Lynchburg Virginian" from 1850 till 1893, was elected to the Virginia Senate in 1891, and was appointed United States minister to Persia in 1893. He had previously served as a commissioner to the Vienna and Paris expositions.

McGiffin, Philo Norton, naval officer, born in Pennsylvania in 1863; died in New York city, Feb. 11, 1897. He was graduated at the United States Naval Academy in 1882 and sent to the China station. He became greatly interested in the country, and at the outbreak of the war between France and China he resigned from the navy and, with the permission of the United States Government, entered the service of China. During this war he captured the only vessel the French lost, at Yantse. After the war he went to England to superintend the building of several gunboats for the Chinese navy, one of which, the "Chen-Yuen," became the flagship of the fleet in the battle of the Yalu river, in the war between China and Japan, on Sept. 17, 1894. Capt. McGiffin was second in command of this vessel, and on the death of his superior officer became commander of the fleet. His vessel was struck over 400 times by Japanese missiles, and narrowly escaped destruction. During the fight one of the "Chen-Yuen's" heaviest guns was prematurely discharged, and Capt. McGiffin and many of the crew were injured by the shock. In the fight Capt. McGiffin received so many wounds that he partly lost both his sight and hearing. He refused to commit suicide after the battle, as is the Chinese custom with defeated officers, and was obliged to leave the country. His mind became affected as a result of his injuries, and shortly after his arrival in New York city it was found necessary to send him to the Post-Graduate Hospital. He succeeded in eluding the vigilance of his attendants and shot himself with a revolver which he had smuggled in among writing materials.

McGowan, Samuel, jurist, born in Laurens County, S. C., in 1819; died in Abbeville, S. C., Aug. 9, 1897. He served through the Mexican War, entering the American army as a private and receiving promotion to the rank of captain. After the war he was admitted to the bar, practiced at Abbeville, and became active in politics. He served twelve years in the lower house of the Legislature. Upon the secession of the State he was appointed brigadier general in the Confederate army. He took part in the capture of Fort Sumter by Gen.

Beauregard, and in the battles of Cold Harbor, the second Manassas, Chancellorsville, and Spottsylvania Courthouse. In 1865 he was a member of the South Carolina Reconstruction Convention, and was elected to Congress, but admission was denied to him as to other Southern representatives. When the Democrats secured control of the State government in 1879, Gen. McGowan was elected justice of the Supreme Court, and he held this office till December, 1893.

McIlvaine, Joshua Hall, educator, born in Lewis, Del., March 4, 1815; died in Princeton, N. J., Jan. 30, 1897. He was graduated at Princeton College in 1837, and at the Theological Seminary in 1840; was pastor of Presbyterian churches in Little Falls, Utica, and Rochester, N. Y., till 1860; and was Professor of Belles-lettres at Princeton in 1860-'70. He resigned his chair to take a pastorate in Newark, N. J., where he remained four years. He founded Evelyn College for young women at Princeton in 1887, and was its president till his death. In 1859 he delivered a course of six lectures before the Smithsonian Institution on "Comparative Philology in Relation to Ethnology," and in 1869 a course on "Social Science" before the University of Pennsylvania. His more prominent publications embrace "The Tree of Knowledge of Good and Evil" (1854); "Elocution: The Sources and Elements of Power" (1870); "The Wisdom of Holy Scriptures, with Reference to Skeptical Objections" (1883); and "The Wisdom of the Apocalypse" (1886). He received the degree of D. D. from the University of Rochester in 1854.

McKinley, Nancy Allison, mother of President McKinley, born near the present city of Lisbon, Ohio, April 21, 1809; died in Canton, Ohio, Dec. 12, 1897. In 1829 she married William McKinley, a young iron manufacturer, who died in 1892. Nine children were born of this marriage, of whom four survive.

McLaws, Lafayette, soldier, born in Augusta, Ga., Jan. 15, 1821; died in Savannah, Ga., July 24, 1897. He was graduated at the United States Military Academy and commissioned brevet 2d lieutenant in the 6th Infantry in 1842; served in the Indian Territory and in Mexico till after the capture of Vera Cruz; was promoted captain Aug. 24, 1851; took part in the Utah expedition in 1858, and the Navajo Indian campaign in 1859-'60; and resigned his commission March 23, 1861. Upon the secession of his native State he was commissioned brigadier general in the Confederate army. His services in an action near Lee's Mill, in the battle of Williamsburg, and in the retreat of the army to Richmond attracted the attention of Gen. Johnston, on whose recommendation he was promoted to major general, May 23, 1862. He was placed in command of a division comprising Kershaw's and Semmes's brigades, with which he engaged in the battles of Savage's Station and Malvern Hill. At the beginning of the Antietam campaign he was placed in command of a corps, with orders to capture Maryland Heights. He constructed a road for his cannon up the side of the mountain overlooking Harper's Ferry, opened fire on that place, and speedily secured its surrender. He rested there a few hours, and then resuming the march reached Sharpsburg in time to repel the attack on the Confederate left and restore the line, which had been



broken by the defeat of the troops under Gens. Jackson and Hood. At Fredericksburg his men were posted along the bank of the Rappahannock, opposite the city, and on Marye's Hill. In the second day's fight at Gettysburg his division was attached to Gen. Longstreet's corps, which drove back Gen. Sickles's corps. At the siege of Knoxville he was ordered by Gen. Longstreet to assail Fort Saunders. He protested against the movement, on the ground that it involved too serious risks with no compensatory probabilities of success. On a repetition of orders he made the attempt, and was soon convinced of the correctness of his judgment, and ordered a retreat. For this act he was summoned before a court-martial, by which his conduct was justified. During Gen. Sherman's march to the sea Gen. McLaws commanded the military district of Georgia, and had charge of the defenses of Savannah. In March, 1865, he commanded a division in the battles of Averysboro, N. C. (16th), and Bentonville (21st). His command was surrendered with the army under Gen. Joseph E. Johnston. In 1875 he was appointed collector of internal revenue at Savannah, and in 1876 postmaster of that city.

McMillan, Samuel James Renwick, jurist, born in Brownsville, Pa., Feb. 22, 1826; died in St. Paul, Minn., Oct. 3, 1897. He was graduated at Duquesne College, Pittsburg, in 1846; studied law in the office of Edwin M. Stanton, afterward secretary of war; was admitted to the bar in 1849; and settled in Stillwater, Minn., to practice in 1852. In 1856 he removed to St. Paul, where a year later he was elected judge of the 1st Judicial Circuit of Minnesota. He was appointed an associate justice of the Supreme Court of the State in 1864, and held the office till 1874, when he was appointed Chief Justice. In February, 1875, he was elected United States Senator. He was re-elected in 1881. While in the Senate he was chairman of the Committee on Claims and succeeded Roseoe Conkling at the head of the Committee on Commerce, and was also a member of the Committee on the Judiciary. In 1890 he was appointed by the Presbyterian General Assembly one of two representatives of the West on the Committee of Revision of the Confession of Faith.

McPherson, John Roderic, capitalist, born in York, Livingston County, N. Y., May 9, 1833; died in Jersey City, N. J., Oct. 8, 1897. He engaged in farming and stock raising when eighteen years old, and settled in Jersey City in 1858. There he entered the live-stock trade on an extensive scale; invented new devices and methods for the treatment of animal matter; and designed and put into operation a great *abattoir* system. He was a member of the Board of Aldermen of Jersey City in 1864-'70, and its president for three years; established a gas-light company and became its president; was president of several savings banks and a Western stock-yard company; and owned a paper mill near the Delaware Water Gap. In 1871 he was elected to the New Jersey Senate, and in 1877, 1883, and 1889 was elected to the United States Senate. During his last term in the United States Senate he was chairman of the Committees on Naval Affairs and the Potomac River Front, and a member of the Committees on Finance, Immigration, Coast Defenses, and Woman Suffrage (select). In 1884, 1888, and 1892 he was a delegate to the National Democratic Convention. After the death of Daniel Manning, Secretary of the Treasury, President Cleveland urged Senator McPherson to accept the office; but local party reasons led him to decline it.

Mallory, George Scovil, clergyman, born in Watertown, Conn., June 5, 1838; died in New York city, March 2, 1897. He was graduated at Trinity College in 1858, and at Berkeley Divinity School in 1862; was ordained deacon in the Protestant Epis-

copal Church, June 4, 1862; and was Professor of Ancient Languages at Trinity College in 1862-'64, and Brownell Professor of English in 1864-'72. In 1872 he was elected a trustee and became treasurer of Trinity College; in 1874 received the degree of S. T. D. from Hobart College; and in 1891 that of L.L. D. from the University of the South. In 1866 Dr. Mallory became part owner of "The Churchman," a weekly religious journal in New York city, of which he was editor until his death. With his brother he built the Madison Square Theater, 1880.

Maretzek, Max, operatic manager, born in Brunn, Austria, June 28, 1821; died on Staten Island, N. Y., May 14, 1897. He was graduated at the University of Vienna. When eighteen years old he produced in his native town an original opera on "Hamlet," and when twenty-two he had become a successful orchestral conductor. He made a conducting tour of Germany, England, and France; spent some time in Paris arranging ballets for Carlotta Grisi and Lucille Grahn; and in 1844 was appointed assistant to Balfe, director of her Majesty's Theater in London. While in London he conducted the negotiations with Meyerbeer, under which Jenny Lind was first permitted to sing in concerts in London. In 1848 he came to New York city and became musical director at the Astor Place Opera House. The following year he began his career as an *impresario*. He opened the new Academy of Music with Grisi and Mario, Oct. 2, 1854; produced for the first time "Semiramide," and, for the first time in the United States, "Il Trovatore," in 1855; and introduced Adelina Patti to the public in 1858. He returned to the Academy of Music in 1864, and remained there till the building was burned in 1866, losing in the fire a great deal of valuable scenery, costumes, and the music of 50 operas. He took charge of the rebuilt Academy in 1867; left it for Pike's (now the Grand) Opera House in 1868; returned to the Academy in 1869; brought out Pauline Lucca in 1872; produced "Sleepy Hollow," an original American opera, in 1878; and then practically retired from the operatic field.

Martin, Homer Dodge, artist, born at Albany, N. Y., Oct. 28, 1836; died in St. Paul, Minn., Feb. 12, 1897. He received his early education in the town of his birth, and at a very early age showed a remarkable taste for art and a talent for drawing. He had little opportunity, however, for scholastic training in painting, and probably little taste for it. Excepting a few weeks' study under William Hart, he may be said to have been practically a self-taught painter. Nevertheless, his progress was far more rapid than that of most men with better opportunities for study, and he had the good fortune to have one of his canvases hung at the annual exhibition of the National Academy of Design, in New York, when he was about twenty years of age. Thenceforward his progress as an artist was rapid. In 1862 he took up his abode in New York city, where he had a studio for many years. Six years later he was elected an associate member of the Academy of Design, and in 1875 a full member. The following year, and again in 1880 and 1881, he traveled in England, and from 1882 to 1886 he lived in France, spending much of his time at Villerville and Honfleur. Long before this his individuality was well established, but his visits to Europe were not without their effect upon his art. In the course of his travels and during his residence on the Continent he worked indefatigably, and, as he was a man of a plastic mind, his art became considerably modified, not alone by what he saw of other men's work, but by the study of Nature under different aspects. Nor did his sojourn in France and his wanderings in England result in any detriment of his individuality. Martin was a

man of very broad vision, and his vision only became broader with travel; and it is generally conceded that his work in England and in Normandy was hardly, if at all, inferior to that which he produced in his own country. Indeed, some of his finest canvases—such as "The Thames at Richmond" and the "Landscape on the Seine," to name only two—were painted abroad. He possessed a remarkably vigorous mind, deep artistic feeling, and acute perception; and his artistic career may be said to have been one of almost uninterrupted progress. It has been said of him that his early work was entirely in keeping with the doctrines and theories of what is commonly known as the Hudson river school, and this is true in a sense. Superficially, there was little to distinguish it from that of his fellows; but even when he was most strongly influenced by the traditions of his time and by his surroundings something of his own personality was evident in his least individual productions. The hardness and almost preraphaelite minuteness of his coworkers was not to his taste. Even in his early works it may be seen that he had a broader manner of seeing things than most painters of his time, and that he sought rather to soften down than to accentuate Nature's crudities. It was not long before he broke away from traditions and achieved a style that was entirely his own. That he was somewhat influenced by certain painters of the Barbizon school, as well as by others, is evident; but it is equally certain that no American painter of his time possessed more individuality than he. While his inferior works are, perhaps, somewhat "painty" in quality, his finest productions are technically excellent, possess a rare poetic feeling, a distinction, and a richness and mellowness of color that are to be found in few landscapes by his contemporaries. His work was always refined and large in conception, and he understood the beauty and charm of atmosphere. Strangely enough, it was a long time before his sterling qualities as a painter gained general recognition. Though he had long been known as one of our most distinguished artists by those who understood his work, the public at large was inclined to consider him a somewhat insignificant painter. It was only shortly before his death that he won the reputation that he had long deserved. During the latter years of his life he produced much less work than in his earlier days—partly because of the general loss of his health, for he suffered for a long time from the cancer that ultimately resulted in his death, and partly because his eyesight failed. Nevertheless, his latest work is quite equal if not somewhat superior to that which he produced in his prime. What place he will hold among his fellow-artists in the estimation of posterity it is impossible to say. Perhaps he can hardly lay claim to a place beside Inness, but certainly he must be ranked among the greatest American landscape painters of his time. He generally loved to interpret Nature in her more somber and pensive aspects; but that he was capable of seeing her in many different moods was made evident when 44 of his canvases were brought together shortly after his death and placed on exhibition at the Century Club, in New York. Martin was hardly less remarkable for his social qualities than for his artistic attributes. He was a man of wide culture, very well read, individual in his opinions and convictions, and gifted with remarkable critical and conversational powers. He was the intimate friend of Mr. Whistler, Albert Moore, and many other of the famous artists as well as literary men. Some of his finest works are in the possession of Messrs. T. B. Clarke, William C. Brownell, G. A. Hearn, G. Thompson, and Montgomery Schuyler.

Of his more famous canvases it will be sufficient to mention here the following: "Landscape on the Seine," presented to the Metropolitan Museum, in New York by a few of his friends; "An Equinoctial Day" (in the possession of Dr. F. N. Otis); "Brook in the Woods" (Dr. Mosher); "In the Adirondacks" (T. B. Clarke); "Morning" (Montgomery Schuyler); "Adirondacks" (Century Club); "Church at Cinqueboef" (W. T. Evans); "Newport Neck" (Lotos Club); "Morning on the Lake"; "Cloudy Day"; "Hemlock Woods"; "The Thames at Richmond"; "Idling"; "The Footpath"; "Evening on the Saranac"; "Sand Dunes on Lake Ontario"; and "White Mountains, from Randolph Hill." Mr. Martin was a member of the Society of American Artists, of the Artists' Fund Society, and of the Century Club.

Mason, Alexander Macomb, soldier, born in Washington, D. C., in 1841; died there, March 17, 1897. In early life he was appointed a midshipman in the United States navy, and in 1857-'58 served on the "Niagara" while that vessel was assisting in laying the Atlantic cable. When Virginia adopted the ordinance of secession he resigned, and entered the Confederate naval service, distinguishing himself especially in the engagement in Hampton Roads. After the war he rendered military service in Chili, China, and Cuba till 1870, when he went to Egypt, with whose Khedive he soon became a favorite. He was selected to reorganize the Egyptian army and navy, made the first survey of Lake Albert Nyanza, was appointed governor of equatorial Africa by Gen. Gordon, and in 1877 was sent to Massowah to keep the peace between the Soudanese and the Abyssinians. In 1878 he served with Gen. Gordon in Khartoum, and in 1884 was appointed by the Khedive Governor of Massowah and High Commissioner of the Soudan. During his service in Egypt he was director general of public lands. He was also sent on important political missions.

Mason, John Sanford, soldier, born in Steubenville, Ohio, Aug. 21, 1824; died in Washington, D. C., Nov. 29, 1897. He was graduated at the United States Military Academy and commissioned 2d lieutenant in the 3d Artillery in 1847, and was immediately ordered to duty in Mexico, where he served to the close of the war. He was promoted 1st lieutenant, Sept. 7, 1850; captain, 11th Infantry, May 14, 1861; major, 17th Infantry, Oct. 14, 1864; lieutenant colonel, 4th Infantry, Dec. 11, 1873; and colonel, 9th Infantry, April 2, 1883; and was retired Aug. 21, 1888. In the volunteer service he was commissioned colonel of the 4th Ohio Infantry Oct. 3, 1861, was promoted brigadier general Nov. 29, 1862, and was mustered out April 30, 1866. In the civil war he was brevetted major in the regular army, Sept. 17, 1862, for gallantry at Antietam; lieutenant colonel, Dec. 13 following, for Fredericksburg; colonel, March 13, 1865, for meritorious services during the war; and brigadier general, same date, for services in the field.

Mayer, Alfred Marshall, physicist, born in Baltimore, Md., Nov. 13, 1836; died in Maplewood, N. J., July 13, 1897. At an early age he exhibited mechanical ingenuity, and he left college to enter the workshop and draughting room of a mechanical engineer. Here he remained two years. Meanwhile he studied by himself the laws of physics and mechanics that were applied in his daily labors. A laboratory course followed, and for two more years he studied chemistry, chiefly the principles and processes of quantitative analysis. In 1856 he was appointed Professor of Physics and Chemistry in the University of Maryland, and in 1859 accepted a similar chair in Westminster College, Fulton, Mo., but he relinquished this place two years later, owing to the insignificance of the equip-

ment. In 1863-'64 he studied physics, mathematics, and physiology in the University of Paris, where he came largely under the influence of Regnault, who confirmed his bias in favor of pure sci-



ence. He returned to the United States in 1865, and soon afterward was called to the chair of Physics and Chemistry in Pennsylvania College, Gettysburg, whence in 1867 he passed to Lehigh University, where he remained until 1871, having charge of the department of astronomy, and superintended the erection of the observatory there. Prof. Mayer then accepted the chair of Physics in Stevens

Institute of Technology, Hoboken, N. J., and he continued in charge of that department until his death. Prior to 1871 his publications were for the most part contributed to the "American Journal of Science," and included studies on "The Estimation of the Weight of very Small Portions of Matter" (1857); "Researches in Electro-Magnetism" (1870); and "Observations on the Magnetic Declination in Connection with the Aurora of October 11" (1870). While in charge of Lehigh Observatory he alone erected the instruments and accomplished the tedious task of adjusting them. At this time he made a series of observations of Jupiter, the publication of which was made in England. In 1869 he had charge of the party sent by the "United States Nautical Almanac" office to Burlington, Iowa, to observe the solar eclipse of Aug. 7. He took 41 successful photographs. Four of these were taken during the eighty-three seconds of totality. He published in 1871-'75, in the "American Journal of Science," a series of brilliant investigations under the title of "Researches in Acoustics." These included experiments showing that the translation of a vibrating body causes it to emit waves differing in length from those produced by the same vibrating body when stationary; a method of detecting the phases of vibration in the air surrounding a sounding body, leading to his invention of the topophone; a mode of measuring the wave lengths and velocities of sound in gases, resulting in the invention of an acoustic pyrometer; the determination of relative intensities of sound; five new methods of sonorous analysis for the decomposition of a compound sound into its elementary tones; the discovery that the fibrils of the antennæ of the male mosquito vibrate sympathetically to notes that have the range of pitch of the sounds given out by the female mosquito; and the determination of the laws of vibration of tuning forks, especially in the direction of the bearing of these laws on the action of the chronoscopes that are used in determining the velocities of projectiles. In 1876-'78 he contributed a series of papers to the "Scientific American Supplement," under the title "On the Minute Measurements of Modern Science." His later papers include "The Effect of Magnetization in changing the Dimensions of Iron and Steel Bars" (1873); "Method of investigating the Composite Nature of the Electric Discharge" (1876); "Experiments with Floating Magnets" (1878); "A New Spherometer" (1886); "On the Coefficiency of Expansion and Diathermancy of Ebonite" (1886); "Measures of Absolute Radiation" (1886); "Cubical Expansion of Solids by Vessels or Hydrometers made of the Material of these Solids" (1890); "Physical Properties of Hard

Rubber" (1891); "Simultaneous Contrast Color" (1893); "Researches on the Röntgen Rays" (1896); and "Equilibrium of Forces acting in the Flotation of Disks and Rings of Metal, with Determinations of Surface Tension" (1897). He possessed great ingenuity and skill in construction, and a remarkable degree of delicacy and precision as an experimenter. The degree of Ph. D. was conferred on him by Gettysburg College in 1866, and in 1872 he was elected to the National Academy of Sciences, to whose "Memoirs" he contributed papers. In 1893 he served as one of the associate editors of the "American Journal of Science," and contributed five papers to its pages, but failing eyesight compelled him to relinquish the work. He edited "Sport with Gun and Rod in American Woods and Waters" (New York, 1883), writing the chapters on "The Shotgun" and "The Blowgun." His publications in book form include "Lecture Notes on Physics" (Philadelphia, 1868); "The Earth a Great Magnet" (New Haven, 1872); "Light" (New York, 1877); and "Sound" (1878).

Meade, Richard Worsam, naval officer, born in New York city, Oct. 9, 1837; died in Washington, D. C., May 4, 1897. He was the eldest son of Capt. Richard W. Meade, U. S. N., and a nephew of Gen. George G. Meade. He was appointed a midshipman in the navy Oct. 2, 1850; was promoted passed midshipman, June 20, 1856; master, Jan. 22, 1858; lieutenant, the day following; lieutenant commander, July 16, 1862; commander, Sept. 20, 1868; captain, March 13, 1880; commodore, May 5, 1892; and rear admiral, Sept. 7, 1894, and was retired May 20, 1895. During his active career he was on sea service for eighteen years and three months, and on shore or other duty for nineteen years and one month. From Oct. 29, 1861, till Jan. 3, 1862; Meade was instructor in gunnery on the receiving ship "Ohio" at Boston. In the last half of 1862 he commanded the ironclad "Louisville," and was employed in breaking up guerrilla warfare on the Mississippi river between Memphis and Helena, and in co-operating with the Western armies. During the draft riots in New York city, in July, 1863, he commanded the naval battalion in the lower part of the city, and dispersed several disorderly gatherings. He commanded the steam gunboat "Marblehead," of the South Atlantic blockading squadron from Sept. 12, 1863, to May 3, 1864; was on picket duty on Stono river, S. C.; took part in the battle there, Dec. 25, 1863; and successfully resisted the attempts of the Confederates to sink his vessel, drive the National transports out of the inlet, and turn Gen. Gillmore's left flank. In the last movement the "Marblehead" was struck thirty times in the hull. Subsequently he landed, captured two 8-inch guns, and destroyed the enemy's batteries. For these actions he was officially thanked by Admiral Dahlgren and recommended for promotion. From May 3, 1864 till July 7, 1865, he served in the Western Gulf blockading squadron, and captured or destroyed seven blockade runners. In 1869-'70 he inspected all the principal gun foundries in the country; in the summer of 1870 commanded the schooner yacht "America," and defeated the English yacht "Cambria" in a race in New York harbor; and in 1872 negotiated a commercial treaty in the Samoan Islands, for which he was commended by the Secretary of the Navy. Between March 21, 1871, and April 1, 1873, he passed 431 days under way and actively cruising with the "Narragansett," sailing under canvas about 60,000 miles, visiting nearly every quarter of the Pacific Ocean, surveying harbors and islands, collecting unpaid indemnities, and negotiating treaties. In 1893 he was appointed naval commissioner to the World's Columbian Ex-

position, and in August, 1894, succeeded Admiral Stanton in command of the North Atlantic squadron. An unfortunate disagreement between Admiral Meade and the Navy Department over the manner in which he had been treated officially culminated in May, 1895. In an interview published in the "New York Tribune" Admiral Meade was represented as criticising the administration of President Cleveland and Secretary Herbert, and using the expression, "I am an American and a Union man—two things this administration can't stand." When he was called on by Secretary Herbert to affirm or deny this expression, he returned a noncommittal answer; and as there were rumors that he was to be court-martialed for disrespect to the President, he asked to be retired. The President, in granting the application, rebuked Admiral Meade for his conduct.

Merrick, Edward T., jurist, born in Wilbraham, Mass., July 9, 1809; died in New Orleans, La., Jan. 12, 1897. He was admitted to the bar of Ohio in 1838, and to that of Louisiana in 1839, and began to practice in Clinton, La. In 1854 he was elected judge of the 7th Judicial District of Louisiana, and in 1855 and 1863 Chief Justice for terms of eight years each. Judge Merrick rendered a decision in 1856 which first gave the celebrated *Myra Clark Gaines* case a standing in court. He was opposed to secession and the war. His position with reference to the doctrine of State rights was set forth in a decision rendered in 1863, in which he held that, so long as any part of the State was not in the hands of United States troops, State authority could be maintained. After retiring from the bench Judge Merrick was engaged in private practice with a son till within five years of his death.

Mettam, Charles, architect, born in Dublin, Ireland, in May, 1819; died in Bayonne, N. J., Dec. 5, 1897. He was educated in architectural and civil engineering in his native city, and practiced there and in England till 1848, when he came to New York city. In 1854, when the subject of rapid transit was being discussed, he proposed in the "Scientific American" an elevated structure on posts in the streets similar to the present system. He was a member of the old 12th Regiment of New York Militia, and when in April, 1861, he went to Washington the officials of the War Department persuaded him that he could render more valuable service as a civil engineer. Accordingly, he was assigned to duty, under Gen. Delafield, in constructing the fortifications in New York harbor. Mr. Mettam patented many articles used in the building trade, including the rolling iron shutter. Among the numerous buildings planned and erected by him are the New York Historical Society building, the Eye and Ear Infirmary, the College of Physicians and Surgeons (now Packard's College), and the Brandreth and Gilsey buildings. He also designed the funeral car that bore the remains of President Lincoln in New York.

Miller, Samuel A., lawyer and scientist, born in Coolville, Ohio, Aug. 28, 1836; died in Cincinnati, Ohio, Dec. 19, 1897. He was educated at the Ohio University and at the Cincinnati Law School; was admitted to the bar in 1860; and, excepting one year, practiced continuously in Cincinnati till his death. In early life he became interested in geology, and later he served on the geological commissions of Ohio, Indiana, Illinois, Missouri, and Wisconsin. He gathered a rare collection of fossils and geological specimens and a large library of scientific works, and was a frequent contributor to scientific periodicals and "Proceedings." Among his numerous publications are the following: "North American Geology and Palæontology"; "Palæozoic Fossils"; "Mesozoic Fossils"; and "Cenozoic Fossils."

He received the degree of Ph. D. from Ohio University in 1893.

Moore, Michael, soldier, born in New York city, July 4, 1800; died in Brooklyn, N. Y., Aug. 2, 1897. At the beginning of the War of 1812 Michael and an elder brother walked to Albany and enlisted in the 13th United States Infantry, and soon afterward Michael was detailed as a drummer boy. He took part in the capture of Fort George, Upper Canada, in the battles of Queenstown and Stony Creek, in the attempt to capture Montreal, and in the defense of Sackett's Harbor. After peace was declared he enlisted in the regular army. In 1821 he took part in establishing a military post at Sault Ste. Marie; in 1826 served in the escort of Gov. Cass on his expedition to the head of Lake Superior to negotiate a treaty with the Indians; in 1832 fought in the Black Hawk war; and in 1837-'40 was in the Seminole war in Florida. On the expiration of his term of service he re-enlisted, and from 1841 till 1869 was engaged in recruiting duty, principally at Bedloe's island. In January, 1869, he was commissioned a second lieutenant in the 9th Infantry, and in 1872 he was retired for "disability from old age." He was a charter member of the Military Society of the War of 1812.

Mora, Antonio Maximo, claimant, born in Cuba in 1818; died in New York city, April 24, 1897. He inherited extensive sugar plantations in Cuba not far from Havana, which were the cause of his memorable claim against the Spanish Government and of international negotiations extending over more than twenty-five years. A Cuban revolt broke out Oct. 18, 1868, and continued eight years. One of the measures employed by the Spanish Government to crush the insurgents was the embargo of estates in Cuba, the income from which the Government believed was used to aid the revolt. The owners of some of these estates claimed to be citizens of the United States, and they called on the United States Government to demand a release of the embargoes and compensation for damages. The claim of Mr. Mora was the most notable of these because of its size, the value of the seized property being placed at \$3,000,000. From the great mass of documents that accumulated during the negotiations for a settlement, it appears that Mr. Mora came to New York city and declared his intention of becoming a citizen of the United States in 1853. Under a general embargo decree of April 20, 1869, his property in Cuba was seized, and in 1870 he was sentenced to death for acts alleged to have been done prior to May, 1869. With his brother, José Maria, Antonio escaped to New York, and at once laid his case before Hamilton Fish, then Secretary of State, declaring that he had in nowise engaged in the rebellion nor aided it. Diplomatic correspondence was immediately opened with Spain. Under a decree of Sept. 15, 1873, the Spanish Government released the embargoes against all American property in Cuba except the Mora plantations. It was agreed between the two governments that claims for damages by alleged or *de facto* citizens of the United States should be submitted to an international commission. In the Mora case the arbitrators disagreed on the question of American citizenship, and the umpire, in a decision filed Feb. 22, 1883, dismissed Mora's claim, on the ground that the seizure of his property was made nine days before May 14, 1869, the date of his certificate of naturalization, and that accordingly at the time of the seizure Mora was a subject of Spain. In May, 1883, Secretary Frelinghuysen asked in a diplomatic note for the restoration to Mora of the embargoed estates. The case again dragged till 1886, when the American minister to Spain concluded an arrangement with the Spanish Minister

of Foreign Affairs, that the Colonial Secretary propose to the Cortes that the sum of \$1,500,000 be inserted in the Cuban budget of 1887-'88 to pay Mora for his estates. Mr. Mora accepted this compromise, but the Cortes refused to appropriate the money unless there should be an arrangement between the two governments covering all claims held by either. Protracted correspondence between the two governments ensued, the United States insisting on a prompt settlement and Spain making many promises that were not fulfilled. Under a strong pressure by Secretary Olney and an agreement by Mr. Mora to waive the interest on the claim from 1886, amounting to \$800,000, the Spanish Cabinet decided, on Aug. 13, 1895, to pay the claim in a lump sum in the following month, and accordingly, on Sept. 14, the Spanish minister at Washington delivered to the State Department a draft on the financial agent of the Spanish Government at London for the amount. Mr. Mora had been put to great expense in his contest, and his interest in the amount that was finally paid was \$994,509.

Morais, Sabato, clergyman, born in Leghorn, Italy, April 29, 1824; died in Philadelphia, Pa., Nov. 11, 1897. He was of Portuguese ancestry, and was educated for the ministry in his native city. In 1846 he was called to London as the head instructor of Hebrew in the orphans' school of the Portuguese congregation. In 1851 he came to the United States and was elected minister of the Congregation Mickoe Israel of Philadelphia, the oldest Jewish congregation in Pennsylvania. This office he held till his death. Shortly before he settled in Philadelphia a religious movement, originating in Germany, had gathered considerable strength in the United States. It aimed to cast aside the traditional observances and customs of the Jewish Church, to alter the ritual and to introduce innovations antagonistic to historical Judaism. Dr. Morais united with a few ministers who were endeavoring to counteract this influence soon after his arrival, and till his death he was recognized as the foremost champion of American Hebrew orthodoxy. He was opposed to slavery, and for his influential service in the National cause during the civil war he was elected an honorary member of the Union League Club of Philadelphia. When Maimonides College was opened in Philadelphia, in 1867, he became Professor of Biblical Literature and he occupied that post five years. Subsequently he inaugurated a movement that resulted in the establishment of the Jewish Theological Seminary in New York city, and from its opening, in 1887, till his death he was president of its faculty. He received the degree of LL. D. from the University of Pennsylvania in 1887. Among his writings, none of which he would allow to be issued in book form, are "Specimens of Italian Hebrew Literature," "The Ritual Question," "The Falashas," English translations of the works of Maimonides and Samuel David Luzzatto, articles on great Hebrew scholars of different ages, lectures on "Post-Biblical History" and on the "Bible, Talmud, and the Jewish Religion," and numerous biographical studies.

Morfit, Campbell, chemist, born in Herculaneum, Mo., Nov. 19, 1820; died in London, England, Dec. 8, 1897. He became a student in Columbian University, but before completing the course began studying chemistry with James C. Booth in Philadelphia. Afterward he was employed in a manufactory of commercial chemicals, of which he became proprietor. He organized the chemical department of the Maryland Institute; was Professor of Applied Chemistry in the University of Maryland in 1854-'58; and practiced his profession in New York city in 1858-'61. In the last year he re-

moved to London, England, where he resided till his death. He received the honorary degree of M. D. from the University of Maryland. After settling in London he gave much attention to the improvement of technical processes, and became widely known by his preparation of condensed food rations. His publications include "Chemistry as applied to the Manufacture of Soaps and Candles" (Philadelphia, 1847); "Chemical and Pharmaceutical Manipulations" (1848); "The Arts of Tanning and Currying" (1852); "Perfumery: Its Use and Manufacture" (1853); "Oleic Soaps" (London, 1871); and "Pure Fertilizers and Phosphates" (1873). In collaboration with Dr. James C. Booth he published "Progress of Chemical Arts" and edited the "Encyclopædia of Chemistry" (both 1851) and prepared a report to the United States Ordnance Department on "Gun Metal" (1853).

Morse, Henry Woolson, composer, born in Charlestown, Mass., in 1858; died in New York city, May 3, 1897. He was graduated at the Massachusetts Institute of Technology; studied painting in Paris, and executed creditable pieces in landscape and animal life; and, removing to New York city, applied himself wholly to composition of light operas. His first composition, "Cinderella at School," was produced at Daly's Theater in 1882, and had a run of more than one hundred nights. "King Cole II" was brought out in Philadelphia in 1889; "The Merry Monarch," in New York city in 1890; "Wang," in New York in 1891; and "Lost, Strayed, or Stolen," his last work, in New York in 1897. Other works of which the music was either composed or revised by him are "The Lion Tamer," "The Rainmaker of Syria," "Prince Ananias," "The Devil's Deputy," "Panjandrum," and "Dr. Syntax."

Mundy, Johnson Marchant, sculptor, born near New Brunswick, N. J., May 13, 1832; died in Tarrytown, N. Y., Aug. 16, 1897. He was the youngest child of Frederick Mundy and Mary Marchant, and was of German and English descent. Part of his childhood and early youth was spent in Geneva, N. Y. Although living where the atmosphere of art was unknown, he early developed an aptitude for copying forms of nature with whatever materials were at hand. He decorated his school-books with original illustrations and molded bits of clay into attractive forms. At twelve years of age he was instructed in the use of crayons, and began to work with serious enthusiasm at sketching and at portraiture. He visited New York with the hope of making there a permanent home where he could pursue his studies and perfect himself in his favorite art. Almost by accident he was led into a marble yard which at that time occupied the corner of Broadway and 28th Street. He with difficulty persuaded the proprietor to engage his services, but when fairly at work showed himself to be a true artist in both design and execution. This was his first experience in chiseling, and was the realization of a long-cherished dream. After familiarizing himself with the technical details of marble cutting he began to chafe under the restrictions of his employer's limited orders. In the spring of 1854 he entered the studio of the sculptor Henry K. Brown, who at that time was engaged upon the model of his equestrian statue of Washington, which was later placed at the southeast angle of Union Square, New York. The sculptor, apprehending young Mundy's talent, took pains to instruct him in the manipulation of clay. Mundy retained his place during the ensuing seven years, familiarizing himself with the various processes peculiar to clay, plaster, marble, and bronze, and supporting himself the while by crayon portraiture. The first order for a work in marble was received in 1858, when

the Geneva Chapter of the Alpha Delta Phi engaged him to model a portrait bust of President Benjamin Hale, which he began in the autumn of 1860. His connection with H. K. Brown was severed, and in 1863 he took up his residence in Rochester, N. Y. Here he established the first school in that city for instruction in drawing and in modeling from the antique and from life. During the twenty years of his residence in Rochester he modeled and executed in marble a large number of busts, among the most notable of which are those of Bishop William H. De Lancey, President Martin B. Anderson, Dr. Chester Dewey, Frederick Douglass, and Dr. W. W. Ely. His hand was also employed at intervals on statuettes and medallions, which showed his imaginative quality. But he was handicapped in all his labor by imperfect eyesight. At an early age he developed a serious malady, one of the symptoms of which was night blindness. Although he rested and took long sea voyages, his blindness gradually increased until in 1883 the left eye was entirely useless, and cataract developed to dim the little remaining sight of the right eye. He had lost none of the vigor of youth, and his ambition was as stimulative as ever. He took up his residence in the home of his sister in Tarrytown, and there executed his most important works under the disadvantage of almost total blindness. To model a statue of heroic size had long been his desire, and learning that the Grand Army Veterans of Tarrytown had been making futile efforts to obtain funds for a bronze statue to be placed upon the soldiers' monument in Sleepy Hollow, he offered his services free for this great work. He completed the work in two years of arduous application. The statue was exhibited, cast in bronze, and finally unveiled on Decoration Day, 1890. The figure represents a *vidette* in the volunteer service of the National army, and has been called the most spirited and graceful military figure in this country. The crowning effort of his life was his heroic statue of Washington Irving. As preparation for modeling this great work, he sought to become familiar with the great writer's mind and character through communion with those who knew him in life. He had long conversations with his relatives and personal friends, and became thoroughly imbued with the spirit of the man whose likeness he was to model. With the aid of magnifying glasses, he was able to see some of the best portraits of Irving. For four months he worked entirely upon the head, and after that was perfected he worked on the various parts, until the figure was complete. This task consumed eighteen months. The statue represents the author sitting in an armchair in his habitual easy manner while in conversation, one hand holding his eyeglasses, with the other left free for gesticulation or for the friendly hand clasp which he so readily extended. Mundy was obliged to model the statue in parts, and put it together without the usual aid of a small model from which to copy the pose. Small models of this kind are made with the modeling stick, and as they are in miniature many parts are too small for the fingers to accomplish unaided. As Mundy was guided by the sense of touch alone, such aids to his work were out of the question; therefore the harmony of his statue seems all the more remarkable. Delicate calculation was used with phenomenal accuracy, as was proved when the various parts were placed in position. At night many hours were devoted to a careful examination of the day's work, when the imperfections became more noticeable, for the dim glimmer of the light that reached his consciousness in the daytime tended to obscure the mind's ideal. (See "Annual Cyclopædia" for 1891, page 300, for an engraving of the statue).

Nelson, Thomas Leverett, jurist, born in Haverhill, N. H., March 4, 1827; died in Worcester, Mass., Nov. 21, 1897. He was graduated at the University of Vermont in 1846; studied law, and was admitted to the bar in 1855. For many years he was associated with United States Senator George F. Hoar in practice in Boston. In 1870-'73 he was city solicitor of Worcester; in 1879 was appointed United States district judge for Massachusetts; and subsequently, on the organization of the United States Circuit Court of Appeals, was appointed one of its justices. He received the degree of LL. D. from the University of Vermont in 1879.

Neuendorff, Adolph Heinrich Anton Magnus, musical director, born in Hamburg, Germany, June 13, 1843; died in New York city, Dec. 4, 1897. He came to the United States when twelve years old, and while attending a public school in New York city studied music. When fifteen years old he made his public appearance as a pianist at the old Dodworth Hall, and a year afterward he was employed in an orchestra and also as a chorus master. In 1860-'62 he played the violin on a concert tour with his father in South America, and on his return played in an orchestra in New York city for a year, and then became musical director at the German Theater in Milwaukee, Wis. The following season he became chorus master for Carl Anschütz in his season of grand German opera productions in New York; soon afterward succeeded him as conductor; and held the place till 1867, when he assumed the musical direction of the new Stadt Theater in New York. He established the Germania Theater in New York in 1872, and managed it for eleven years; in 1878 succeeded Theodore Thomas as conductor of the New York Philharmonic Society; and in 1884-'89 directed a series of promenade concerts in Boston. Since 1895 he had applied himself chiefly to concert work. He succeeded Anton Seidl as director of the Metropolitan permanent orchestra, and his last public appearance was as conductor of this orchestra at the Madison Square roof-garden concerts in the summer of 1897. While at the Stadt Theater he produced about forty operas. In 1892-'95 he was in Vienna, where his wife, Georgine von Januschowsky, sang at the Imperial Opera House. His compositions include the operas "The Rat Charmer of Hamelin" (1880); "Don Quixote" (1882); and "Prince Waldmeister" (1887); besides symphonies, overtures, and cantatas.

Oller, Jacob Franklin, clergyman, born in Waynesboro, Pa., in 1825; died in Baltimore, Md., Jan. 30, 1897. He entered the ministry of the German Baptist Brethren Church in 1857; was consecrated a bishop in 1882; and while discharging his episcopal duties retained his pastorate of the church in Waynesboro till his death. He was also treasurer of a large manufacturing concern.

Ordway, Albert, soldier, born in Boston, Mass., Feb. 24, 1843; died in New York city, Nov. 21, 1897. He entered Lawrence Scientific School, of Harvard College, shortly before the civil war, and in April, 1861, withdrew and enlisted as a private in the 4th battalion, Massachusetts Militia. In September following he became 1st lieutenant in the 24th Massachusetts Infantry, which accompanied Gen. Burnside's expedition to New Berne, N. C. He remained in that district till 1863, took part in all the operations there, and became adjutant of his regiment and an aid and acting adjutant general on the staff of Gen. Henry Prince. In July, 1863, he accompanied Gen. Prince on his transfer to the Army of the Potomac, and received a staff appointment in the 2d division of the 3d Army Corps. At the close of the campaign of that year he rejoined his regiment in Florida, and became ordnance

officer of the fortifications at Jacksonville. In 1864 his regiment was transferred to the Army of the James, when he was detached and first made division ordnance officer and afterward appointed to the staff of Gen. Terry. After the occupation of Richmond he was promoted to be colonel of his regiment, and, for gallant and meritorious services, brevetted a brigadier general. His regiment was selected for special duty in Richmond, and he was appointed provost marshal general of the State. In February, 1866, he was mustered out of the volunteer service, and engaged in business in Richmond till 1877. He then settled in Washington, D. C., and at the time of his death was brigadier general and commander of the National Guard of the District of Columbia. Gen. Ordway was President of the American Ordnance Company.

Ordway, Alfred, painter, born in Roxbury, Mass., March 9, 1821; died in Melrose, Mass., Nov. 17, 1897. He was educated in the public schools of Lowell; began studying art in boyhood, and made numerous creditable crayons and pastels; and opened his first studio in Boston in 1845. With the exception of two years spent in New York city—part of the time at the National Academy of Design, and a short period in Virginia—his entire professional life was identified with that of Boston. In 1856-'63 he was director of the art exhibitions of the Boston Athenæum. He was a founder of the Boston Art Club, and had been its secretary, treasurer, and president. Mr. Ordway made a specialty of portraiture and landscape work, and was a frequent exhibitor in local exhibitions.

Osborne, Phoebe Sayre, educator, born in Madison, N. J., March 14, 1812; died in Chicago, Ill., Jan. 20, 1897. In 1828 she removed to New York city with a sister, and, having ample means at her command, engaged in charitable work. Two years afterward philanthropic citizens established a charity public school, which became known as the Ragged School, and the two sisters were installed as teachers. The success of this effort induced the city council in 1836 to open two schools—one for boys, the other for girls—for public education, and the sisters were employed as the first teachers in Public Schools Nos. 1 and 2. Mrs. Osborne had lived in Chicago since 1873.

Paddock, Algernon Sidney, lawyer, born in Glens Falls, N. Y., Nov. 9, 1830; died in Beatrice, Neb., Oct. 17, 1897. He was educated at Glens Falls Academy, studied law, and, removing to Omaha in the spring of 1857, was admitted to the bar, and became active in the development of Nebraska Territory. In 1858 he was an unsuccessful candidate for the Territorial Legislature, in 1859 was a delegate to the first Republican convention in that Territory, and in 1860 a delegate to the Republican National Convention. Soon after President Lincoln's inauguration Mr. Paddock was appointed Secretary of the Territory, and he held this office till the admission of Nebraska as a State in 1867. He was a delegate to the Republican National Convention in 1864, an unsuccessful independent Republican candidate for Congress in 1866, was appointed Governor of Wyoming Territory in 1868, but declined the office, and was elected United States Senator in 1875 and 1887. Between his two terms in the Senate he served four years on the Utah Commission. In his last term he was chairman of the Committee on Agriculture and Forestry, and a member of the Committees on Pensions, Public Lands, and Indian Depredations (select).

Pancoast, William Henry, surgeon, born in Philadelphia, Pa., Oct. 16, 1835; died there, Jan. 5, 1897. He was a son of the distinguished surgeon Joseph Pancoast, M. D., was graduated at Haverford College in 1853 and at Jefferson Medical Col-

lege in 1856, and spent three years in special study in Europe. On his return he established himself in surgical practice in Philadelphia, and soon acquired a wide reputation for the boldness and skill of his operations. In the civil war he served as a surgeon with the Army of the Potomac. He succeeded his father as Professor of Surgery in Jefferson Medical College in 1874, and was President of the Medical-Chirurgical College in Philadelphia in 1886-'96. Dr. Pancoast was the first President of the Red Cross Society of Philadelphia, president of one of the sections of the Pan-American Medical Congress held in Washington, and author of several papers at the International Medical Congress in Boston. In 1874 he secured the bodies of the Siamese twins, and demonstrated that they could not have been separated without causing their death.

Parmelee, Dubois D., chemist, born in Redding, Conn., in 1830; died in New York city, April 16, 1897. He was graduated in medicine and chemistry at the University of the City of New York in 1858, applied himself to experimental chemistry, and invented the cold process of manufacturing rubber. For several years, and till the expiration of the Goodyear patents, he was engaged in the rubber business in Salem, Mass. Subsequently he was consulting chemist to a large belting and packing company in New York city. Dr. Parmelee was an active member of the American Institute, and many of his inventions were exhibited there.

Pasko, Wesley Washington, editor, born in Waterloo, Seneca County, N. Y., Jan. 4, 1840; died in New York city, Dec. 15, 1897. He learned the printer's trade in Utica, N. Y., and worked a year on the "New York Tribune." In the civil war he enlisted as a private in the 16th New York Heavy Artillery, and after the war he was engaged in editorial work in Albany and Troy, N. Y., till 1867, when he became connected with the education department of the State. Here he assisted in codifying the school laws, in preparing official reports for the Superintendent of Public Instruction, and in compiling a volume on the conditions of education in the United States and abroad. About this time he also wrote "Men who Advertise." In 1870 he edited "Old New York." Subsequently he edited the "Albion" in New York and a weekly newspaper in Lancaster, N. H. He was editor for a Cincinnati publishing house in 1879-'83, and at this time wrote several books of biography and local history. In 1883 he returned to New York and applied himself to the literature of printing. He was elected librarian of the New York Typothetæ in 1885, and subsequently was its secretary. In 1891 he was a delegate to the annual convention of the United Typothetæ of America. Mr. Pasko was a frequent contributor to the "American Bookmaker" and "The Printer and Bookmaker" of New York, compiled the "American Dictionary of Printing and Bookmaking," and published "The History of Printing in New York, from its Beginning to the Present Time." He was also the inventor of the Pasko press, probably the smallest cylinder press ever made, designed to print small bulletins for the Stock Exchange. His surname was originally Probasco, but was changed subsequently to 1872.

Peele, John Thomas, painter, born in Peterborough, England, in 1822; died in 1897. In 1835 he removed with his parents to New York city, and soon developed such a taste for portrait painting that he was sent abroad to study. In 1846 he returned to New York and continued his studies in the National Academy of Design, of which he was elected an associate. From portrait painting he turned to *genre* work, making a specialty of studies of child life. He returned to England in 1851, and for several years resided on the Isle of Man. His

"Children in the Wood" (1847) was bought by the late Prince Consort, and is now in Queen Victoria's collection at Osborne. The "Girl and Kitten" is owned by the National Academy of Design. "Jennie's Pet" was exhibited in the loan collection at the Metropolitan Museum in the season of 1896-'97, and "Sunny Days of Childhood" is owned in Chicago. Among his other works in the United States are "Grandma's First Lesson in Knitting," "Music of the Reeds" (1857), "Asleep on Duty," "The Song of the Shirt," "The Prayer for Health," "The Mountain Maid," "Spring Wild Flowers," and "The Wreath of Wild Flowers." Other works are "Highland Supper," "The Little Laundress," "Recitation for Grandpa," "A Bit of Gossip," and "The Bird's Nest" (1885). He was a member of the Society of British Artists, and exhibited frequently in London and New York.

Peyton, Jesse Enlows, "father of centennials," born in Mayesville, Nicholas County, Ky., Nov. 10, 1815; died in Haddonfield, N. J., April 28, 1897. He was brought up on his father's farm, and on attaining his majority went to work in a general store at Flat Rock, Ky. In 1841 he removed to Philadelphia and entered a dry-goods house, in which he subsequently became a partner. Soon afterward, on being informed that Henry Clay was financially embarrassed, he collected sufficient funds among his manufacturing and mercantile acquaintances to liquidate Mr. Clay's debts. In 1854 he retired from business, and acquired large interests in coal lands in what is now West Virginia. He also became active in politics. In January, 1860, he made a tour of the principal Southern cities to convince himself of the probable extent of the threatened secession. The same year he was one of the founders in Philadelphia of what became known as the Constitutional Union party, and represented the 1st New Jersey District at the convention that nominated John Bell and Edward Everett for President and Vice-President. After President Lincoln's inauguration he sent Mr. Peyton on a secret mission to Kentucky to endeavor to restrain the State from leaving the Union. Subsequently Mr. Peyton organized the first cavalry regiment that reached Washington at the beginning of the civil war, and the 3d and 11th Pennsylvania Volunteers, paying all the expenses personally. He was best known in later days as the "father of centennials," as he had suggested and done much to promote the centennial observance of Independence Day, Bunker Hill, Yorktown, Va., and the inauguration of American constitutional government. His last scheme was to organize a celebration of the birth of Jesus Christ by all Christian nations, in Jerusalem, in 1900.

Phillips, Stephen H., lawyer, born in Salem, Mass., about 1823; died there, April 8, 1897. He was graduated at Harvard College in 1842; studied at Dane Law School, and was admitted to the bar in 1846. During 1847-'50 he edited the "Boston Law Reporter," in the last year removed to Salem, and in 1851 was appointed district attorney for Essex County. He served two years as city solicitor of Salem, and from 1858 to 1861 was Attorney-General of Massachusetts. Afterward he was judge advocate general of the State militia. In 1866 he was appointed by King Kamehameha V Attorney-General of the Hawaiian Government and one of the four Cabinet ministers. He held this office till 1873, and during that period frequently acted as Minister of Foreign Affairs and of Finance.

Picknell, William Lamb, painter, born in Hinesburg, Vt., Oct. 23, 1854; died in Marblehead, Mass., Aug. 8, 1897. When seventeen years old he went to Europe and studied painting. He exhibited at the Royal Academy in London and at

the Paris Salon. He returned to the United States in 1882 with but few paintings, having sold nearly all his work abroad. In 1881 he received a silver medal at the Mechanics Fair in Boston, and in 1884 a gold medal. He was elected a member of the Society of American Artists in 1880, and of the Society of British Artists in 1884. Good specimens of his landscapes are in the Walker Art Gallery in Liverpool, the Metropolitan Museum of Art in New York, the Museum of Fine Arts in Boston, the Art Museum in Philadelphia, and the Carnegie Gallery in Pittsburg. His most noteworthy works are "Route de Concarneau" (1880), for which he received the Lippincott prize in Philadelphia and a medal at Atlanta in 1896; "On the Borders of the Marsh" (1880); "A Stormy Day" (1881); "Sunshine and Drifting Sand" (1883); "A Sultry Day" (1884); "Wintry March" (1885); "Bleak December" and "After the Storm" (1886); "November Solitude" (1887); "Edge of Winter," exhibited at the Columbian Exposition in 1893; "Old Fort at Antibes," exhibited at the Paris Salon in 1894; "Morning on the Loing," for which he received a gold medal at the Paris Salon in 1895; and "River Loing at Moret."

Pierce, Edward Lillie, lawyer, born in Stoughton, Mass., March 29, 1829; died in Paris, France, Sept. 5, 1897. He was a brother of Henry Lillie Pierce (see obituary in "Annual Cyclopædia" for 1896), and was graduated at Brown University in 1850 and at Harvard Law School in 1852. At the law school he was the prize essayist, and a year after graduation there he published a paper on "Secret Suffrage," which was reprinted by the Ballot Society of England and quoted as an authority on the floor of Parliament. As this publication long antedated the Australian movement, Mr. Pierce has been called the father of ballot reform. In 1857 he published an elaborate treatise on "American Railroad Law," the first law book on the subject, which was rewritten, expanded, and republished under the title of "Pierce on Railroads" in 1881. During the Know-nothing excitement of 1857 he published a pamphlet, which was widely circulated, on the "Effect of Proscriptive or Extreme Legislation against Foreigners in Massachusetts and New England, on Free Labor, Free States, and the Cause of Freedom in the West." He returned to Boston to practice, was a delegate to the Republican National Convention in 1860, and was active in the ensuing canvass. In February, 1861, when the Massachusetts Legislature was considering a proposition for the repeal of the "Personal Liberty" laws, he made an eloquent appeal and argument which were largely instrumental in preventing the abrogation or modification of those laws. Soon afterward he enlisted as a private in the 3d Massachusetts Regiment, and in July was detailed to gather the fugitive slaves at Hampton, Va., and to organize and set them at work on the intrenchments. In December, 1861, his term of enlistment having expired, he was sent by Secretary Chase to the Sea Islands to report on the condition of the negroes who had fled to the abandoned plantations there, and in March following he was placed in charge of them. He found 200 plantations and about 10,000 negroes, caused 15,000 acres to be planted in cotton, corn, and potatoes, organized the negroes into an orderly community, and, with the large force of teachers he took with him, founded schools and taught the negroes how to become self-supporting. The success of his work here led him to urge the formation of freedmen's aid societies for similar work elsewhere. In 1863 he was appointed collector of internal revenue for the 3d Massachusetts District, which office he held three years. From May, 1866, till October, 1869, he was

district attorney for Norfolk and Plymouth Counties, and from the last date till 1874 he was secretary of the Board of State Charities. During his tenure of the last office he made a tour of the charitable institutions of England and the Continent, and made reports on his observations. In 1875-'76 he was a member of the Legislature and chairman of the House Committee on the Judiciary, and prepared and carried to enactment the first general law regulating municipal indebtedness ever adopted in the United States. He was again elected to the Legislature in 1895 and 1896. Mr. Pierce was a founder of the free public library at Milton, Mass., and a member of the Massachusetts Historical Society. His last literary work of importance was the completion of his "Memoirs and Letters of Charles Sumner" (Vols. I and II, Boston, 1877; Vols. III and IV, 1896). Previous to finishing this work he compiled a "Genealogy of the Pierce Family." A collection of his addresses and papers, entitled "Enfranchisement and Citizenship," was published in 1896.

Pleasanton, Alfred, soldier, born in Washington, D. C., June 7, 1824; died there, Feb. 17, 1897. He was graduated at the United States Military Academy and commissioned a brevet 2d lieutenant in the 1st Dragoons in 1844; was promoted 2d lieutenant, 2d Dragoons, Nov. 3, 1845; 1st lieutenant, Sept. 30, 1849; captain, 2d Cavalry, March 3, 1855; and major, Feb. 15, 1862; resigned Jan. 1, 1868; commissioned major, U. S. A., Oct. 19, 1888; and was retired Oct. 23 following. In the volunteer service he was commissioned a brigadier-general July 16, 1862; was promoted major general June 22, 1863; and was mustered out Jan. 15, 1866.



He was brevetted 1st lieutenant, May 9, 1846, for gallantry in the battles of Palo Alto and Resaca de la Palma; lieutenant colonel, Sept. 17, 1862, for Antietam; colonel, July 2, 1863, for Gettysburg; brigadier general, March 13, 1865, for the campaign in Missouri; and major general, the same date, for meritorious services in the field during the war. On leaving West Point he was ordered to duty at Fort Atkinson, Iowa, whence in 1845 he marched with Capt. Sumner's expedition to the Devil's lake region, now in North Dakota, 3,000 miles. After the Mexican War he was assigned to garrison duty, first in Monterey, Mexico, and afterward at Santa Fé, New Mexico. In 1849-'50 he served on the staff of Gen. Persifor F. Smith in California, and for two years thereafter he was engaged in fighting the Apache and Navajo Indians in New Mexico. He was acting assistant adjutant general on the staff of Gen. William S. Harney in the Sioux campaign in 1856, and adjutant general in the operations against the Seminoles in Florida and in those in Kansas, Oregon, and Washington Territory. When Fort Sumter was fired on he was in St. Joseph, Mo., on his way to his regiment in Utah. He hastened to Pennsylvania, reported to Gen. Robert Patterson for immediate service, and was ordered to Wilmington, Del., to organize a force with which to protect the railroad. Within a week he mustered and equipped a full regiment. The men became so much attached to him that they petitioned Gen. Scott to place him in command, but he was ordered to rejoin his regiment. His efficiency in an emergency had been noted, however, and after the first battle of Bull Run he was ordered with his dragoons to Washington. He

reached the city in the autumn of 1861, and served with distinction through the Peninsula campaign in Virginia. When Gen. Lee invaded Maryland, Gen. Pleasanton was placed in command of a division of cavalry. He was engaged in the actions at Boonesboro, South Mountain, and Antietam. He won great credit at Chancellorsville, May 2, 1863, by the skillful handling of a small force of cavalry and light artillery when Jackson attacked the right flank. At Gettysburg he commanded the entire cavalry of the Army of the Potomac. In 1864 he was transferred to Missouri, and drove the Confederates under Gen. Price from the State. He resigned his commission in 1868; was for some time a collector of internal revenue in New York city; was commissioner of internal revenue in 1870-'71; and subsequently became a railroad president. He was proud of the facts that in the winter of 1863-'64 a committee of Congress had recommended him for the command of the Army of the Potomac and that he had served through 105 battles.

Poor, Daniel Warren, clergyman, born in Tillipally, Ceylon, Aug. 21, 1818; died in Newark, N. J., Oct. 11, 1897. He was a son of the Rev. Daniel Poor, D. D., a noted scholar and missionary, and was graduated at Amherst College in 1837, and at Andover Theological Seminary in 1842. In 1843-'48 he was pastor of a Presbyterian church in Fairhaven, Mass. He then organized the High Street Presbyterian Church, Newark, N. J., of which he was pastor till 1869, aided in organizing three German churches, and was a founder of the German Theological Seminary, at Bloomfield, N. J. In 1869-'72 he was pastor of the First Presbyterian Church in Oakland, Cal. In this time he organized the San Francisco Theological Seminary, and was its Professor of Ecclesiastical History and Church Government from 1871 till 1876. In 1876-'93 he was secretary of the Presbyterian Board of Education in Philadelphia. He received the degree of D. D. from Princeton in 1857. Dr. Poor was one of the translators and editors for Lange's "Commentary," his part being "The Epistles to the Corinthians" (1868). He also was associated with Henry Clay Fish in the publication of "Select Discourses from the French and German" (New York, 1858).

Porter, Albert Gallatin, lawyer, born in Lawrenceburg, Ind., April 20, 1824; died in Indianapolis, Ind., May 3, 1897. By working as a ferryman on the Ohio river he earned money to take a college course, and he was graduated at Asbury University in 1843. Two years afterward he was admitted to the bar, and settled in Indianapolis. He was a city councilman and corporation attorney for two terms each; became reporter of the Supreme Court of Indiana in 1853, and published five volumes of "Decisions"; joined the Republican party in 1856, and was elected to Congress in 1858 and 1860. While in Congress he served on the Committees on the Judiciary and on Manufactures. At the expiration of this second term he resumed law practice. In 1878 he was appointed Comptroller of the Currency. He held this office till 1880, when he was elected Governor of Indiana, serving in 1881-'84. In 1889 he was appointed minister to Italy. He resigned the post in September, 1892, and resumed law practice.

Pouder, James, shipbuilder, born in Milton, Del., Oct. 31, 1819; died there, Nov. 5, 1897. He was of English extraction and owned the estate in Delaware acquired by patent by his great-grandfather. He became a partner of his father in the business of building, buying, and selling vessels in 1843; and after the death of his father, in 1863, carried on the business alone and added to it the pur-

chase and shipment of grain, lumber, ship timber, and bark. He also built a large steam sawmill, and engaged extensively in agriculture and peach growing. In 1857 he was elected to the Legislature, in 1864 to the State Senate, and in 1867 to the presidency of the last-named body. He was elected Governor of Delaware in 1870, as a Democrat, and served four years.

Powers, Daniel William, banker, born in Batavia, N. Y., June 14, 1818; died in Rochester, N. Y., Dec. 11, 1897. He was brought up on a farm, became a clerk in a hardware store in Rochester when nineteen years old, and engaged in the banking business in 1850. Dealings in Government bonds during the civil war yielded him large returns, and he subsequently acquired much real estate. He erected the Powers Hotel and the Powers Commercial Building in Rochester, and established an art gallery and a law library, the last containing the law library of Roscoe Conkling.

Preston, Margaret Junkin, author, born in Philadelphia, Pa., in 1825; died in Baltimore, Md., March 28, 1897. She was a daughter of the Rev. George Junkin, founder and President of Lafayette College, Easton, Pa., and President of Washington College, Lexington, Va. From the time of her marriage to Prof. John T. L. Preston, of the Virginia Military Institute, in 1857, till the death of her husband, about 1891, she lived at Lexington, Va. Mrs. Preston began contributing to "Sartain's Magazine," in Philadelphia, in 1849, and published her first book, "Silverwood," a novel, in 1856. After her marriage she became a frequent contributor, chiefly in verse, to the "Southern Literary Messenger." During the civil war she wrote her best-known volume of verse, a narrative poem entitled "Beechenbrook" (New York, 1866), which made her extremely popular in the South. "Old Songs and New" appeared in 1870. The "Book of Monograms" contains an account of the ramblings of herself and her husband in Europe after the war. Her other works include "Cartoons" (1876); "For Love's Sake" (1886); "Colonial Ballads, Sonnets, and Other Verses" (1887); "Aunt Dorothy" (1890); and a translation of the "Dies Iræ" (1855).

Proctor, Joseph, actor, born in Marlboro, Mass., May 7, 1816; died in Boston, Mass., Oct. 2, 1897. He entered mercantile life in Boston, and before long he was enrolled in a company of youthful players. With very little special training, he made his first appearance on the stage as Damon in "Damon and Pythias," on Nov. 29, 1833. Next he appeared as Rolla in "Pizarro." He played a star engagement at the Tremont Theater, and then appeared with the stock company of the Pearl Street Theater, Albany, N. Y., till 1837, when he and Mr. Connor were engaged at the Walnut Street Theater, Philadelphia, opening in "Thalaba." The next year he returned to Boston, and after one season made a starring tour of the West. On May 6, 1839, he opened the rebuilt Bowery Theater, New York city, appearing as Nathan Slaughter in "Nick of the Woods." He played this part more than 2,500 times. In 1859 he went to England, played in London one hundred nights, beginning with "Othello"; and afterward played in other English cities, and then on the Continent. In 1861, while he was playing in Glasgow, his company included the present Sir Henry Irving. He returned to Boston in the autumn of 1861; played an engagement at the Howard Athenæum, under the management of Edwin L. Davenport; and starred in a round of Shakespearean characters, "Nick of the Woods," and other dramas till 1869. After managing a theater in Sacramento, Cal., for nearly three seasons, he retired for two years; then reappeared in his familiar parts; and continued his professional work till his

final retirement, in 1885. The fiftieth anniversary of his first appearance on the stage was made the occasion of a grand benefit testimonial at the Boston Theater, Nov. 29, 1883.

Pullman, George Mortimer, inventor, born in Chautauqua County, New York, March 3, 1831; died in Chicago, Oct. 19, 1897. He learned the trade of cabinetmaker in Albion, N. Y. In 1853, when the Erie Canal was being widened, he took contracts for moving large buildings that stood in the way of the improvement. He was successful in this, and six years later he removed to Chicago and entered upon the work of raising large blocks of brick and stone buildings. The city had been built, some blocks on one level and some on another, and an effort was being made to bring all to one level. Meanwhile he had been studying the problem of making long railway journeys comfortable, and soon after his removal to Chicago he converted two old railway coaches into sleeping cars. These were used successfully, and very soon there was a demand for more. He perfected his invention, and in 1863 began building the cars that have since borne his name. The first, which was called the "Pioneer," was built at a cost of \$18,000. In 1867 he organized the Pullman Palace Car Company, of which he was president from that time till his death. In 1887 he devised the vestibule train. In 1880 he founded the town of Pullman, near Chicago, a model village, with his factories for its industry, in which 5,000 of the inhabitants are employed. It is said that statistics prove this to be one of the most healthful places in the world. Mr. Pullman was interested also in other enterprises, one of the most important being the Metropolitan Elevated Railroad in New York city.

Raymond, Minor, educator, born in New York city, Aug. 29, 1811; died in Evanston, Ill., Nov. 25, 1897. He was graduated at Wesleyan Academy, Wilbraham, Mass., in 1831; became a member of the faculty, and remained there ten years; held pastorates in Worcester, Boston, and Westfield in 1841-'48; and was principal of Wesleyan Academy in 1848-'64. Through his efforts Fisk Hall was built in 1851 and Binney Hall in 1854, and after the fire that destroyed the academy buildings in 1856 he secured a large part of the funds to rebuild them. In 1864 he was elected Professor of Systematic Theology in Garrett Biblical Institute of the Northwestern University, Evanston, Ill., and he held the chair for thirty years. He received the degree of D. D. from Wesleyan University in 1854, and that of LL. D. from Northwestern University in 1884. He published "Systematic Theology" (3 vols., Cincinnati, 1877).

Reid, John C., journalist, born in Kenosha, Wis., about 1837; died in New York city, Jan. 25, 1897. He learned the printer's trade in Chicago and at the beginning of the civil war enlisted as a private in an Illinois regiment. At the expiration of his term he re-enlisted in an Ohio regiment, of which he became quartermaster; was captured and taken to Andersonville, but escaped through the aid of friendly negroes. After the war he settled in New York city, and was first employed as a compositor on the "New York Times." He was soon promoted to the place of proof reader, was made night editor in 1871, and was managing editor



from 1872 till 1889. On leaving the "Times," he was for a while in charge of the London edition of the "New York Herald," and after his return to the United States had an editorial place on journals in New York city and in New Haven, Conn.

Reid, Sam Chester, lawyer, born in New York city, Oct. 21, 1818; died in Washington, D. C., Aug. 13, 1897. He was a son of Captain Samuel Chester Reid, United States navy, and went to sea when sixteen years old. Four years afterward he was attached to the Government survey of the Ohio river for a year, and then settled in Natchez, Miss., where he studied law, and became a United States deputy marshal. In 1841 he was admitted to the bar of Mississippi; in 1844 to that of Louisiana; and in 1846 to that of the United States Supreme Court. During the Mexican War he was a member of a company of Texas Rangers, and distinguished himself at Monterey. After the war he was employed on the "New Orleans Picayune." He reported the proceedings of the Secession Convention of Louisiana in 1861, and was a correspondent with the Confederate armies for several Southern newspapers during the civil war. After the war he resumed law practice, and lectured in the principal cities of the South on "The Restoration of Southern Trade and Commerce." In 1874 he established the Mississippi Valley and Brazil Steamship Company, in St. Louis. His father had commanded the American privateer "General Armstrong" in a memorable engagement with a British squadron in the harbor of Fayal in 1814, and had lost his vessel. Soon afterward a claim was made on Congress for indemnity. The claim slumbered for many years; all the principals died; and Mr. Reid, taking it up for the heirs, advocated it vigorously for several years, and secured an appropriation from Congress for its payment about ten years ago. He published "The United States Bankrupt Law of 1841" (Natchez, 1842); "The Seouting Expeditions of McCulloch's Texas Rangers" (Philadelphia, 1847); "The Battle of Chickamauga" (Mobile, 1863); and "The Daring Raid of Gen. John H. Morgan in Ohio" (Atlanta, 1864). He also reported and edited "The Case of the Private-Armed Brig of War 'General Armstrong'" (New York, 1857). At the time of his death he was rewriting a memoir of his father to replace one that was burned. He had also prepared "The Life and Times of Col. Aaron Burr," but the manuscript was lost in a fire in 1850.

Rhind, Alexander Colden, naval officer, born in New York city, Oct. 31, 1821; died there, Nov. 8, 1897. He was appointed a midshipman in the navy, Sept. 3, 1838; was promoted passed midshipman, July 2, 1845; master, Feb. 21, 1853; lieutenant, March 17, 1854; commander, Jan. 2, 1863; captain, March 2, 1870; commodore, Sept. 30, 1876; and rear admiral, Oct. 30, 1883; and was retired on the following day. During his active career he was on sea service for nineteen years and five months, and on shore or other duty for ten years and seven months. He was on coast-survey duty in 1845-'56; was attached to the home squadron, and served along the coast

at North Edisto, had a shore fight with a mounted force at Seabrook's plantation, South Carolina, and received the thanks of the Navy Department for his capture and destruction of the works commanding South Edisto, Dawho, and Pou-Pou rivers. In the attack on the defenses of Charleston, April 7, 1863, he commanded the ironclad "Keokuk," which was struck ninety times in thirty minutes and was pierced by nineteen shots. The sinking condition of his vessel obliged him to withdraw from action, but he kept her afloat in smooth water till the following morning, when she went down, but without losing a man. Later in the year, as commander of the "Paul Jones," he took part in the operations against the defenses of Charleston. On Aug. 13, 1864, with the "Agawam," he engaged the three batteries at Deep Bottom in a manner that elicited the commendation of his superior officers and a second letter of thanks from the department. His most conspicuous feat, characterized by Rear-Admiral Porter as "the most perilous adventure that was, perhaps, ever undertaken," was performed on the night of Dec. 23, 1864, when he commanded the powder-boat "Louisiana," loaded with 215 tons of gunpowder and bombs fitted with time fuses, and exploded her at a point within 350 yards of Fort Fisher. The explosion did not have the contemplated effect on the fort. Rear-Admiral Porter recommended the promotion of Commander Rhind, Lieutenant Preston, and all the volunteer crew. After the war Captain Rhind commanded the naval rendezvous at New York, 1868; the Brooklyn Navy Yard in 1869-'70; and the "Congress," of the European squadron, in 1872-'73. He was lighthouse inspector in 1876-'79; President of the Board of Inspection in 1880-'82; and Governor of the Naval Asylum in 1883. Admiral Rhind was a son of Charles Rhind, a shipowner, United States minister to Turkey in 1827, and on his mother's side was descended from Cadwallader Colden.

Rice, William, clergyman, born in Springfield, Mass., March 10, 1821; died there, Aug. 17, 1897. He was educated at Wesleyan Academy, Wilbraham, Mass.; entered the ministry of the Methodist Episcopal Church in 1841; and after holding numerous pastorates was obliged by failing health to retire from pulpit work. In 1856, as a member of the General Conference, he took an active part in the controversy concerning slavery. Since 1861 he had been librarian and secretary of the Springfield city library, and for nearly twenty years he had been a member of the State and city boards of education. Wesleyan University conferred the degree of D. D. on him, and for many years he was a trustee of the university and president of the Board of Trustees of Wesleyan Academy. Dr. Rice published "Moral and Religious Quotations from the Poets," a "Pastor's Manual," and a catalogue of the library; and in 1876 the "Methodist Hymnal" was published under his direction.

Richards, David, sculptor, born in Abergonolwyn, North Wales, in 1829; died in Utica, N. Y., Nov. 28, 1897. He was brought up on a farm in his native land, removed early in life to Utica, and there followed the stonecutter's trade. In his leisure he learned to model in clay and to carve in marble, and after studying in Italy he established himself as a sculptor in Utica. He executed a good many outdoor statues, and did much decorative work, but never entered public competitions. Among his works are "Love"; "Boy chasing Butterfly"; "The Barber Dentist"; statues of President Grant, Gov. Seymour, and Harding; a statuette of Thomas Paine; and the models of the bronze statuettes for the Soldiers' Monument in Mount Hope Cemetery, Rochester, and "The Pilgrim's Rest" at Cypress Hills Cemetery, Long Island.



of Mexico during the war with that country; returned to coast-survey duty in 1849 and 1851; and was appointed commander of the gunboat "Crusader," South Atlantic blockading squadron, in 1862. He was several times engaged with the Confederates

Ricker, Joseph, clergyman, born in Parsonsfield, Me., June 27, 1814; died in Augusta, Me., Sept. 4, 1897. He was graduated at Waterville College (now Colby University) in 1839; was immediately appointed editor of "Zion's Advocate," the organ of the Baptist Church in Maine; and four years later entered the ministry. For more than twenty-five years he was chaplain at the Massachusetts State Prison; for seven years was secretary of the Massachusetts Baptist convention, and for two years of the Maine convention; and, after holding pastorates in Gloucester, Belfast, and Augusta, Me., and in Woburn and Milford, Mass., he gave his entire time to superintending the missionary and educational work of his denomination. He did effective work in putting the training schools of Colby University at Waterville, Hebron, and Houlton on a sound financial basis, and to the school at Houlton (now known as the Ricker Classical Institute) he gave \$10,000. He received the degree of D. D. from Waterville College in 1868.

Ricord, Frederick William, librarian, born in Guadeloupe, West Indies, Oct. 7, 1819; died in Newark, N. J., Aug. 12, 1897. He was a son of Jean Baptiste Ricord, physician and scholar, and a nephew of Philippe Ricord, the distinguished French surgeon. Frederick was educated at Hobart and Rutgers Colleges, studied medicine and law, but had no liking for either; and, settling in Newark, N. J., opened a classical school and conducted it twelve years. In 1849 he was elected librarian of the Newark Library Association, and he held the office for twenty years. In this period he was elected a member of the first board of education of the city, and served in it for sixteen years, six years as its secretary and three as its president. He was also State Superintendent of Public Schools four years. He served three terms as sheriff of Essex County, in 1869-'73 as mayor of Newark, and subsequently as police justice and as lay judge of the Court of Common Pleas. For many years he was librarian of the New Jersey Historical Society, and also editor of its numerous publications. He wrote and published "An English Grammar"; a "History of Rome" (New York, 1852); "Life of Madame de Longueville," from the French of Victor Cousin (1854); "The Henriade," from the French of Voltaire (1859); "English Songs from Foreign Tongues" (1879); and "The Self-Tormentor, from the Latin of Terentius, with more English Songs" (1885). He edited many volumes of "The Colonial Documents of New Jersey," published by the New Jersey Historical Society, and compiled the greater part of the volume treating of New Jersey in the series "Memorial History of New York." At the time of his death he had ready for the press a translation of another work of Terentius, a collection of original poems, and more "Songs from Foreign Tongues"; and had in preparation "The Governors of New Jersey," a "History of New Jersey," and other books.

Roberts, William Randall, merchant, born in County Cork, Ireland, Feb. 6, 1830; died in New York city, Aug. 9, 1897. He removed to New York city in 1849, and engaged successfully in mercantile business for many years, retiring in 1869. In 1865 he was elected president of the Fenian Brotherhood, and in the following year actively promoted the raid into Canada, for which he was imprisoned by the United States Government. He was elected to Congress as a Democrat in 1870 and 1872, and to the New York Board of Aldermen in 1877, and was defeated for sheriff in 1879. In 1885 he was appointed United States minister to Chili, and while serving there was stricken with paralysis, in May, 1889. He was brought back to New York and remained a helpless invalid till his death.

Robertson, Thomas James, legislator, born in Fairfield County, S. C., Aug. 3, 1823; died in Columbia, S. C., Oct. 13, 1897. His ancestors were among the first settlers in the county and were active Whigs in the Revolutionary War. He was graduated at South Carolina College in 1843, and became a planter. In 1857-'58 he was aid-de-camp to Gov. Allston, and throughout the civil war was conspicuous for the firm and open support he gave to the National cause. He was a member of the State constitutional convention that was held under the reconstruction acts of Congress, and in 1868 was elected without opposition to one of the vacant seats in the United States Senate. In 1870 he was re-elected for a full term, and was appointed chairman of the Committee on Manufactures and a member of the committees on the District of Columbia and on Enrolled Bills (select).

Robeson, George Maxwell, lawyer, born in Belvidere, Warren County, N. J., in 1829; died in Trenton, N. J., Sept. 27, 1897. He was graduated at Princeton College in 1847; studied law, was admitted to the bar in 1850, and soon afterward removed to Camden. In 1858 he was appointed prosecutor of the pleas for Camden County; in 1867 became Attorney-General of New Jersey; and in June, 1869, was appointed Secretary of the Navy. He went out of the naval office March 4, 1877, after serving for some time in 1876 as Secretary of War also on the resignation of Gen. Belknap. In 1878 and 1880 he was elected to Congress, and in 1882 was defeated for a third term. His administration of the Navy department was the subject of much adverse criticism and of congressional investigation in 1876 and 1878; but the Judiciary Committee of the House unanimously declared that the charges against him were not sustained. After retiring from Congress, Mr. Robeson practiced law in Trenton till within a few years of his death.

Robinson, John Cleveland, soldier, born in Binghamton, N. Y., April 10, 1817; died there, Feb. 18, 1897. He entered the United States Military Academy in 1835; withdrew to study law three years afterward; was commissioned 2d lieutenant in the 5th Infantry, Oct. 27, 1839; promoted 1st lieutenant, June 18, 1846; captain, Aug. 12, 1850; major, 2d infantry, Feb. 20, 1862; and colonel, 43d Infantry, July 28, 1866; and was retired with the rank of major general, May 6, 1869. In the volunteer service he was commissioned colonel of the 1st Michigan Infantry, Sept. 1, 1861; promoted brigadier general, April 28, 1862; brevetted major general, June 27, 1864; and mustered out Sept. 1, 1866. In the regular army he was brevetted lieutenant colonel, July 1, 1863, for services at the battle of Gettysburg; colonel, May 5, 1864, for the battle of the Wilderness; brigadier general, March 13, 1865, for Spottsylvania; and major general, same date, for services in the field during the war. His first military service was as a quartermaster in the army of occupation of Mexico at Corpus Christie, Texas, in 1845. He served with distinction at Palo Alto, Resaca de la Palma, and Monterey, and in the closing operations of the war; was engaged in campaigns against Indians in Texas in 1853-'54, and in Florida in 1856; and accompanied the expedition to Utah in 1857-'58. In February, 1861, he was ordered from duty at Fort Columbus, N. Y., to Fort McHenry, Baltimore. He reached Baltimore at a critical moment, and prevented the loss of Fort McHenry to the Government. From May till September, 1861, he was on duty at Detroit, Mich., and Columbus, Ohio, mustering volunteer troops, and after his promotion to brigadier general of volunteers he commanded a brigade at Newport News and the troops in the neighborhood of Portsmouth, Va., till May, 1862.

He was then given command of the 1st brigade, Kearny's division, Army of the Potomac; took part in the seven days' battle before Richmond; and commanded a division at Fredericksburg, Chancellorsville, Gettysburg, the operations at Mine Run, and the battles of the Wilderness and Spottsylvania. In the last battle, while leading a charge of his division, he was wounded in his left knee, which necessitated the amputation of his leg at the thigh. For his gallantry on this occasion he was presented with a congressional medal of honor. After recovering from his wound he commanded the military division of northern and western New York, the departments of the South and the Lakes, and the post of Fort Wayne, Mich., till his retirement. In 1872 he was elected Lieutenant Governor of New York on the ticket headed by Gen. John A. Dix.

Rollins, Alice Wellington, author, born in Boston, Mass., June 12, 1847; died in Bronxville, N. Y., Dec. 5, 1897. She was the daughter of Ambrose Wellington, a lawyer; was educated at home and in Europe; taught for several years in Boston; and married Daniel M. Rollins, a merchant of New York city, in 1876. After her marriage she traveled extensively, and lived for a time in Brazil. Her publications comprise "The Story of a Ranch," "From Palin to Glacier," "The Ring of Amethyst," and "The Story of Azron," the last two being poems. For children she published "Little Page Fern" and "The Finding of the Gentian." She also published the booklets "Aphorisms for the Year" and "Unfamiliar Quotations"; a novel based on tenement-house reform, "Uncle Tom's Tenement" (1888); and a dramatic colloquy, "Dealing in Futures."

Rollins, Daniel G., lawyer, born in Great Falls, N. H., Oct. 18, 1842; died in Somersworth, N. H., Aug. 30, 1897. He was a son of Judge Daniel G. Rollins; was graduated at Dartmouth in 1860 and at Harvard Law School in 1862; and was admitted to the bar in 1863. After practicing in Portland, Me., three years, he removed to New York city to accept the appointment of assistant United States district attorney, which he held till 1869. In 1869-'73 he was engaged in private practice; in 1873-'80 was assistant district attorney of New York County; in 1880-'82 was district attorney; in 1882-'88 was surrogate of the county. While in the district attorney's office he conducted several notable prosecutions, including the Lambert and Case insurance trials, the Wetmore and Joe Coburn cases, and a series of arson and perjury trials, in which, in the estimation of insurance officials, he did much to check incendiarism. His most enduring reputation was made while he presided over the surrogate's court. Wills involving many millions of dollars were probated before him without contest or delay; but there were many others whose contest developed unusual complications. Among the notable wills contested before him were those of James Stokes, involving \$10,000,000; Sarah Burr, \$5,000,000; and Jesse Hoyt, \$11,000,000; and the Hammersley, Darling, and Paine wills, involving smaller amounts but many perplexing questions of law. Toward the end of his term he was defeated by a small majority in an election for judge of the Supreme Court of New York, and after his retirement he resumed practice. He received the degree of LL. D. from Dartmouth College in 1884.

Ross, Christian K., merchant, born in 1823; died in Philadelphia, Pa., June 21, 1897. He was engaged in the wholesale dry-goods business for many years prior to 1876, and from that year till his death was master warden of the port of Philadelphia. On July 1, 1874, while his two sons, Walter and Charles,

were playing in front of their home in the German-town district, they were invited by two men in a buggy to take a ride. The boys clambered into the buggy and were liberally supplied with candy till they reached Palmer and Richmond Streets, when Walter, who wanted some fireworks, was given a quarter of a dollar and sent into a store to make a purchase. When he came out, the buggy, men, and Charlie, a beautiful child of four years, had disappeared. Walter was found by a friend of the family, who took him home, and immediately after he had told his story a search was begun for his younger brother. From this incident was developed the "mystery of little Charlie Ross," which, despite the efforts of the detectives and police authorities of the entire country, and of numerous volunteer searchers, never has been satisfactorily explained. A few days after the disappearance Mr. Ross received a letter from the supposed abductors, which declared that Charlie would not be returned without the payment of a large ransom, and that an attempt to recover him through the agency of detectives would result in his immediate death. Two days afterward Mr. Ross received a demand for \$20,000. The money was promptly raised, and Mr. Ross was about to follow the instructions in the letter, when the police officials took up the case, and Mayor Stokely offered a reward of \$20,000 for the arrest of the kidnappers and the return of the boy. In the ensuing four months Mr. Ross received sixteen letters from the kidnappers, but these furnished no clew to the writers. Interest in the case increased daily; photographs of the missing boy were sent to every part of the United States and to many foreign seaports, and hundreds of apparent clews were investigated, but without encouraging results. On the night of Dec. 14, 1874, the residence of Judge Van Brunt, at Bay Ridge, N. Y., was entered by burglars, who were attacked by members of the family. One burglar, William Mosher, was shot dead, and another, Joseph Douglass, was mortally wounded. The latter acknowledged that he and Mosher had stolen Charlie Ross, and declared that Mosher knew all about the boy. Walter Ross identified the dead burglars as the men who had driven him and Charlie in the buggy. The only further explanation of the mystery was the declaration by the police that, while Mosher and Douglass were trying to escape from officers who wanted them for several burglaries, they had drowned the boy in the North river. The body of a boy of about Charlie's age was found in the river shortly after the death of the burglars, but it was not fully identified as that of Charlie.

Ruggles, Daniel, soldier, born in Barre, Mass., Jan. 31, 1810; died in Fredericksburg, Va., June 1, 1897. He was graduated at the United States Military Academy and commissioned a brevet 2d lieutenant in the 5th Infantry in 1833; served in the war against the Seminole Indians in Florida in 1839-'40; took part in the military occupation of Texas in 1844-'45; and in the Mexican War was present at the battles of Palo Alto, Resaca de la Palma, the siege of Vera Cruz, Churubusco, Molino del Rey, Contreras, and Chapultepec, and the capture of the city of Mexico. He was promoted captain in 1846, and brevetted major and lieutenant colonel for services in Mexico. On May 7, 1861, he resigned his commission to enter the Confederate service, in which he was appointed a brigadier general. He commanded a division at the battles of Shiloh and Baton Rouge; was promoted major general in 1863; commanded the department of the Mississippi; and was commissary general of prisoners at the close of the war. In 1874-'78 he lived on his ranch at Palafix, Texas, and afterward he was engaged in the real-estate business in Fredericksburg.

Ruggles, Edward Rush, educator, born in Norwich, Vt., in 1836; died in Hanover, N. H., Oct. 30, 1897. He taught at Bradford (Vt.) Academy; went to Canada to perfect himself in French and to teach at the mission of Grande Ligne; and then went abroad for further study. In 1864-'66 he was instructor in English and French at the Dresden Polytechnic School, and in the last year was appointed instructor in modern languages at Dartmouth College. He became Professor of Modern Languages in the Chandler Scientific School in 1867, and since 1893 had been Professor of German at Dartmouth. Prof. Ruggles, who was regarded as one of the best German scholars in the United States, received the degrees of A. M. and Ph. D. from Dartmouth in 1864 and 1885 respectively.

Rulison, Nelson Somerville, clergyman, born in Carthage, N. Y., April 24, 1842; died in Mannheim, Germany, Sept. 1, 1897. He was educated at Gouverneur Academy in his native town, and received his training for the ministry in the General Theological Seminary, New York city, being graduated in 1866. In the same year he was admitted to deacon's orders in the Episcopal Church, and not long afterward to priest's orders. From 1867 till the close of 1869 he was rector of Zion Church, Mount Morris, N. Y., and subsequently he founded, and was the first rector of St. John's Church on the Heights in Jersey City. In 1877 he was called to the rectorship of St. Paul's Church, Cleveland, and he remained there until he was consecrated Assistant Bishop of Central Pennsylvania. After that event his episcopal residence was at South Bethlehem, Pa. In 1895, on the death of the senior bishop, he succeeded to the office. The enormous amount of work involved in administering the affairs of his diocese made great inroads upon his naturally strong constitution, and in the last years of his life he was obliged to seek an entire change of scene in the hope of recovering his former health. But the change had been made too late. Besides sermons and essays, and contributions in prose and verse to religious periodicals, he published a "History of St. Paul's Church, Cleveland, Ohio" (1877).

Russell, John Henry, naval officer, born in Frederick City, Md., July 4, 1827; died in Washington, D. C., April 1, 1897. He was appointed a midshipman in the United States navy, Sept. 10, 1841; was promoted passed midshipman, Aug. 10, 1847; master, Sept. 14, 1855; lieutenant, the following day; lieutenant commander, July 16, 1862; commander, Jan. 28, 1867; captain, Feb. 12, 1874; commodore, Oct. 30, 1883; and rear admiral, March 4, 1886; and was retired Aug. 27 following. During his active career he was on sea service for twenty years and nine months, and on shore or other duty for nineteen years and eleven months. He made his first cruise in the sloop "Cyane" of the Pacific squadron in 1841-'43, and had his first experience of war on the "St. Mary's" in the Gulf of Mexico in 1846. He took part in the capture of Corpus Christi and the securing of Fort Taylor at Brazos. He also served on the blockade at Vera Cruz prior to the capture of the city. In 1848 he was graduated at the United States Naval Academy, and was ordered on coast-survey duty.



He accompanied the North Pacific exploring expedition of 1853-'56 as acting lieutenant and navigator, and on this cruise, notwithstanding the Chinese had refused all intercourse, secured by his personal boldness an official audience for the American and British envoys. He also made explorations in the arctic region which disclosed numerous errors in the charts. In 1860-'61 he was on duty at the Washington Navy Yard. He was ordered to the Norfolk Navy Yard, and had charge of the last boat that left that yard, April 28, 1861. While attached to the frigate "Colorado" off Pensacola, Fla., he performed during the night of Sept. 14, 1861, one of the most thrilling feats of the civil war. In command of a boat expedition of 100 sailors, he undertook to cut out or destroy the privateer "Judah," lying at that port under the protection of strong shore batteries and a force of 8,000 men. The expedition was detected before it reached the privateer, and fire was opened on the boats; but the sailors pressed on, and after a hand-to-hand fight, in which 20 of the "Colorado's" men were killed or wounded, the "Judah" was captured. While the troops in the navy yard were being assembled, the "Judah" was set on fire and sank, and the survivors of the expedition returned to their frigate. For this feat Lieut. Russell received the personal thanks of President Lincoln, the congratulations of the Navy Department, and the thanks of the State of Maryland. Subsequently he took part in the operations of Farragut's fleet at New Orleans and on the Mississippi river up to Vicksburg; received the garrison of Fort Jackson as prisoners on his ship; and was thanked by Farragut for saving the lives of the officers and men in the flagship's boat during a guerrilla attack at Baton Rouge. In 1869, while commanding the "Ossipee," of the Pacific squadron, he rescued the passengers and crew of the Pacific mail steamer "Continental" during a gale, and in 1875, while serving in the North Atlantic squadron, saved the vessels of the squadron from an epidemic of yellow fever at Key West.

Sage, Henry Williams, philanthropist, born in Middletown, Conn., Jan. 31, 1814; died in Ithaca, N. Y., Sept. 17, 1897. Feeble health caused him to abandon plans for a professional life, and in 1832 he entered his uncle's mercantile house. He purchased the business in 1838, and managed it till 1854, when he became interested in the lumber regions of Canada and the West. He bought large tracts of timber around Lake Simcoe, in Canada, and was highly successful in his operations. Subsequently, in partnership with John McGraw, he built the largest sawmill in the world at Winona, Mich., and became one of the most extensive land owners in that State. In 1847 he was elected to the Legislature as a Whig; in 1857 removed to Brooklyn, N. Y.; and in 1880 returned to Ithaca. His early benefactions included the endowment of the Lyman Beecher lectureship on preaching at Yale College, the building and endowment of several churches and schools, and the building of the public library at West Bay City, Mich. From its inception Mr. Sage was deeply interested in Cornell University. He was elected a trustee in 1870, and had been president of the board since 1875. Besides his gifts to the institution, he managed its pine lands for many years, and realized about \$6,000,000 for them, although, but for his objections, the board of trustees would have sold them at one time for \$1,000,000. His principal gifts to the university are the Sage College for Women, \$266,000; Susan Lynn Sage chair of Philosophy, \$50,000; Sage School of Philosophy, \$200,000; University Library Building, \$260,000, and endowment \$300,000; Museum of Classical Archaeology, collection and equipment, \$20,000; house for Sage

Professor of Philosophy, \$11,000; and contribution toward paying off a floating indebtedness, \$30,000. (See GIFTS AND BEQUESTS.)

Sartain, John, artist, born in London, England, Oct. 24, 1808; died in Philadelphia, Pa., Oct. 25, 1897. He studied painting with John Varley and Henry Richter, learned the art of line and mezzotint engraving, and produced fine specimens of



each branch before leaving England. In 1830 he removed to Philadelphia, and continued his study of painting with Joshua Shaw and Manuel J. de Franca. During the first ten years of his residence in Philadelphia he painted portraits in oil and miniatures on ivory, drew on wood for book illustrations, and designed vignettes for

bank notes. In 1840 he became connected with "Graham's Magazine." To this periodical he contributed many of his best miniature engravings. Three years afterward he became proprietor and editor of "Campbell's Foreign Semi-Monthly Magazine." He also acquired an interest in "The Electric Museum," for which he engraved many plates. In 1848 he bought a half interest in "The Union Magazine," published in New York, which he transferred to Philadelphia and renamed "Sartain's Magazine." In this he first published the famous poem of "The Bells," after making the author rewrite it three times. He brought this magazine to a high standard of excellence, and while acting as its managing editor engraved a very large number of illustrations for magazine and book publications. He also produced numerous prints for framing, of which the most noteworthy are "The County Election in Missouri," after Bingham (about 1855); "Christ Rejected," after West (1862); "Men of Progress, American Inventors" (1862); "Zeisberger preaching to the Indians at Gosgoshunk" (about 1862); "The Ironworker and King Solomon" (1876); "John Knox and Mary, Queen of Scots," after Leutze; "Homestead of Henry Clay," after Hamilton; and "Edwin Forrest" and "The Battle of Gettysburg," after Rothermel (1876-'77). Mr. Sartain had charge of the art department at the Centennial Exhibition at Philadelphia, and for his services there received numerous honors. He gathered a great collection of illustrated books, original paintings, and prints, the engravings alone numbering more than 20,000.

Sedgwick, John, jurist, born in New York city, June 22, 1829; died in Norfolk, Conn., Sept. 11, 1897. He was graduated at the University of the City of New York in 1847, was admitted to the bar in 1852, and was assistant district attorney of New York in 1856-'61. He was defeated as Republican candidate for the offices of city judge and recorder, but in 1871 was elected a judge of the Supreme Court of New York, and in 1885 was re-elected on a combined ticket of Republicans and Democrats. His re-election was a compliment to his honesty and ability displayed in the disruption of the Tweed ring. He became a justice of the Supreme Court of New York in 1895, when under the new Constitution the Superior Court was merged in that tribunal, and in May, 1896, retired.

Seward, Clarence Armstrong, lawyer, born in New York city, Oct. 7, 1828; died in Geneva, N. Y.,

July 24, 1897. He was a nephew of William H. Seward, in whose family he was brought up; was graduated at Hobart College in 1848; and was admitted to the bar in 1850. He began practice in partnership with Samuel Blatchford, removed with him to New York city in 1854, and on his partner's elevation to the bench Mr. Seward became head of the law firm of Blatchford, Seward, Griswold & Da Costa. Mr. Seward made a specialty of the laws of patents and common carriers. He was judge advocate general of New York in 1856-'60; Assistant Secretary of State of the United States under his uncle, and Acting Secretary during the latter's illness in 1865 following the attempt to assassinate him; was a delegate to the National Republican Convention of 1878; and a presidential elector in 1880. Mr. Seward conducted many diplomatic negotiations for the Government, and had much to do with bringing about the creation of the State of West Virginia. He was an original member of the Union Club, and had been its president since 1890. He collected an exceptionally fine library. He assisted Judge Blatchford in compiling the "New York Civil and Criminal Justice" (Auburn, 1850).

Seymour, Augustus Sherrill, jurist, born in Ithaca, N. Y., Nov. 30, 1836; died in New York city, Feb. 19, 1897. He was graduated at Hamilton College and the Dwight Law School; began practicing law in New York city in 1859, removed to New Berne, N. C., in 1865, and became city judge in 1868. He served in both branches of the Legislature and in the State Constitutional Convention of 1871; was elected judge of the Superior Court of the State in 1874, and held the office till 1882, when he was appointed judge of the United States District Court of Eastern North Carolina. The last office he retained until his death. Judge Seymour compiled a "Digest of the Laws of North Carolina" (1878).

Shelby, Joseph Orville, soldier, born in Lexington, Ky., in 1831; died near Adrian, Mo., Feb. 13, 1897. He removed with his parents to Waverly, Mo., in 1850, and engaged in the manufacture of rope. Subsequently he became owner of a large plantation in Lafayette County. During the Kansas-Missouri border troubles he was an active proslavery leader, and early in the civil war he raised and equipped a company of cavalry for the Confederate service. Soon afterward he was commissioned colonel and brigadier general, and given command of a brigade that saw much hard service in Missouri, Arkansas, Louisiana, and Texas. He commanded a division in the raid under Gen. Sterling Price into Missouri, and saved that general's army on its retreat to Texas. After the surrender of the Confederates in the Trans-Mississippi Department at Shreveport Gen. Shelby marched a force of 1,000 well-equipped cavalymen into Mexico, where he offered to raise an army of 40,000 veteran American soldiers to sustain the empire. Maximilian declined his overtures, and his force soon disbanded. Gen. Shelby himself became a freight contractor in the city of Mexico, but returned to his farm in Missouri in 1867. In 1893 he was appointed United States marshal for the Western District of Missouri.

Sheldon, Edward Austin, educator, born in Perry Center, Wyoming County, N. Y., Oct. 4, 1823; died in Oswego, N. Y., Sept. 16, 1897. He was educated at Hamilton College, began teaching in Oswego in 1848, and was Superintendent of Public Schools in Syracuse in 1851-'53, and in Oswego in 1853-'69. While holding the last-named office he was the first to introduce object teaching in the United States, and in 1861 he organized the first training school for teachers. In 1869 the Oswego training school was made a State normal school,

and he was principal of it from that year till his death. His special work in recent years comprised the adding of kindergarten work to the normal-school departments, the perfecting of a system whereby kindergartens may be incorporated harmoniously in primary-school work, the unifying of the school systems of the State, and the bringing of industrial training into its true educational relation with other instruction. Dr. Sheldon's publications include a "First Reading Book and Reading Charts" (New York, 1862); "Manual of Elementary Instruction" (1862); "Series of Reading Books and Charts" (1874); and "Lessons on Objects" (1875).

Skilton, Julius Augustus, physician, born in Troy, N. Y., June 29, 1833; died in Brooklyn, N. Y., Nov. 20, 1897. He was graduated at Rensselaer Polytechnic Institute in 1849 and at Albany Medical College in 1855, and practiced in Troy till the beginning of the civil war. In 1861 he was commissioned assistant surgeon to the 30th New York Volunteers, and in 1862 surgeon of the 87th. He served under Gen. Philip Kearny in the Peninsula campaign, and after the seven days' fight was left in charge of the wounded on the field when the army retreated. With such of the wounded as could be removed he was taken to Richmond, and after a short confinement in Libby Prison he was exchanged and returned to New York. In 1863 he took part in organizing the 14th New York Cavalry, of which he was commissioned surgeon, and with which he served during the draft riots in New York city. Afterward he accompanied the regiment to New Orleans, was appointed medical director of the Cavalry Department of the Southwest in 1864, and served through the Red River campaign, in which he was wounded. On being mustered out of the service he went to Vera Cruz as correspondent for a New York newspaper, and witnessed the events leading to Maximilian's dethronement and death. Subsequently he was appointed medical officer of the escort that accompanied President Juarez to the city of Mexico. In 1869 he was appointed United States consul to the city of Mexico, and from 1872 till 1878 he was consul general. Pending the resumption of diplomatic intercourse he also acted in special matters for the governments of England, France, and Austria. He made extensive archaeological explorations, and gathered a valuable collection of specimens, now in Yale University Museum. After the expiration of his term as consul general he engaged in railroad and mining operations in Mexico till about twelve years ago, and then became head of a firm of electrical engineers in New York city. Among his publications is one on the mining districts of Mexico.

Smith, Job Lewis, physician, born in Spafford, Onondaga County, N. Y., Oct. 15, 1827; died in New York city, June 9, 1897. He was graduated at Yale College in 1849, and at the College of Physicians and Surgeons, New York city, in 1853. He made a specialty of diseases of children, and passed his entire professional life in New York. From 1878 till within a short time of his death he was Professor of the Diseases of Children in Bellevue Hospital Medical College, and for many years was Physician to the City Hospital, the New York Foundling Asylum, and the New York Infant Asylum. Dr. Smith published a "Treatise on the Diseases of Children" (8th ed., 1896).

Smith, John Eugene, soldier, born in Bern, Switzerland, Aug. 3, 1816; died in Chicago, Ill., Jan. 29, 1897. He was a son of John Banler Smith, an officer under Napoleon, who removed with his family to Philadelphia a few months after John's birth. The son received an academic education, learned the jeweler's trade, and followed it in St.

Louis, Mo., and in Galena, Ill. On the inauguration of Gov. Richard Yates in 1861, he was appointed an aid on the Governor's staff, and from April till July was engaged in raising, organizing, and forwarding troops. After the first battle of Bull Run he recruited the 45th Illinois Volunteers, known as the Washburn Lead-Mine Regiment, and was commissioned its colonel. He took part in the capture of Forts Henry and Donelson, the battle of Shiloh, and the siege of Corinth; was promoted brigadier general Nov. 29, 1862; commanded the 8th division, 16th Army Corps, in the following month, and the 3d division, 17th Corps, during the Vicksburg campaign; and with the 15th Corps was at the capture of Mission Ridge, and in the Atlanta and Carolina campaigns. In April, 1866, he was mustered out of the volunteer service, and in July was commissioned colonel of the 27th United States Infantry. He was assigned to the 15th Infantry and transferred to the 14th in 1870, and retired May 19, 1881. Gen. Smith was brevetted major general of volunteers, Jan. 12, 1865, for faithful service and gallantry in action, and brigadier general and major general United States army, March 2, 1867, for the siege of Vicksburg and the action at Savannah.

Spangler, Andrew M., journalist, born in York, Pa., in 1818; died in Philadelphia, Pa., Nov. 2, 1897. In early life he was editor of the "Lancaster Gazette," and founder and editor of "The Farm Journal." Afterward he established and edited "The Progressive Farmer" and "The Culturist"; and at times he was editorially connected with "The Evening Herald," "The Star," "The Globe," "The Evening Journal," and "The Age," all in Philadelphia. Early in the civil war he aided in organizing the Philadelphia Home Guards, and through the war he was active in raising money and supplies for sick and wounded soldiers. Mr. Spangler had been a member of the Board of Education of Philadelphia for many years. He was acknowledged authority on fishing, and published "A Paradise for Gunners and Anglers" and "Near-by Fresh- and Salt-Water Fishing."

Spaulding, Elbridge Gerry, banker, born in Summer Hill, Cayuga County, N. Y., Feb. 24, 1809; died in Buffalo, N. Y., May 5, 1897. He studied law, was admitted to practice in Genesee County, and in 1834 settled in Buffalo. In 1836 he became city clerk, attorney of the Supreme Court, and solicitor in Chancery; in 1847 was elected mayor; and in 1848 was elected to the Assembly. He practiced law with much success till about 1850, when he became a banker. At his instigation the Farmers' and Mechanics' Bank of Batavia was removed to Buffalo, and after the passage of the Federal banking law it was reorganized with Mr. Spaulding as president and principal stockholder. In 1849-'51 he was a Whig Representative in Congress, in 1853 was State Treasurer, and in 1858-'63 was again in Congress. In his last term in Congress, as chairman of the subcommittee of the Committee on Ways and Means charged with the preparation of financial measures, he drafted the legal-tender and the national currency bank acts, and secured their adoption as war measures. From this circumstance he became known as the "father of greenbacks." In 1869 he published a "History of the Legal-Tender Paper Money used during the Great Rebellion," and in 1876 delivered an address before the National Banking Association at the Centennial Exhibition in Philadelphia on "One Hundred Years of Progress in the Business of Banking."

Starkweather, Mary Ann Theresa, philanthropist, born in Waterville, Oneida County, N. Y., Sept. 22, 1819; died in Ypsilanti, Mich., Sept. 24, 1897. She was a sister of the late John S. New-

berry, of Detroit, Mich., and widow of John Starkweather, one of Michigan's early educators. Her husband died in 1883, and soon afterward, by the death of an uncle, she came into possession of a large estate. From that time till her death she was noted for her large public benefactions. In 1886 she gave to the Ladies' Library Association of Ypsilanti her handsome residence; in 1888 gave to Highland Cemetery a \$10,000 chapel; soon afterward gave to the city a costly fountain and the statue that surmounts the Soldiers' Monument; and recently she erected a \$10,000 building for the Students' Christian Association of the State Normal College.

Stevens, Abel, clergyman, born in Philadelphia, Pa., Jan. 19, 1815; died in San José, Cal., Sept. 11, 1897. He was educated at Wesleyan University; joined the New England Conference of the Methodist Episcopal Church, and became pastor of a church in Boston, Mass., in 1834; and spent a year in the service of the university. After a second pastorate in Boston, he made a European tour in 1837, and on his return was stationed in Providence, R. I. In 1840-'52 he was editor of "Zion's Herald" in Boston; in 1853-'54 of "The National Magazine" in New York; in 1856 was elected editor of "The Christian Advocate and Journal"; and in 1860-'74 was an associate editor of "The Methodist." Subsequently he spent many years in travel and in residence at Geneva, Switzerland, where he was pastor of the Union Church. He received the degree of LL. D. from Indiana University in 1856. He was most widely known as the historian of Methodism. His publications include "Memorials of the Introduction of Methodism into New England" (2 vols., Boston, 1847-'52); "History of the Religious Movement of the Eighteenth Century, called Methodism" (3 vols., 1858-'61); "History of the Methodist Episcopal Church in the United States" (4 vols., 1864-'67; Vol. V, 1895); "The Centenary of American Methodism" (1865); "The Women of Methodism; Its Three Foundresses" (1866); "A Compendious History of American Methodism" (1867); "Madame de Staël: A Study of her Life and Times" (1881); "Character Sketches" (1882); and "Christian Work and Consolation" (1885).

Stevenson, John D., soldier, born in Staunton, Va., June 8, 1821; died in St. Louis, Mo., Jan. 22, 1897. He took a partial course at the College of South Carolina, was graduated in law at Staunton in 1841, and began practicing in Franklin County, Mo., in 1842. In 1846 he raised a company of volunteers, with which he served under Gen. Stephen W. Kearny in the invasion of New Mexico. He removed to St. Louis after his return, served in both branches of the Legislature, and was president of the Senate. In 1861 he recruited the 7th Missouri Volunteers, of which he was commissioned colonel. During the siege of Corinth he commanded the District of Savannah. Afterward he commanded a brigade in Tennessee; was promoted brigadier general of volunteers, Nov. 29, 1862; served through the Vicksburg campaign; commanded an expedition that drove the Confederates from northern Louisiana; and occupied and fortified Decatur, Ala. Toward the close of 1864, being left without a command, he resigned his commission. On July 28, 1866, he was appointed colonel of the 30th United States Infantry, and during the reconstruction period he was stationed in northern Georgia. He was brevetted major general of volunteers and brigadier general, U. S. A., March 2, 1867, for distinguished services during the war and for gallantry in leading a charge at Champion Hill. Subsequently he commanded the 25th United States Infantry till his resignation, Jan. 1, 1871. After retiring from the army he resumed law practice.

Stokes, Ellwood H., clergyman, born in Medford, N. J., Oct. 10, 1815; died in Ocean Grove, N. J., July 16, 1897. He was of Quaker parentage, and when thirteen years old was apprenticed to a bookbinder in Philadelphia. In 1842 he was appointed a class leader in the Methodist Episcopal Church; in 1843 was licensed to preach and assigned temporarily to the Salem circuit; and in 1844 was given a charge in the Medford circuit. From the last year till 1875 he held appointments in New Jersey, and built churches in Newark and Trenton. He was an organizer of the Pitman Grove Camp-Meeting Association; was President of the Ocean Grove Camp-Meeting Association from its organization, in 1869, till his death; and since 1875 had been occupied principally with the work at Ocean Grove. Largely through his efforts the greatest camp-meeting grounds in the world were there established. The erection of the great Auditorium, that cost \$70,000, was the crowning work of his life. He published a volume of letters from Europe and two volumes of poems. (See GIFTS AND BEQUESTS.)

Storow, James J., lawyer, born in Boston, Mass., July 29, 1837; died in Washington, D. C., April 15, 1897. He was graduated at Harvard College in 1857, and at the Harvard Law School in 1858; was admitted to the bar in 1860; and early acquired reputation as a patent lawyer. From 1879 till his death he was chief counsel for the Bell Telephone Company, and in this post he prepared all the cases concerning the company before the United States courts, and appeared in all the final appeals before the Supreme Court. He was best known to the public through his services as counsel to the Venezuela Government in its controversy with Great Britain over the boundary line. After the British and Venezuelan ministers in Washington had agreed on the terms of the arbitration treaty, Mr. Storow accompanied the latter to Venezuela, where, despite considerable opposition, he was instrumental in bringing the treaty into favor and securing its acceptance.

Swain, David Gaskill, soldier, born in Salem, Ohio, Dec. 22, 1832; died in Washington, D. C., Aug. 17, 1897. He was admitted to the bar in 1858, and practiced at Salem. He was commissioned 2d lieutenant in the 65th Ohio Infantry, Oct. 4, 1861; was promoted 1st lieutenant, Nov. 4 following; captain and assistant adjutant general, May 16, 1862; and major, Feb. 7, 1865; and was mustered out of the volunteer service, Sept. 15, 1866, having been appointed 2d lieutenant in the 34th United States Infantry, July 28 preceding. On Dec. 9, 1869, he was promoted major and judge advocate, and on Feb. 18, 1881, brigadier general and judge advocate general of the army. He was brevetted lieutenant colonel and colonel of volunteers, March 13, 1865, and 1st lieutenant, captain, and major, United States army, March 2, 1867, for faithful and meritorious services during the war. Gen. Swain was engaged in the battles of Shiloh, Murfreesborough, Perryville, Chickamauga, where he was wounded, and at Missionary Ridge, and served on the staffs of Gens. William S. Rosecrans and George H. Thomas. In 1884 he was involved in sensational proceedings, for which he was court-martialed and suspended from rank and duty for twelve years, and on Dec. 22, 1894, the unexpired portion of the sentence was remitted by the President and he was retired. He sued to recover full pay for the period of his suspension, but the Supreme Court decided against him on appeal.

Sweetser, Moses Foster, author, born in Newburyport, Mass., Sept. 22, 1848; died in Dorchester, Mass., in July, 1897. He was educated at Beloit and Columbian Colleges and made a protracted

tour of Europe and the East. On his return he produced a large number of books, including "New England" (1873); "The Middle States" (1874); "The White Mountains" (1875); "The Maritime Provinces" (1876); and "Pocket Guide to Europe" (1883). He published nineteen guidebooks, and also wrote "Artist Biographies," in 18 volumes.

Tenney, Asa W., jurist, born in Dalton, N. H., in 1833; died in Brooklyn, N. Y., Dec. 11, 1897. He was brought up on his father's farm, began teaching when sixteen years old, and was graduated at Dartmouth College in 1859. After studying law and serving as a school commissioner two years at Lancaster, N. H., he removed to New York city in 1862, and was admitted to the bar. During the draft riots he was one of a company of citizen volunteers who defended the house of Mayor Opdyke against the mob. In 1867, when the Republicans of Georgia were endeavoring to restore their party organization, Mr. Tenney was selected by Horace Greeley to visit the State and aid the work. He delivered addresses in Atlanta and Savannah, under police protection, that were printed and circulated as Republican campaign documents. In 1873 he was appointed United States attorney for the Eastern District of New York, and he held the office more than twelve years. On the expiration of his last term he applied himself to private practice in Brooklyn. In July, 1897, he was appointed United States district judge for the Eastern District of New York. Hard work to clear the docket by the end of the term resulted in a fatal prostration.

Terry, William Richard, soldier, born in Liberty, Va., March 12, 1827; died in Chesterfield, Va., March 28, 1897. He was graduated at the Virginia Military Institute in 1850, and was engaged in business till the beginning of the civil war. He entered the Confederate service as a captain of cavalry, was soon afterward commissioned colonel of the 24th Virginia Regiment, and in May, 1864, was promoted brigadier general. After the war Gen. Terry was a State Senator eight years, and superintendent of the Richmond Penitentiary.

Thayer, Alexander Wheelock, born in South Natick, Mass., in 1817; died in Trieste, Austria, July 15, 1897. He was graduated at Harvard University in 1843, and at the Harvard Law School in 1848. While employed as an assistant in the university library he resolved to write a life of Beethoven, and in 1849 he went to Germany to collect material for this purpose, intending from the first that the biography should first be printed in German. He was United States consul at Trieste from 1859 to 1882, and he continued to reside there after the latter date, employed upon his great work. The first volume, which takes the life of his subject to 1796, appeared at Bonn in 1866; the second, which carried it to 1806, was issued in 1872; the third, which carried the narrative to 1816, was published in 1879. A fourth and concluding volume was nearly completed at the time of Mr. Thayer's death. No English version of the work has yet appeared. Besides many contributions to American newspapers and about 20 articles in Grove's "Dictionary of Music and Musicians," he wrote "The Hebrews and the Red Sea" (Andover, 1883), and "Signor Masoni, and Other Papers of the Late I. Brown." (See GIFTS AND BEQUESTS.)

Thomas, Henry Goddard, soldier, born in Portland, Me., April 5, 1837; died in Oklahoma, Jan. 23, 1897. He was graduated at Amherst College in 1858, and was admitted to the bar in Maine. In April, 1861, he enlisted as a private in the 5th Maine Volunteers; in June he was promoted captain; and in August he was commissioned captain in the 11th United States Infantry. He was promoted major and transferred to the 20th Infantry,

Sept. 21, 1866; transferred to the 4th Infantry, Oct. 22, 1876; and to the pay department, May 23, 1878; and was retired July 2, 1891. In the volunteer service he was commissioned colonel of the 79th United States Colored Infantry, March 20, 1863; transferred to the 19th United States Colored Infantry, Jan. 16, 1864; promoted brigadier general, Nov. 30 following; and mustered out Jan. 15, 1866. During the civil war he was brevetted major, U. S. A., May 12, 1864, for gallantry at Spottsylvania; lieutenant colonel, July 30, for services in front of Petersburg; and colonel and brigadier general, and major general of volunteers, March 13, 1865, for meritorious services during the war. Gen. Thomas was engaged in the first battle of Bull Run; the actions at Snicker's Gap, Va., Bristol Station, Rappahannock Station, and Mine Run, Va.; and the battles of the Wilderness, Spottsylvania, Petersburg, and Hatcher's Run. He was the first regular army officer to accept a colonelcy of colored troops.

Thompson, Daniel Greenleaf, author, born in Montpelier, Vt., Feb. 9, 1850; died in New York city, July 10, 1897. He was the youngest son of Daniel Pierce Thompson, author of "The Green Mountain Boys." He was graduated at Amherst in 1869. Previous to graduation, in connection with his college duties, he served several terms as Assistant Secretary of State of Vermont. In the autumn of 1869 he removed to New York city, where he gave private instruction and studied law. In April, 1870, he became teacher of classics in the Springfield, Mass., High School, where he remained until the summer of 1872. In July of that year he published "A First Book in Latin," and in the autumn he resumed the study of law in New York, and in December was admitted to the bar. He was continuously in active practice of law from that date. His hours of leisure were given to study and literary work, and he made notable contributions to periodicals. His publications in book form were: "A System of Psychology" (2 vols., 8vo, 1884); "The Problem of Evil" (1886); "Religious Sentiments of the Human Mind" (1888); "Social Progress" (1889); "The Philosophy of Fiction in Literature" (1892); and "Politics in a Democracy" (1893), an essay upon present political tendencies, which has since been translated into Dutch, by Dr. D. C. Nijhoff. He also delivered addresses before many societies and on various occasions, one of the last being an address before the "Woman's Law Class" of the University of the City of New York, at the closing exercises, April 4, 1894. Mr. Thompson served as a member of the Committee of One Hundred at the Columbian Celebration in the autumn of 1892, and held numerous honorary offices in connection with public movements. In 1888, he was elected to the presidency of the Nineteenth Century Club, which office he held two years. At the time of his death he was a member of the executive council and secretary of the Authors Club. He was also a member of the Century Club, Manhattan Club, Reform Club, Bar Association, Lawyers' Club, Sons of the Revolution, the Patria Club, and of the New England Society. Amherst gave him the degree of Ph. D. in 1894.

Thompson, William, soldier, born in Pennsylvania in 1813; died in Tacoma, Wash., Oct. 7, 1897. He entered the National army as a captain in the 1st Iowa Cavalry, July 31, 1861; was promoted major, May 18, 1863; and colonel, June 20, 1864; was mustered out March 15, 1866; appointed a captain in the 7th United States Cavalry, July 28, 1866; and retired Dec. 15, 1875. He was brevetted brigadier general of volunteers, March 13, 1865; major and lieutenant colonel, U. S. A., March 2, 1867, for services in action at Prairie Grove and Bayou Metoe, Ark.; and brigadier-general, U. S. A., by act of Congress in 1896.

Thorne, Edwin F., actor, born in New York city in 1845; died there, May 4, 1897. He was a son of Charles R. Thorne, and brother of Charles R. Thorne, Jr., and had been on the stage from early youth, making his first appearance at Winter Garden Theater, New York city. In 1860, with his father and three brothers, he went to California, where he became popular in juvenile parts. Subsequently he made a tour round the world, returning to New York in 1865. He was associated with Nat. C. Goodwin in producing "The Black Flag" in New York, and afterward appeared but seldom, owing to feeble health.

Thorne, Joseph, inventor, born in Marlboro, Ulster County, N. Y., Feb. 17, 1826; died in Sing Sing, N. Y., May 4, 1897. He was of Quaker parentage, served through the Mexican War, and became an engineer. From early youth he was fond of machinery, and for a time he was associated with Elias Howe while he was perfecting his sewing machine. Afterward he was connected with the Singer Company, and established and operated a factory in Scotland. Among his many inventions were a typewriter, a sewing machine, and the typesetting and distributing machine bearing his name.

Tilton Elizabeth Richards, wife of Theodore Tilton, born in Brooklyn, N. Y., in 1835; died there, April 13, 1897. She married Theodore Tilton in 1855, and was the cause of the sensational suit brought against Henry Ward Beecher by her husband in 1874. After the trial Mr. and Mrs. Tilton separated, he taking up a permanent residence in Paris, France, and she passing the remainder of her life in seclusion in Brooklyn. She united with a small religious circle, known as Christian Friends and as Plymouth Brethren, and many of its meetings were held at her home. For several years Mrs. Tilton was totally blind, but within the past year her sight was restored by a surgical operation.

Truesdale, Hiram C., jurist, born in Rock Island, Ill., in 1860; died in Phoenix, Ariz., Oct. 28, 1897. He was graduated at Iowa State University in 1880; studied law there; and removed to Minneapolis, Minn., to practice. In 1895 he made his residence in Phoenix, where he soon became known as an expert in mining laws. He was appointed Chief Justice of the Territory in June, 1897, and was fatally prostrated immediately after trying the noted suit of *Warner vs. Wells*, which involved the valuable Hillside mining property.

Trumbull, James Hammond, philologist, born in Stonington, Conn., Dec. 20, 1821; died in Hartford, Conn., Aug. 5, 1897. He entered Yale with the class of 1842. Feeble health prevented his graduation, but in 1850 his name was restored to its place in his class, and he was given the degree of A. M. In 1842-'43 he aided the Rev. James H. Linsley in compiling catalogues of the mammalia, reptiles, fishes, and shells of Connecticut. In 1847 he became Assistant Secretary of Connecticut, and he held that place until 1851, and again in 1858-'61, and he was State librarian and register in 1854-'55, and Secretary in 1861-'65. He was President of the Connecticut Historical Society twenty-six years. Dr. Trumbull was librarian of the Watkinson Library of Reference in Hartford from 1863 till 1891. He became a member of the American Philological Society on its organization, in 1869, and was its president in 1874-'75. He was elected a member of the National Academy of Sciences in 1872, in consideration of his great knowledge of the Indian languages of North America. He was the author of a dictionary and vocabulary of John Eliot's Indian Bible, and was said to be the only living American able to read that work. The degree of LL. D. was conferred upon him by Yale in 1871 and by Harvard in 1887, and Columbia gave him that of

L. H. D. in 1887. He contributed to the proceedings of societies, to periodicals, and to cyclopædias. Among his articles are those on the significance of the word "Shawmut," the supposed Indian name of Boston (1866), on the significance of "Massachusetts" (1867), on the Algonkin name of "Manitou" (1870), and on the "Indian Languages of America." His publications include "The Colonial Records of Connecticut" (3 vols., Hartford, 1850-'59); "Historical Notes on Some Provisions of the Connecticut Statutes" (1860-'61); "The Defense of Stonington against a British Squadron, August, 1814" (1864); Roger Williams's "Key into the Language of America" (Providence, 1866); "Thomas Lecliford's 'Plain-Dealing, or Newses from New England, 1642'" (Boston, 1867); "The Origin of McFingal" (1868); "The Composition of Indian Geographical Names" (1870); "The Best Method of studying the Indian Languages" (1871); "Some Mistaken Notions of Algonkin Grammar" (1871); "Historical Notes on the Constitution of Connecticut" (1872); "Notes on Forty Algonkin Versions of the Lord's Prayer" (1873); "On the Algonkin Verb" (1876); "The True Blue Laws of Connecticut and the False Blue Laws invented by the Rev. Samuel Peters" (1876); and "Indian Names of Places in and on the Borders of Connecticut, with Interpretations" (1881). He edited "The Memorial History of Hartford County" (2 vols., Boston, 1886). In the various bibliographies on the languages of North American Indians compiled by James C. Pilling and published by the Bureau of American Ethnology a full bibliography of his works will be found. The catalogue of Americana belonging to George Brinley was made by him at the time of the sale of the collection, 1879-'86, and gained for him the reputation of the "most learned and acute bibliographer in America."

Tucker, John Randolph, statesman, born in Winchester, Va., Dec. 24, 1823; died in Lexington, Va., Feb. 13, 1897. He was a grandson of St. George Tucker, and son of Henry St. George Tucker, and was graduated at the University of Virginia in 1844. The following year he was admitted to the bar and began to practice in Winchester. In 1857-'65 he was Attorney-General of Virginia, and in 1870-'74 was Professor of Equity and Public Law at Washington and Lee University. From 1874 till 1887 he represented the 10th Virginia District in Congress, in which he was a member of the Committee on Ways and Means for eight years, chairman of the Committee on Judiciary for four years, and a member of the Committee on Civil-Service Reform. Among his notable speeches were those opposing protective duties in tariff legislation; on the electoral commission bill and the constitutionality of the presidential count of 1876; and Chinese immigration in 1883. Some of his most famous addresses were those delivered before the Social Science Association in 1877, before the law school of Yale College in 1887, and at the unveiling of the statue of Gen. Jackson in Richmond. At the close of his congressional service he resumed his professorship at Washington and Lee University, and at the time of his death was also dean of its law school. He received the degree of LL. D. from Yale in 1887.

Tucker, Joshua Thomas, clergyman, born in Milton, Mass., Sept. 20, 1812; died in Boston, Mass., June 11, 1897. He was graduated at Yale College in 1833, and at Lane Theological Seminary in 1837. He engaged in the home-mission work of the Presbyterian Church in Chester, Ill., for a few months; was ordained by the presbytery of Alton, Ill., and had charges in Rushville in 1838, and in Hannibal, Mo., in 1840-'46. In 1846-'48 he held a pastorate in St. Louis, and was associate editor of the "Her-

ald of Religious Liberty"; in 1849-'67 was pastor of the Congregational church in Holliston, Mass.; and in 1868-'78 of the Second Church in Chicopee, Mass. Dr. Tucker was a founder of the "Boston Review," and its editor in 1861-'68, and one of the editors of the "Boston Recorder" in 1863-'64, and of the Springfield "Union" in 1871-'77. He received the degree of D. D. from Iowa College in 1875. His publications include "The Sinless One" (1855) and "Christ's Infant Kingdom" (1870).

Tyler, William Seymour, classical scholar, born in Harford, Pa., Sept. 2, 1810; died in Amherst, Mass., Nov. 19, 1897. He was graduated at Amherst College in 1830, and was Professor of Greek there from 1843 to 1893, when he resigned. His writings include: "The Germania and Agricola of Tacitus, with Notes for Colleges" (New York, 1847); "The Histories of Tacitus, with Notes for Colleges" (1849); "Prayer for Colleges" (1855); "Memoir of Rev. Henry Lobdell" (Boston, 1859); "Plato's Apology and Crito, with Notes" (New York, 1860); "The Theology of the Greek Poets" (Boston, 1867); "History of Amherst College during its First Half Century, 1821-1871" (Springfield, Mass., 1873); "Demosthenes, De Corona," edited (Boston, 1874); "Homer's Iliad, Books XVI-XXIV," edited (New York, 1886).

Voorhees, Daniel Wolsey, lawyer, born in Liberty, Ohio, Sept. 26, 1827; died in Washington, D. C., April 10, 1897. While an infant he was taken by his parents to their home in Indiana. He was graduated at Indiana Asbury (now De Pauw) University in 1849; was admitted to the bar and



began practice in Covington, Ind., in 1851; and was defeated as Democratic candidate for Congress in 1856. In 1859-'61 he was United States district attorney for Indiana; in 1861-'66 and 1869-'73 was a Representative in Congress; and in 1877-'97 was Senator from Indiana. Because of his tall, erect figure he was called the "tall

sycamore of the Wabash." On entering the Senate he was immediately appointed to the Committee on Finance, with which he served till the close of his last term. He was also a member of the Committees on Immigration, Library, and International Expositions (select). His maiden speech in the Senate was an argument in favor of the free coinage of silver and the preservation of the greenback currency as full legal-tender money. In 1893, however, he voted to repeal the silver-purchase clause of the Sherman act. For this, although he retained the chairmanship of the Finance Committee till December, 1895, nominally, he was displaced as the leader of the majority side by Senator Jones, of Arkansas, early in 1894. To Senator Voorhees more than to any one else is due the erection of the building in which the Congressional Library is now installed. In 1880, in a speech on the condition and necessities of the library, he prepared the way for the appointment of the joint select committee to provide additional accommodations, and for seventeen years he was chairman of it. In January, 1897, he was defeated for re-election to the Senate by Charles W. Fairbanks, Republican.

Wales, Leonard Eugene, jurist, born in Wilmington, Del., Nov. 26, 1823; died there, Feb. 8, 1897. He was graduated at Yale College in 1845,

and was admitted to the bar in 1848. For two years he was associate editor of the "Delaware State Journal," the organ of the Whig party in Delaware. In 1849 he was appointed clerk of the United States court for the district of Delaware, and in 1853 and 1854 was elected city solicitor. In 1861 he enlisted in the 1st Delaware Volunteers, and in 1863 was appointed a commissioner of enrollment to superintend the draft of troops. While serving in the last-named office he became, in October, 1864, associate judge of the State courts for Newcastle County. He held this post till March, 1884, when he was appointed judge of the United States district court for the district of Delaware.

Walker, Francis Amasa, economist, born in Boston, Mass., July 2, 1840; died there, Jan. 5, 1897. He was a son of Amasa Walker, author of "The Science of Wealth." He was graduated at Amherst in 1860, receiving two prizes for *extempore* speaking, and studied law. He joined the 15th Massachusetts Volunteers as sergeant major Aug. 1, 1861, and was made assistant adjutant general of the brigade under Gen. Darius N. Couch, Sept. 14, 1861, with the rank of captain. On Aug. 11, 1862, he was promoted adjutant general of Gen. Couch's division, with the rank of major, and he was made colonel on the staff of the 2d Army Corps on Dec. 23, 1862.



He continued with that corps as adjutant general, serving successively under Gen. Gouverneur K. Warren, Gen. Andrew A. Humphreys, and Gen. Winfield S. Hancock until he was captured at Reams's Station, Aug. 25, 1864. He was sent to Libby Prison, but was soon paroled, and after being exchanged rejoined the army early in 1865. His health was impaired by his imprisonment, and he resigned Jan. 12, 1865. He received the brevet of brigadier general of volunteers, March 13, 1865, at the special request of Gen. Hancock. His staff associates spoke of him as "a man who comprehended a position at once and saw the strength and weakness of a line of battle or of the position of the enemy." He taught Latin and Greek in Williston Academy in 1865-'67, whence in 1868 he passed to the place of assistant editor of the Springfield "Republican," serving as chief editorial writer. On the recommendation of David A. Wells, special Commissioner of the Revenue in the United States Treasury Department, he was appointed his deputy Jan. 15, 1869, and was made chief of the Bureau of Statistics, which place he held until his appointment in 1870 to the superintendency of the ninth census, which he held until April 1, 1879. Meanwhile, in November, 1871, he was appointed Commissioner of Indian Affairs in the Department of the Interior, and he held this office until 1873. In 1873 he was called to the chair of Political Economy in Sheffield Scientific School, Yale University, which he held until his election in 1881 to the presidency of the Massachusetts Institute of Technology, in Boston, where he then continued until his death. From May to November, 1876, he was chief of the Bureau of Awards at the Centennial Exposition held in Philadelphia,

and in 1879 he was made superintendent of the tenth census. He adopted new methods of enumeration and secured the power to appoint a force of enumerators, properly supervised, in districts comprehending a certain number of enumeration districts. The census of 1870 was confined to a few topics and the results were given in 4 volumes. The results of the census of 1880 were comprised in 22 volumes and a compendium (in 2 parts). His work at the Institute of Technology was mainly executive, but he gave to it his ceaseless care and thought, and he saw the institute expand until the student roll increased from 302 to 1,198. He gave special courses of lectures at Johns Hopkins University in 1877-'79, and at Harvard University in 1882, 1883, and 1896. Gen. Walker was greatly interested in common-school education, and strongly advocated the introduction of mechanical instruction and practice into the course of study. While a resident of New Haven he was a member of its local school committee (1877-'80) and of the State Board of Education (1878-'81), and on his removal to Boston he became a member of its school committee (1885-'88) and of the State Board of Education (1882-'90). He was chairman of the Massachusetts Topographical Survey Commission in 1884-'90, a member of the Art Commission of Boston in 1890-'97, a member of the Park Commission of Boston in 1890-'96, and a trustee of the Boston Public Library in 1896. In 1878 he represented the United States at the International Monetary Conference in Paris, and in 1889 the French Government made him an officer in the Legion of Honor. He was elected to the National Academy of Sciences in 1878, and was its vice-president in 1890. He was President of the American Statistical Association from 1882 till his death, and President of the American Economic Society from 1885 till 1892. In 1893 he was elected a correspondent of the French Institute, and in 1894 a corresponding member of the British Association for the Advancement of Science. The degree of A. M. was conferred on him in 1863 by Amherst and in 1873 by Yale; that of Ph. D. by Amherst in 1875 and by Halle (Germany) in 1894; and that of LL. D. by Amherst and Yale in 1881, by Harvard in 1883, by Columbia in 1887, by St. Andrews, Scotland, in 1888, by Dublin in 1892, and by Edinburgh in 1896. His writings included contributions to cyclopædias, to reviews, and to proceedings of societies. He compiled "Commerce and Navigation of the United States" (2 vols., Washington, 1868-'69); "Statistical Atlas of the United States" (1874); "Judges' Reports on Awards" (8 vols., Philadelphia, 1878); and was the author of "The Indian Question" (Boston, 1874); "The Wages Question" (1876); "Money" (1878); "Money, Trade, and Industry" (1879); "Land and its Rent" (1883); "Political Economy" (New York, 1883; briefer course, 1884; new ed., 1887); "History of the Second Army Corps" (1886); and "General Hancock," in Great Commanders Series (1894). See the address on "Francis Amasa Walker," together with a "Bibliography of his Writings and Reported Addresses," by Carroll D. Wright, in No. 38 of the "Quarterly Publications of the American Statistical Society" (Boston, 1897).

Warner, James M., soldier, born in Middlebury, Vt., in 1836; died in New York city, March 16, 1897. He was graduated at the United States Military Academy and appointed a brevet 2d lieutenant in the 10th Infantry in 1860; was on duty on the plains till the outbreak of the civil war; was ordered to Washington, and on the organization of the 1st Vermont Heavy Artillery was commissioned its colonel, and served on the defenses of Washington till after the Wilderness campaign. On May

19, 1864, he was seriously wounded, but he rejoined his regiment in time to accompany it to Washington, then menaced by the Confederates under Gen. Early. He was brevetted brigadier general of volunteers in 1864, and in command of a brigade took charge of the line from Fort Stevens to Fort Reno at Tenallytown. Gen. Warner participated in the Shenandoah campaign under Gen. Sheridan, and commanded a brigade at Sailor's Creek and at Appomattox Courthouse. He was brevetted lieutenant colonel and colonel in the regular army. In 1865 he resigned, removed to Albany, N. Y., and became connected with financial and manufacturing concerns. He was postmaster of the city during the administration of President Harrison.

Warner, Samuel Adams, architect, born in Genesee, N. Y., about 1822; died in Roslyn, Long Island, N. Y., June 22, 1897. He was a son of Cyrus L. Warner, an architect of New York city. Samuel entered his father's office and learned the profession. On the death of Cyrus, in 1851, Samuel succeeded to the business, and in 1862 admitted a younger brother, Benjamin, into partnership, subsequently taking in also his nephew, Charles S. Warner. Samuel remained in active practice till nine months prior to his death, planned and constructed large public buildings in Texas, Louisiana, and South Carolina, and was the architect of the Marble Collegiate Church and many structures in the "dry-goods" district in New York city.

Warren, Willis, preacher, born a slave in Georgia, in 1824; died in Lee County, Ga., in February, 1897. For fifty-five years he was a Baptist preacher. Before the war his owner, Col. Jordan, seeing the great influence he had over his slaves, relieved him from work on the plantation, that he might apply his whole time to preaching. When freed by the emancipation proclamation, he remained at his post, but extended his work till he united the negroes in three surrounding counties into an association, of which he was the head. He exercised a personal supervision over his large field, ordained preachers, made every member pay him a *per capita* tax annually, and built four of the largest churches in that part of the State, which gathered a membership of nearly 6,000. He also practiced medicine among his people.

Wheatcroft, Nelson, actor, born in London, England, Feb. 15, 1852; died in New York city, March 3, 1897. He made his first appearance in Swansea, Wales, and secured his first regular engagement there in 1873, playing the part of John Casper Lavater in "Not a Bad Judge." Subsequently he appeared at the Theater Royal, in Bristol; made a provincial tour with Sarah Thorne, playing in "The Woman in Red" and "Lady Audley's Secret"; took the part of Rashleigh Osbaldistone in "Rob Roy," at Sadler's Wells Theater, with Kate and Virginia Bateman; and made a tour of the principal South American cities. In August, 1884, he made his first appearance in New York city, at the Park Theater, in "The Corsican Brothers & Co., Limited." For three seasons he played in several cities in "The Duke's Motto," "The Ticket-of-Leave Man," "The Dead Heart," and Bartley Campbell's "Separation." In 1886 he was engaged by Daniel Frohman for the stock company of the Lyceum Theater, New York, and among his parts were Matthew Culver in "The Wife"; Gaston de Verneuil in "The Marquise"; Richard van Buren in "The Charity Ball"; Sir John Harding in "The Idler"; and Tom Coke in "Old Heads and Young Young Hearts." He starred for a time in 1891 in his own play, "Gwynn's Oath"; then joined Augustus Pitou's company, appearing in the chief parts in "A Modern Match" and "Geoffrey Middleton, Gentleman"; and on the opening of the

Empire Theater, New York, played as Martin Parlow in "The Girl I left behind me." He thereafter applied himself to the direction of the Empire Dramatic School, which he founded.

White, Sarepta C., missionary, born in 1810; died in San Francisco, Cal., Dec. 9, 1897. She married Dr. Elijah White, a physician of the Methodist Board of Missions and the first Indian agent appointed for the Pacific coast, and went with him to Oregon in 1835. On their way they spent some time in Honolulu, where Mrs. White taught in one of the first schools established there. For about five years the Whites were stationed near Salem, Ore., and during this period Mrs. White organized and conducted a school of 100 Indian girls and boys, and also practiced medicine, after studying with her husband. On one occasion she traveled several hundred miles in a canoe down the Willamette river and up the Columbia, to attend the wife of Dr. Marcus Whitman, and on her return her canoe was upset and her baby was drowned. In 1842 she returned to New York and completed her medical studies, and from 1852 till 1882 she practiced in San Francisco.

Whiting, Henry L., topographical engineer, born about 1812; died in West Tisbury, Mass., Feb. 4, 1897. In 1884 Prof. Whiting, Prof. Shaler, of Harvard, and Gen. Francis A. Walker were appointed Massachusetts topographical survey commissioners, and they worked together till 1892, when Gen. Walker resigned and Desmond Fitzgerald succeeded him. Prof. Whiting was chairman of the commission from its organization till his death.

Wight, Charles Copeland, educator, born in Richmond, Va., in September, 1841; died in Baltimore, Md., June 25, 1897. He was graduated at the Virginia Military Institute just as the civil war broke out, and served on the staff of Gen. Jackson through the valley campaign. After the war he became a teacher in Baltimore. At the time of his death he was Professor of English History in Baltimore City College.

Willard, Joseph, hotel keeper, born in Vermont in 1817; died in Washington, D. C., Jan. 17, 1897. With his brothers Cabot and Henry he went to Washington about fifty years ago, and found employment in the old Metropolitan Hotel. A few years later Joseph and Cabot established a small boarding house on the site of their future hotel. As their business increased they acquired one building after another, and about 1860 the small buildings gave way to the structure known as Willard's Hotel. The opening of the enlarged hotel was deemed a matter of such local importance that a number of the most eminent public men in Washington accepted invitations to make speeches. Joseph and Henry had equal shares in the property till a few years ago, when Joseph became sole owner.

Williams, Charlotte Louisa, educator, born in Morristown, N. J., in 1842; died in New York city, Oct. 9, 1897. She married the Rev. W. W. Williams, of Philadelphia; was superintendent of the New York Infirmary for ten years; and, on the organization of the Teachers' College of New York city, was elected its principal by a unanimous vote. She held the last office till her death, and brought the college to a high degree of excellence.

Williams, Nelson Grosvenor, soldier, born in Bainbridge, N. Y., May 4, 1823; died in Brooklyn, N. Y., Dec. 1, 1897. He entered the United States Military Academy in 1839, in the same class with Ulysses S. Grant, but withdrew at the end of his first year. In 1861 he was commissioned colonel of the 3d Iowa Volunteer Infantry, with which he served in Missouri till March, 1862. At the battle of Shiloh he commanded the 1st brigade, 4th division, Army of the Tennessee. Here he was injured

by the fall of his horse when it was shot. For his gallantry in this battle Gen. Hurlbut commended him to the favor of the commander in chief and the Government. Before he fully recovered from his temporary paralysis he rejoined his regiment and took part in the siege of Corinth. He was promoted brigadier general, Nov. 29, 1862, but was obliged by his injuries to resign soon afterward. Since 1869 he had been in the customhouse service in New York city, and nearly all the time in charge of one of the public stores. Gen. Williams was an artist of high merit, particularly in water colors.

Willis, Albert Sydney, diplomatist, born near Shelbyville, Ky., Jan. 22, 1843; died in Honolulu, Hawaii, Jan. 6, 1897. He was graduated at the Louisville High School in 1860, and at the Louisville Law School in 1866. In 1870 and 1874 he was elected attorney for Jefferson County, and in 1876-'87 was representative in Congress from the Louisville district. He was defeated for re-election in 1886, after a fierce political struggle, precipitated by the reappointment of Mrs. W. R. Thompson as postmistress of Louisville, which had been recommended by Mr. Willis. In September, 1893, he was appointed United States minister to Hawaii, succeeding Commissioner Blount. He was conveyed to his post on a naval vessel, and was received by President Dole. In accordance with his instructions, he called on the dethroned queen and inquired whether, in the event of her restoration, she would grant full amnesty as to life and property to all who had been or who were then in the Provisional Government, or who had been instrumental in the overthrow of her Government. After a slight hesitation, Lilioukalani replied: "My decision would be as the law directs, that such persons should be beheaded and their property confiscated to the Government." Minister Willis communicated the reply to the President, and he disposed of the matter by referring it to Congress (see "Annual Cyclopædia" for 1894, article HAWAII). During his residence in Honolulu, Minister Willis's social surroundings were far from pleasant. He died at his post after an illness of several months.

Wilson, Greenville D., composer, born in Plymouth, Conn., Jan. 26, 1833; died in South Nyack, N. Y., Sept. 20, 1897. After teaching music in Boston he became instructor in that department in Temple Grove Seminary, Saratoga Springs, N. Y. He taught Mlle. Albani in Saratoga, and while there was associated with Louis M. Gottschalk. When Dr. Leopold Damrosch was organizing the great May Music Festival that was given in the 7th Regiment armory Prof. Wilson trained 70 voices for him. He organized the Nyack Choral Society in 1879, and conducted it till his death. He composed about 300 pieces of music, of which the best known is "The Shepherd Boy."

Winans, William Lewis, capitalist, born in Baltimore, Md., in 1822; died in London, England, June 25, 1897. He was the youngest of the two sons of Ross Winans, inventor, engineer, and locomotive builder. On reaching their majority the brothers were associated in business with their father, who had established in Baltimore the largest railroad machine shops in the country. In 1842 the head of the firm was solicited to go to Russia and equip a projected railroad between St. Petersburg and Moscow. Declining to make the journey himself, he sent his two sons, and in 1843 they signed the first contract with the Russian Government for \$3,000,000. The railroad was constructed and thoroughly equipped, and this work brought to the firm other advantageous contracts by which a great fortune was accumulated. Thomas De Kay Winans returned to the United States; but William, from an uncontrollable horror of crossing the ocean, estab-

lished himself permanently in England. He maintained several costly establishments there and in Scotland; was passionately fond of music, sporting, and building models of steam vessels after original designs; and left an estate of \$12,000,000.

Winsor, Justin, historian, born in Boston, Mass., Jan. 2, 1831; died in Cambridge, Mass., Oct. 22, 1897. He was educated at Harvard and Heidelberg Universities, was superintendent of the Boston Public Library in 1868-'77, and from 1877 till his death was librarian of Harvard University. He was the author of many reforms in indexing and cataloguing. He was a founder of the American Library Association, and its president in 1876-'86, and again from June 25, 1897, till his death. In



July, 1897, he attended the International Convention of Librarians in London, England. After spending three months in restful loiterings, he returned home in October, but contracted a fatal cold on the voyage. He received the degree of LL. D. from the University of Michigan in 1886, and from Williams College in 1893. In connection with his library work Dr. Winsor

gave much attention to historical research, and published a large number of noteworthy volumes. He was an ex-president of the American Historical Association and vice-president and corresponding secretary of the Massachusetts Historical Society. His publications include "History of Duxbury, Massachusetts" (Boston, 1849); "Bibliography of the Original Quartos and Folios of Shakespeare, with Particular Reference to Copies in America" (1876); "Reader's Handbook of the American Revolution, 1761-'83" (1880); "Arnold's Expedition against Quebec, 1775-1776" (1886); "The Manuscript Sources of American History" (New York, 1887); "Notes on the Spurious Letters of Montcalm" (Cambridge, 1887); "Christopher Columbus" (1891); "The Mississippi Basin: The Struggle in America between England and France" (1895); "and "The Westward Movement: The Struggle for the Trans-Allegheny Region, 1763-1797" (1898). He also edited the "Memorial History of Boston" (4 vols., Boston, 1880-'81); "Narrative and Critical History of America" (8 vols., 1883-'89); "Harvard University Bulletin" (since 1877); "Library of Harvard University: Bibliographical Contributions" (since 1877), to which he also contributed important papers; and the "Record of the 250th Anniversary of the Founding of Harvard College" (1887).

Wiswell, Rebecca, philanthropist, born in Provincetown, Mass., in 1806; died in Plymouth, Mass., Oct. 29, 1897. When eighteen years old she became a nurse, and she followed that vocation throughout her active life. For many years she was closely identified with the work of Rev. Phineas Stowe, of the Boston Baptist Bethel. Early in the civil war she prepared and sent daily to the Statehouse in Boston packages of lint. Dorothea L. Dix summoned her to Washington in March, 1862, and for two years she was on duty at the Seminary Hospital. Afterward she ministered to the sick and wounded in the Shenandoah valley, and was then transferred to Fort Monroe, where she served till the close of the war. Miss Wiswell, known in the army as "Aunt Rebecca," was a member of the Collingwood Woman's Relief Corps; was a familiar figure at all the Grand Army celebrations in Bos-

ton; and received marked attentions at the national encampment in Washington in 1892.

Wood, De Volson, engineer, born in Smyrna, N. Y., June 1, 1832; died in Hoboken, N. J., June 27, 1897. He was graduated at the Albany Normal School in 1853, and at the Rensselaer Polytechnic Institute as a civil engineer in 1857, having been a tutor and professor in the normal school and first principal of the Napanoch (N. Y.) school in the meantime. In 1857-'72 he was assistant and full Professor of Civil Engineering at the University of Michigan; in 1872 became Professor of Mathematics and Mechanics in Stevens Institute of Technology, Hoboken; and since 1885 had been Professor of Engineering there. He received the degrees of A. M. from Hamilton College and M. Sc. from the University of Michigan, both in 1859. He invented an ore dock, a rock drill, an air compressor, and several pumps, and was an expert on the subjects of water wheels and hydraulics. He published "Treatise on the Resistance of Materials" (New York, 1871); "A Treatise on the Theory of the Construction of Bridges and Roofs" (1872); "The Elements of Analytical Mechanics" (1876); "Principles of Elementary Mechanics" (1878); "The Elements of Co-ordinate Geometry" (1879); "The Mechanics of Fluids" (1884); "Trigonometry, Analytical, Plane, and Spherical" (1885); and "Thermodynamics" (1887).

Woods, Samuel, jurist, born in Quebec, Canada, in 1822; died in Philippi, W. Va., Feb. 17, 1897. In his infancy his family removed to Meadville, Pa. He was graduated at Allegheny College in 1842, and settled in Morgantown, now in West Virginia, to practice law. In 1861 he was a member of the Virginia convention that passed the ordinance of secession; in 1872 was a delegate to the West Virginia Constitutional Convention; and in 1880-'90 was judge of the Court of Appeals of his State.

Worden, John Lorimer, naval officer, born in Sing Sing, N. Y., March 12, 1818; died in Washington, D. C., Oct. 18, 1897. He was appointed a midshipman in the navy, Jan. 10, 1834; was promoted passed midshipman, July 16, 1840; lieutenant, Nov. 30, 1846; commander, July 16, 1862; captain, Feb. 3, 1863; commodore, May 27, 1868; and rear admiral, Nov. 20, 1872; and was retired at his own request and by special act of Congress with full sea pay, Dec. 23, 1886. He was on sea duty twenty-one years and three months, and on shore or other duty twenty-four years and eight months. His early service comprised duty in connection with the Brazilian, Mediterranean, Pacific, and home squadrons, and at the Naval Observatory at Washington in 1844-'46 and 1855-'56. On April 6, 1861, he reported at Washington under orders for special service, and the next morning left for Pensacola, Fla., with orders for the commanding officer of the squadron there to re-enforce Fort Pickens. He set out on his return the same day, but was arrested near Montgomery, Ala., and detained as a prisoner of war till Nov. 4, and, after several transfers, was exchanged on the 18th. From Nov. 20, 1861, till Jan. 16, 1862, he was on duty at the naval rendezvous at New York. On the last day he was ordered to the command of the first ironclad vessel, the



"Monitor," built for the navy under the plans and superintendence of John Ericsson. He hastily left New York on the vessel for an experimental trip, though provided with ammunition and shot as a precaution against a possible encounter. After a dangerous voyage in the novel craft he reached Hampton Roads in good shape on March 8, the day the Confederate ironclad ram "Merrimac" had come down from Norfolk and destroyed the wooden frigates "Congress" and "Cumberland." Lieut. Worden, seeing the helplessness of the wooden vessels, anchored his craft near the "Minnesota," which, in endeavoring to escape from the "Merrimac," had grounded on a shoal, and awaited the events of the morrow. Early in the morning the "Merrimac" reappeared, and headed for the "Minnesota." When she was within a mile of her intended victim, the "Monitor" suddenly steamed out. The "Merrimac" poured a broadside of shot upon "the cheese box on a raft," but every shot that struck her turret glanced off without injury. While manœuvring to get as close as possible to the "Merrimac," the "Monitor" fired deliberately about once in seven minutes, and every shot struck her antagonist. After the fight had thus lasted about two hours the "Merrimac" attempted to ram the "Monitor"; but Lieut. Worden handled his craft so skillfully that the blow glanced off harmlessly. At 11.30 A. M. the "Monitor's" commander was blinded by bits of cement thrown into his eyes when a shot struck the pilot-house as he was looking through the conning slit, and was obliged to relinquish the command to Lieut. Samuel D. Greene, who continued the fight till the "Merrimac" withdrew to Norfolk. This battle was a victory for the "Monitor," in that she completely frustrated the plans of the Confederate commander. It also revolutionized the navies of the world. For this action Lieut. Worden received the thanks of the Navy Department and of Congress, and, almost immediately after his arrival in Washington, the personal congratulations of President Lincoln. As soon as he was able to return to duty he was appointed assistant to Admiral Gregory in superintending the construction of ironclads. He commanded the ironclad "Montauk" from Oct. 8, 1862, till April 16, 1863, and with her attacked Fort McAllister, on the Ogeechee river, and destroyed the Confederate privateer "Nashville" under the guns of that fort. Subsequently he took part in the attack on the defenses of Charleston by the ironclad fleet under Admiral Dupont. In 1870-'74 he was superintendent of the United States Naval Academy, and in 1875-'77 commander in chief of the European squadron. After his retirement he had lived in Washington.

Wormley, Theodore George, chemist, born in Wormleysburg, Pa., April 1, 1826; died in Philadelphia, Pa., Jan. 3, 1897. He studied at Dickinson College; was graduated at the Philadelphia Medical College in 1849; and was Professor of Chemistry and Natural Sciences at Capitol University, Columbus, Ohio, in 1852-'65, and of Chemistry and Toxicology at Starling Medical College in 1854-'77. From the last year till his death he was Professor of Chemistry and Toxicology in the medical department of the University of Pennsylvania. While in Ohio he served for several years as State gas commissioner and as chemist to the State Geological Survey. In 1876 he was appointed a member of the Centennial Medical Commission. He received the degrees of Ph. D. and LL. D. from Dickinson and Marietta Colleges in 1870. Dr. Wormley published "Methods of Analysis of Coals, Iron Ores, Furnace Slags, Fire Clays, Limestones, and of Soils" (1870) and "The Micro-Chemistry of Poisons" (1867); edited the "Ohio Medical and

Surgical Journal" in 1862-'64; and contributed reports to the "Geological Survey of Ohio" (1871) and a series of articles on "Chemical Reactions" to the London "Chemical News" in 1859-'63.

Worthen, William Ezra, civil engineer, born in Amesbury, Mass., March 14, 1819; died in New York city, April 2, 1897. He was graduated at Harvard College in 1838, began the practice of civil engineering at once, and for ten years was engaged in surveys and investigations relating to the water supply of Boston and in other hydraulic work. He designed and constructed the Suffolk, Tremont, Lawrence, Appleton, and Hamilton Mills in Lowell; visited Europe in 1849; and on his return established himself in New York city, where he also engaged in architectural work and became engineer and Vice-President of the New York and New Haven Railroad. After 1854 he was employed extensively as a practicing and consulting engineer. He planned and built heavy masonry dams across rivers for the establishment of water powers; designed and erected the first pumping engine at High Bridge, New York city; was sanitary engineer of the Metropolitan Board of Health of that city in 1866-'69, and chief engineer of the first rapid-transit commission there; and was chief engineer of the Chicago main drainage channel in 1890-'91. His services as an expert were in frequent demand for planning, constructing, or improving water and sewer systems. Mr. Worthen was President of the American Society of Civil Engineers in 1887. Besides a large number of technical reports he published a "Cyclopædia of Drawing" (New York, 1857); "First Lessons in Mechanics" (1862); and "Rudimentary Drawing for Schools" (1863.)

OBITUARIES, FOREIGN. **Alcock, Sir Ruth-**
erford, a British diplomatist, born in 1809; died in London, Nov. 2, 1897. He was the son of a noted physician, and was himself educated for the medical profession, and as an army surgeon served through the Carlist war in Spain and won medals and decorations for his services at San Sebastian and the taking of Irun. After the war was ended, in 1837, he was a member of various mixed commissions that settled the claims of the British auxiliary forces. In 1844 he was appointed British consul at the newly opened port of Fuchow, and two years later was transferred to Shanghai, where he was instrumental in founding the municipal government. In time he was transferred to Canton, and after completing his term of office there he was appointed in 1858 consul general to Japan, and a year later elevated to the post of minister, one of action and of danger during the early stages of European intercourse, when the truculent and formidable anti-foreign element constantly threatened him with violence and assassination. In 1861 an armed band of ronins stormed the British legation in the middle of the night, killing or wounding many of the inmates. In the following year the guard of the Prince of Satsuma killed the Englishman Richardson, who was riding with ladies in the park. For this the English Government exacted an indemnity of £100,000 from the Government of the Tycoon. An additional payment of £25,000 and an apology were demanded from the Prince of Satsuma, and when a year passed without satisfaction being rendered the minister had the English fleet bombard the town of Kagoshima until the prince made his submission. Though criticised by many for his retaliatory policy, Mr. Alcock received the honor of knighthood for his action. For the international exhibition of 1862 he got together a fair representative collection of Japanese art and products after all assistance had been refused by individual Japanese and by the Government of Japan, which five years later sent over to the Paris Exposition a large exhibit in

charge of its own commissioners. In 1864 further trouble arose with the Japanese Government, which only acceded to the demand of the British minister for freedom of commerce and intercourse after a combined fleet had attacked and destroyed the batteries at Shimonoseki. In 1865 this energetic diplomatist was transferred to Peking, and at once began negotiations for a revision of the treaty of Tientsin, which resulted in the convention of Peking providing that inland transit dues may be commuted by paying an additional $2\frac{1}{2}$ -per-cent. duty with the 5-per-cent. import duty. Sir Rutherford Alcock supported the mission of Mr. Burlingame as the first diplomatic representative of the Chinese Government in Europe at its inception, but later he did his best to render the mission abortive. He retired in 1871. He was a British commissioner at the Paris Exposition of 1878, was a member in 1881 of a commission that inquired into the condition of the London hospitals in regard to arresting the spread of infectious diseases, and from 1876 was President of the Royal Geographical Society. Sir Rutherford Alcock was one of the earliest connoisseurs who communicated a knowledge and appreciation of Japanese art to Europeans. He was the author of "The Capital of the Tycoon," "Elements of Japanese Grammar" (1861), and "Art and Industries of Japan" (1878).

Alfieri di Sostegno, Marchese Alberto, an Italian politician, born in 1827; died in Florence, Dec. 18, 1897. His father, Cesare Alfieri, was a leader of Italian Liberalism and one of the founders of the kingdom of Italy. The son, who after his father's death became head of an historic family, was elected a Piedmontese Deputy in 1857, and, except for an interval in 1865, sat continuously in the Italian Chamber till 1870, when he was nominated a Senator of the united kingdom of Italy. He was a moderate Liberal, belonging to the school that advocated a free church in a free state. Disappointed by the continual antagonism between the civil and religious authorities, and hostile to the policy of the triple alliance, he bore but a minor part in recent Italian politics, but wrote on political subjects and on education, and in 1871 founded a school of political and social science in Florence. "L'Italia Liberale" (1872) is an exposition of his political opinions.

Alula, Ras, an Abyssinian general, born in 1845; died in February, 1897. He was of humble origin, and by his courage and military talents raised himself from a private soldier in the service of the Prince of Tigre to be the latter's most valued lieutenant. It was chiefly through Alula's ability that the prince won the throne of Ethiopia, and after he was crowned as the Negus Johannes he left Ras Alula in chief command on the northern frontier, appointing him generalissimo of the national forces and governor of the royal province of Tigre. Transferring his residence to Asmara after the surrender of Bogos to Abyssinia, he became a vigilant observer of the plans of the Italians, and after his success at Dogali their pronounced and relentless enemy. The Negus Menelek retained him in the same posts, and valued his services as highly as did his former king. Alula was strong, handsome, fearless, of imperious disposition, terrible in his wrath, mercilessly cruel, but of simple and abstemious habits, and deeply attached to his only wife.

Asnyk, Adam, a Polish poet, born in Kalisch in 1838; died in Cracow, Aug. 2, 1897. He was educated in the universities of Warsaw, Breslau, and Heidelberg, and began to publish lyrics in a literary journal of Lemberg in 1864. From 1870 he made Cracow his home. His collected poems reached the third edition in 1880. His poetical style is remarkable for nobility and beauty and its occasional pi-

quant touches of irony. While ranking as the greatest of contemporary Polish lyric poets, he wrote also three dramas of high quality: "The Jew," "Cola Rienzi" (1874), and a tragedy derived from Lithuanian history entitled "Kiejstut" (1878).

Aumale, Henri Eugène Philippe Louis, Duc d', a French prince of the ex-regnant family of Bourbon-Orleans, born in Paris, Jan. 16, 1822; died in Zucco, Sicily, May 6, 1897. He was the fourth son of Louis Philippe of Orleans, who became King of the French, and Amélie, Princess of Bourbon-Sicily, and was educated with his brothers at the college of Henri IV, where he specially distinguished himself in his studies. When his father became King in 1830, after the expulsion of Charles X, the young princes were prepared for a military life. The Duc d'Aumale entered the army in 1839 as a captain in a line regiment, and in the following year he went to Algeria as aid-de-camp to his brother, the Duc d'Orleans. He gained distinction in the campaign, and was made a lieutenant colonel in the same year, but was attacked with fever and recalled to France in 1841. The triumphal honors that were paid to the youthful soldier excited the envy of a Democratic revolutionist named Quénisset, who aimed a bullet at the prince riding into Paris at the head of his troop. In 1842 the Duc d'Aumale returned to Algeria, and as commander of the subdivision of Medeah he conducted one of the most brilliant campaigns of the war, capturing the camp and treasure of Abd-el-Kader and taking 3,600 prisoners. For this service he was made a lieutenant general, and was appointed to the command of the province of Constantine. In 1844 he distinguished himself once more by conducting the operations against Biskarah. On Nov. 25 of that year he married a princess of the Two Sicilies, and daughter of Prince Leopold of Salerno, his cousin Caroline, who died on Dec. 6, 1869. In 1847 the duke succeeded Marshal Brigueaud as Governor General of Algeria. The revolution of 1848 compelled him to resign his post to Gen. Cavaignac. He joined his exiled brothers in England, and during the time of his banishment devoted himself to literary studies and writing at Claremont and Twickenham, having from his estates in Sicily and other property an ample income independent of the great estate of Chantilly, valued at 35,000,000 francs, which was confiscated by the Emperor Louis Napoleon in 1853. He published two articles in the "Revue des Deux Mondes" under an assumed name in 1855. In 1861 he issued a pamphlet addressed to Prince Jerome Bonaparte, for which the publisher and printer were prosecuted and condemned to fine and imprisonment. This led the author to challenge Prince Napoleon to a duel, and the refusal of the Bonapartist prince to meet him excited much indignation in France, and fastened a stigma on Prince Napoleon that he could not outlive. The Duc d'Aumale presided at the dinner for the Literary fund in London in 1862, where he made a speech that attracted attention. In 1863 he began the publication in Paris of his "Histoire des Princes de Condé," but the police seized the copies before the publication was completed, giving ground later for a lawsuit. On the outbreak of the war between France and Germany the Duc d'Aumale formally offered his sword to France, and Napoleon refused to accept his services. He returned to France, in spite of the objections of Thiers, as soon as the third republic succeeded the empire, having in February, 1871, been elected to the Assembly by the Department of the Oise. In his address to the constituency he declared his predilection for a liberal monarchy, at the same time expressing his willingness to conform to liberal republican institutions if the nation adopted them deliberately.

When the law banishing the Orleans princes was at last repealed he returned to France on June 8, 1871, and on Dec. 19 he took his seat in the National Assembly. Two weeks later he was elected a member of the French Academy to succeed Montalembert. He was made a general of division in the army of France on March 10, 1873, and acted as president of the military tribunal before which Marshal Bazaine was arraigned. As the most illustrious of the Orleanist princes he was considered by many as a candidate for the throne preferable to his nephew, the Comte de Paris. When the latter acknowledged the prior claims of the Comte de Chambord, and recognized the latter as the legitimate head of the house of Bourbon, he did so with the assent of the Duc d'Aumale. The greater part of his confiscated property, including Chantilly, was restored to the duke in 1872. He declined to be a candidate for the Assembly in February, 1876, in order that he might give his undivided attention to his military command. In 1883 he and his nephews the Duc de Chartres and the Duc d'Alençon were retired from active service in accordance with the act carried through by Gen. Thibaudin, then Minister of War, removing from command members of families that had once reigned in France. In 1886 Gen. Boulanger struck his name from the army list, an act against which he addressed a forcible and touching appeal to President Grévy. In consequence of this letter the Cabinet pronounced a decree of banishment, and the duke retired to Brussels. He retorted by making a free gift to the Institute of France of Chantilly, with its woods, meadows, ornamental waters, buildings, and the trophies, historical relics, and treasures of art contained in them, to be preserved forever by that learned body as a complete and varied monument of French art in all its branches. This gift to the nation he intended to make on his death, and he reserved the right to use the place as a residence while he remained alive. The Institute of France accepted the trust amid popular enthusiasm, and petitioned the Government to revoke the decree of banishment, which was finally done after the downfall and flight of Boulanger. Of the Duc d'Aumale's two sons, Louis Philippe, Prince de Conde, died of typhoid fever in Australia in 1865, at the age of twenty, and François, Duc de Guise, died in 1872.

Ayres, Sir Henry, an Australian statesman, born in England in 1821; died in Adelaide, June 11, 1897. Emigrating to South Australia in 1840, he studied and practiced law, became secretary of the Burra Burra mines in 1845, was elected a member of the Legislative Council in 1857, and for thirty-six years represented Adelaide in the South Australian Parliament. For twelve years he was president of the Legislative Council after having held a Cabinet office several times. He was eleven times a member of the Cabinet and seven times Premier. He was knighted in 1872.

Banks, Mrs. Isabella (Varley), an English novelist, born in Manchester, March 25, 1821; died in London, May 5, 1897. When but eighteen years old she became the head of a long-established school in Manchester for young ladies, which she managed successfully several years. On Dec. 27, 1846, she was married to Mr. George Linnæus Banks, a Manchester journalist and poet, to whom she was of great assistance in his literary work. A daughter of Mr. and Mrs. Banks became the wife of William Black, the well-known novelist. Mrs. Banks's first book was entitled "Ivy Leaves: A Collection of Poems" (1844), and her second one, issued soon after her marriage, was a "Lace Knitter's Guide," which after a number of years was followed by "Light Work for Leisure Hours." Her fame as a novelist

was established by the appearance of "God's Providence House" in 1865. It was her first effort in fiction, and still continues popular. Her subsequent works include "Daisies in the Grass: Songs and Poems," with her husband (London, 1865); "Stung to the Quick: A North Country Story" (London, 1867); "The Manchester Man" (1872); "Glory: A Wiltshire Story" (London, 1877); "Caleb Booth's Clerk," a Lancashire novel (London, 1878); "Ripples and Breakers," a book of verse (London, 1878); "Wooers and Winners," a Yorkshire story (London, 1880); "More than Coronets" (Manchester, 1881); "Through the Night: Tales of Shades" (Manchester, 1882); "Forbidden to Wed" (London, 1883); "The Watchmaker's Daughter and Other Tales" (1883); "Sybilla and Other Tales" (1884); "In his Own Hand" (London, 1885); "Geoffrey Ollivant's Folly" (1886). A number of songs by Mr. and Mrs. Banks were set to music and were widely popular.

Bardoux, A., a French statesman, born in Bouges in 1829; died in Paris, Nov. 23, 1897. He was the son of the tax collector of Bouges, and studied and practiced law at Clermont, where he defended a Republican editor who was prosecuted by the Government of Napoleon III. After the fall of the empire he was elected mayor of the commune, and in 1871 was elected at the head of the poll a Deputy for the Puy de Dôme. In the National Assembly he distinguished himself in debate and took a prominent part in committee and in the meetings of the Left Center. He was appointed undersecretary of the Ministry of Justice in 1875, but resigned when the Government pronounced against the *scrutin de liste*. He was returned for Clermont in 1876, voted against all Radical motions for the abolition of the concordat, took a leading part in the crisis of 1877, and when the Broglie Cabinet resigned he was appointed Minister of Education in the Cabinet formed by M. Dufaure on Dec. 14, 1876. Being left out of the succeeding ministry, formed by M. Waddington, he continued to advocate *scrutin de liste* with Gambetta. He was defeated in the elections of 1881, and in the following year was made a life Senator. In the Senate he spoke often on educational questions. He was the author of several historical works, and in 1890 was elected a member of the Academy of Moral Sciences.

Barnato, Barney I., an English speculator, born in London in 1852; committed suicide at sea, June 14, 1897. He was the son of Jewish parents named Isaacs, which name he changed to Barnato. When twenty-three years old he was at Cape Town when the diamond fields began to attract adventurers. He went to Kimberley with a traveling circus as odd man, and for some time played the clown. Being left penniless here, he became a diamond peddler and afterward a small jobber in shares. Three years later he was buying mines, and by 1878 he had become owner of four valuable claims, which he sold to a company in 1881. Barnato's most important transaction about this time was the sale of the Kimberley mine, of which he was chief proprietor, for \$27,500,000. At one time he was the principal rival of Cecil Rhodes in South Africa, but the consolidation of the De Beers Company and the Kimberley mine terminated the rivalry. Barnato next turned his attention to the Rand. He promoted the Primrose, Glencairn, New Cræsus, and Rodeport companies, and became interested in the Johannesburg Stock Exchange, Johannesburg Water Company, and other concerns. So great was the confidence inspired by his industry that in one day \$5,500,000 were subscribed for shares in one of his enterprises. His success as a speculator led him to London. Although his reputation as a daring operator had preceded him, he was looked on with

suspicion by the leading stock brokers of that city, and never obtained their confidence. But a part of the press was with him, and, consequently, for a short time he received some public support. He reached the height of his popularity in July, 1895, and for a while he was lionized, but his career was meteorlike. Having little experience of the London market, he soon lost heavily. One of his disastrous mistakes was the formation of a trust company, which held a few good securities and a large number of uncertain ones, under the name of the Barnato Banking Company. So great was the demand for participation in this enterprise that the one-pound shares rose to four pounds at the opening of the subscription lists, only to fall below par soon afterward. In November, 1895, the Lord Mayor of London gave a banquet in honor of Barnato, in return for which the latter, to be under no obligation, handed the mayor a check for \$50,000, said to be a donation to the fund for the benefit of the poor in Spitalfields, with which the mayor was intimately connected. In 1888 Barnato had been returned to the Legislative Assembly of Cape Colony as member for Kimberley after a fierce contest, and he was re-elected in 1894, although he had been burned in effigy a short time before. Complications arising out of Dr. Jameson's raid into the Transvaal, necessitated Barnato's return to South Africa, and here he remained some time adjusting his affairs. But the pressure of his daring transactions broke down his health and shattered his nerves. Hoping to relieve the strain by a sea voyage, he set sail for England in the care of two nurses and accompanied by his wife, but he grew no better. In a fit of despondency, during which he eluded his attendants, he jumped overboard and was drowned. Although he was at one time reputed to have \$85,000,000, it is doubtful if, even had the shares he held in his own companies maintained their value, he ever had more than \$35,000,000. The value of his estate at the time of his death has been given as \$3,000,000.

Barry, Charles Robert, an Irish jurist, born in Limerick in 1824; died in Dublin, May 15, 1897. He was educated at Trinity College, Dublin, was called to the Irish bar in 1848, and became known as a sound and shrewd lawyer, especially in criminal practice, and an effective advocate. He became a Queen's counsel in 1859, was soon afterward appointed Crown prosecutor, and in 1865 was made law adviser at Dublin Castle. His method of prosecuting the Fenian prisoner James Stephens and his companions, charging them with the intention of killing the Roman Catholic clergy who were opposed to them, rendered him an object of popular odium. Consequently he lost in 1868 his seat in Parliament, where he had represented the borough of Dungarvan since 1865. His professional and political services, however, were recognized by his appointment to the office of Solicitor-General. He was made Attorney-General when that office became vacant, and in that capacity framed the Irish land act of 1870. In 1872 he was appointed a justice of the Queen's bench, and in 1883 was elevated to the Court of Appeal. He served on the commission for the revision of the commercial law.

Bent, James Theodore, an English traveler, born in Liverpool, March 30, 1852; died in London, May 6, 1897. He was graduated at Oxford in 1875, and at one time superintended excavations in Greece in behalf of the British Museum and the Hellenic Society. His writings include "A Freak of Freedom, or The Republic of San Marino" (London, 1879); "Genoa: How the Republic Rose and Fell" (1880); "Life of Giuseppe Garibaldi" (1881); "The Cyclades, or Life among the Insular Greeks" (1885).

Berardi, Léon, a Belgian journalist, born in Marseilles, Nov. 22, 1818; died in Brussels, April 20, 1897. He went to Paris at an early age and mingled in the literary and political controversies of the first years of the reign of Louis Philippe. His reputation as a political writer led to his selection in 1846 to be M. Perrot's assistant in the editorship of the "Independence Belge." After ten years he became editor in chief, and he soon transformed that journal, while preserving its character as the organ of the Belgian Liberals, into an international repository of intelligence and a universal exponent of Liberal ideas and of views transmitted from countries outside of the centers of European thought and activity.

Berti, Domenico, an Italian statesman, born in Cumiana in 1820; died in Rome in April, 1897. He was born in poor circumstances, pursued his studies amid difficulties, and became professor in the normal school at Novara. He began to write political letters for a Liberal journal in 1846, when all Italy was stirred with the national idea, and at the age of thirty he was elected to the Chamber from Savigliano. In the year following he was chosen Professor of Philosophy in the University of Turin, retaining the chair ten years. During his professorship he contributed to the history of Italian philosophy a "History of Philosophy in Italy from the Time of St. Thomas," "Pica da la Mirandola," and "Giordano Bruno: His Life and Works." He also edited a collection of Cavour's unpublished letters and produced studies on Gioberti, Cesare and Vittorio Alfieri, and King Carlo Alberti. He was Minister of Public Instruction in 1866 and several times thereafter, and Minister of Agriculture, Industry, and Commerce in the Cabinet of Cairoli, and again in that of Depretis, and in this capacity he proposed solutions for some of the questions arising out of the relations between capital and labor, which included employers' liability and a system of insurance against accidents. In 1871 this champion of union was called to the professorship of the History of Philosophy in the university of the new capital, and this chair he filled till 1877. After sickness had compelled him to resign his mandate of Deputy he was nominated a Senator in 1895.

Bianchi, Angelo, an Italian prelate, born in Rome, Nov. 19, 1817; died there, Jan. 22, 1897. He was created a cardinal Sept. 25, 1882, and was consecrated Bishop of Palestrina on May 24, 1889. He was prodatary to the Pope.

Blondin, Jean François Gravelet, a French acrobat, born in St.-Ouen in 1824; died in London, Feb. 22, 1897. He was trained as a performer on the tight rope from childhood, and was the most noted one in France when he joined, in 1851, the Ravel troupe, which for eight years exhibited in the principal cities of the United States. Conceiving the plan of walking across the chasm of Niagara on a rope, he took up his abode there to study the conditions, stretched a hempen rope 1,300 feet long just below the falls, 175 feet above the torrent, and on June 30, 1859, performed the feat in the presence of 50,000 spectators. He repeated the performance blindfolded, and again with a man on his back, and at the Crystal Palace in London trundled a wheelbarrow, with his baby daughter in it, over a rope 200 feet long.

Borda, Juan Idiarte, President of Uruguay, died in Montevideo, Aug. 25, 1897. He was stabbed and killed as he was leaving the cathedral, after a service in memory of Uruguayan independence, by a member of the Blancos, who had stirred up insurrection in the beginning of the year.

Bourbaki, Charles Denis Sauter, a French general, born in Pau, April 22, 1816; died in Ba-

yonne, Sept. 22, 1897. He was of Greek parentage. After completing his military studies at St.-Cyr he entered the foreign legion in Algiers and won high renown by his gallant conduct in the African expedition, so that his name was already well known in France when he was placed in command of a part of the Algerian troops that were sent to the Crimea and received their first introduction to regular European warfare. The performances of Gen. Bourbaki and his command at Alma, Inkerman, and Sebastopol made him one of the most popular officers of the army and earned his promotion to general of division in 1857. In the Italian war he won fresh successes and glory. When the war against Prussia was declared in July, 1870, Gen. Bourbaki was called to the command of the Imperial Guard forming part of Marshal Bazaine's army. He took part in the actions around Metz, which resulted in the French forces being surrounded and besieged. Before Marshal Bazaine capitulated on Oct. 27, 1870, he sent Gen. Bourbaki on a secret mission to the enemy and, with a safe conduct obtained from the Germans, to the Empress in London. As Bourbaki had taken no part in the councils of war, and had never been mixed up in politics, his connection as an emissary in the negotiations of Bazaine with the enemy and with the Emperor and Empress was regarded as a blunder rather than a disgrace, and it was commonly supposed that Bazaine, who was popularly regarded as a traitor to France through fidelity to the empire, wanted to have this brave and loyal soldier out of the way when he capitulated. After failing in his mysterious mission, Bourbaki offered his services to Gambetta, who was organizing the army of national defense. He was placed at first in command of the Northern Army, and subsequently transferred to the Army of the Loire. His inspiring qualities as a patriotic leader and his brilliant dash as a commander in battle availed nothing against the technical proficiency of the German army and the scientific strategy of its generals. Near the end of the siege of Paris he undertook a desperate attempt to create a diversion by leading the Army of the East against the German line of communication in a desperate endeavor to relieve Belfort and break into southern Germany. It was only a forlorn hope, and he was easily outmaneuvered by Manteuffel. After three days of desperate fighting at Villersexel his raw troops, worn out with fatigue and weakened by hunger and cold, were driven across the Swiss frontier and there disarmed. In order to escape the humiliation of defeat, Bourbaki withdrew into his cabinet, pressed a pistol against his head, and pulled the trigger, but the bullet failed to penetrate the temple. Gen. Bourbaki became military governor of Lyons after the peace and as soon as he recovered from his self-inflicted wound, and in 1879 was placed on the retired list. He was an unsuccessful candidate for the Senate in 1885.

Boyce, George Price, an English artist, born in London, Sept. 24, 1826; died there, Feb. 9, 1897. After spending three years in an architect's office, he took up painting. About 1850 he found a friend in Dante Rossetti, near whom in Chelsea he lived from 1870, but his style shows no trace of Rossetti's influence. He was elected an associate of the Old Society in 1864, and was thenceforward a frequent contributor of water-color drawings to its exhibitions, the delicate, unobtrusive character of his work never failing to win the admiration of the more refined, though hardly calculated to secure the praise of the indifferently cultured. Sincerity is the strongest note of his work, as it was of the man, who was modest and undemonstrative, and was best appreciated by those who knew him best. The earliest of his works exhibited in London

were "The Royal Oak, Bettws-y-Coed," "Beeches," "Timber Yard, Chiddingstone," and "East End of Edward the Confessor's Chapel, Westminster," the two last-named pictures being shown at the Academy in 1853.

Brahms, Johannes, a German composer, born in Hamburg, May 7, 1833; died in Vienna, April 3, 1897. He was the son of a player in the orchestra of the Hamburg opera, and began the study of music at the age of ten, with Eduard Marxsohn, of Altona, for his teacher, learning harmony, counterpoint, and composition before he was fourteen. At that age he played in public works of Bach and Beethoven and variations of his own on a folk song, but was not paraded as a musical prodigy; on the contrary, his teacher kept him hard at work until he was twenty. Then he made a concert tour with Remenyi. His compositions soon attracted the attention of the musical world, especially after Schumann, to whom Joachim sent Brahms with a letter of introduction, heralded him in his musical paper as the composer for whose advent Germany was waiting. Only a few critical minds accepted Schumann's estimate of the newcomer, whose style was so severe that his opponents declared that his music was mathematical and formal only, without inspiration or emotional impulse. In time it caused as much discussion as the music of Wagner, and like that master Brahms gradually found popular recognition for a part of his compositions, and these moved and delighted in a high degree many who disliked them at first. Brahms became director of the orchestra and chorus in Detmold. When he played his first piano concerto in Leipsic in January, 1859, it was harshly criticised. In 1862 the people of Vienna paid much attention to his performances after cultivated musicians there signified their admiration for his compositions. He traveled for several years, and in 1867 settled permanently in Vienna. In 1866 he composed the austere and dignified "German Requiem," which was much censured by musicians of the romantic school. He composed the "Triumphlied" in celebration of the German victory in the Franco-Prussian War of 1870. In 1871 he accepted the directorship of the Society of Friends of Music, which he held till 1875. His "Academic Overture" was presented as a thesis, for which the doctor's degree in philosophy was conferred upon him by the University of Breslau. The University of Cambridge twice offered to make him a doctor of music, but he would not make the necessary journey to England. Brahms was strongly averse to popular laudation and empty honors. The best-known and esteemed of his works are the sonatas for the piano, his second concerto for piano and orchestra, the "Academic Overture," the "Tragic Overture," the Hungarian dances, variations on the choral of "St. Anthony," his four symphonies, especially those in D and F, his clarinet quintet, and his piano quintet. Much of his other chamber music has found widespread recognition. He composed trios, quartets, quintets, and two wonderful sextets. Many of his songs rank in general esteem among music lovers with the best works of the kind. His first song was "Liebestreu." Very little development or change of style is noticeable between his latest and his earliest productions. Among his later works are the cantata of "Rinaldo," the rhapsodies from Goethe's "Hartzeise," and his "Song of the Fates." His latest songs dealt with sacred themes. The "Schicksalslied" is an example of a new form of short choral works, of which he produced several. Of great orchestral works he composed, besides the four symphonies, two overtures. Every one of his works has a distinct originality and individuality of its own, and in melodic invention and thematic

development, often following entirely new lines, possesses peculiar elements of grace and beauty and of force and majesty. Brahms's admirers and the partisans of Wagnerism carried on a long and fierce controversy, in which each master was derided and condemned as devoid of all musical conceptions, but Brahms was not responsible for the polemic and had no contempt for Wagner's music.

Brewer, Ebenezer Cobham, an English clergyman, born in London, May 2, 1810; died in Edwinstowe, Nottinghamshire, March 6, 1897. He was educated at Cambridge, where he took a first-class degree in civil law in 1835. He was ordained deacon in 1835 and priest in 1836, but devoted his life to literature and education rather than to the Church. He published a great number of educational books and reference works, most of which have enjoyed a wide popularity; but his distinction as a writer arises from the valuable aid that he has afforded to others. His works include: "A Guide to Roman History"; "Poetical Chronology of Inventions, etc."; "Guide to Scientific Knowledge," of which 25,000 copies were printed in two years and which was translated into French by its author (London, 1850); "A Guide to Scripture History" (1860); "Political and Literary History of France," which had reached an eighth edition in 1893 (1863); "Smaller History of France" (1864); "Guide to Every-Day Knowledge" (1864); "The Young Tutor" (1864-'66); "My First Book of Astronomy" (1866); "First Book of Chemistry" (1866); "First Book of Facts and Discoveries" (1866); "First Book of the History of Rome" (1866); "First Book of French History" (1866); "First Book of Grecian History" (1866); "Great Central Points of Mediæval and Modern History" (1870); "Dictionary of Phrase and Fable," which passed to its twenty-fifth edition in 1894 (1870); "Pathway through Bible History" (1873); "Guide to Christian Evidences" (1874); "Errors of Speech and Spelling" (1877); "The Reader's Handbook of Allusions, References, Plots, and Stories," which reached its twelfth edition in 1888 (1880); "Rules for English Spelling" (1880); "The Political, Social, and Literary History of Germany" (1881); "Smaller History of Germany" (1882); "Etymological Dictionary" (1882); "Guide to English Composition: Authors and their Works, with Dates" (1884); "Dictionary of Miracles" (1884); "Historic Note Book" (1890).

Brown, Thomas Edward, an English clergyman and educator, born in Douglas, Isle of Man, in 1830; died in Clifton, England, Oct. 30, 1897. He was educated at King William's College, Isle of Man, and later won a fellowship at Oriel College, Oxford. In 1863 he was appointed second master at Clifton College, which office he held till his retirement, in 1892. His life was subsequently spent at Ramsey, on the Isle of Man, but his death occurred while he was on a visit to Clifton. As a teacher he endeared himself to generation after generation of Clifton College boys, and his lectures, which were more than commonly attractive, and even brilliant, were eagerly attended. He contributed to reviews and other periodicals, but to the literary world was known as the author of several volumes of poems, mainly in the Manx dialect. "The Doctor" is his most famous poem, and by more than one competent critic has been given high rank among modern poems. He was not a prolific writer, and his published books comprise only the following: "Betsy Lee" (London, 1873); "Fo's'sle Yarns" (1881); "The Doctor and Other Poems, in the Manx Patois" (1887); "The Manx Witch and Other Poems" (1889); "Old John and Other Poems" (1893).

Bucknill, Sir John Charles, an English alienist, born in Market Bosworth, Leicestershire, in

1817; died in Bournemouth, July 20, 1897. He was educated at Rugby, studied medicine in University College, London, was graduated with honors in 1840, and became a fellow of the college. He was medical superintendent of the county lunatic asylum of Devon from 1844 till 1862, and then was the Lord Chancellor's medical visitor of lunatics for four years. He founded the "Journal of Mental Science" in 1853, and edited it for nine years. He was also one of the original editors of "Brain." Sir John Bucknill was one of the originators of the volunteer movement started in 1852, served as a volunteer for many years, and for his early connection with the institution was knighted in 1894. He lectured and wrote much on subjects connected with psychology and mental pathology. Among his works are "Unsoundness of Mind in Relation to Criminal Acts" (1857); "The Mad Folk of Shakspeare" (1859); "The Medical Knowledge of Shakspeare" (1860); "Notes on American Asylums" (1876); "Habitual Drunkards and Insane Drunkards" (1878); and "Care of the Insane and their Legal Control" (1880). He was also the joint author of "Manual of Psychological Medicine."

Burekhardt, Jakob, a Swiss art historian, born in 1818; died there, Aug. 8, 1897. He was the author of several works on the Italian Renaissance, the best of which are "Cicerone zu den Kunstwerken Italiens" and "Geschichte der Renaissance in Italien." For more than forty years he lectured on the history of art in the university of Basel, where he settled in 1844, after completing his studies at Berlin under Ranke and Franz Kugler. In 1855 he went to the Zurich polytechnic school as professor of the same subject, but after three years he returned to Basel. His first important publication, a large work on the epoch of Constantine the Great, appeared in 1855. A work on the civilization of the Italian Renaissance was published in 1858, and his history of the Renaissance in 1865. He resigned his chair in 1893.

Burlet, Jules, a Belgian statesman, born in 1845; died in Nivelles, Feb. 28, 1897. While Burgomaster of Nivelles he was elected a Deputy in 1884, and became a conspicuous champion of the Clerical policy and the Protectionist movement. After being elected a Senator he was called into the Cabinet in May, 1895, upon the retirement of the Comte de Merode from the Ministry of Foreign Affairs, after the adjournment of the debate for the annexation of the Congo State. The excitement caused by the attack made on him by M. Woeste, upon the withdrawal of Gen. Brassine's scheme of military reform, is believed to have brought on the cerebral congestion from the effects of which he finally died, while holding the post of minister to Portugal.

Calderwood, Henry, a Scottish philosopher, born in Peebles, Scotland, May 10, 1830; died Nov. 19, 1897. He was educated at the University of Edinburgh, and ordained minister of the Greyfriars United Presbyterian Church in Glasgow in 1856. He resigned his charge in 1868 to become Professor of Moral Philosophy in the University of Edinburgh, an office which he held until his death. He was the first chairman of the Edinburgh School Board, and was all his life a total abstainer. He was the author of "The Philosophy of the Infinite" (1854); "Caffres and Caffre Missions" (1858); "Moral Philosophy as a Science and as a Discipline" (1868); "Handbook of Moral Philosophy" (1872); "On Teaching: Its Ends and Means" (1874); "The Relations of Mind and Brain" (1879); "The Parables of Our Lord interpreted in View of their Relations to each Other" (1880); "The Relations of Science and Religion" (1881); and "The Evolution of Man's Place in Nature." He com-

pleted shortly before his death a "Life of David Hume" for the "Famous Scots Series."

Canovas del Castillo, Antonio, a Spanish statesman, born in Malaga in 1830; died in Santa Agueda, Aug. 8, 1897. His family, which was not wealthy, intended to educate him for an engineer, but he turned with avidity to literary studies, and displayed such remarkable talent and activity that he acquired a local reputation for learning before he was sixteen, and had already published a volume of poems and was the editor of a newspaper, "Young Malaga." He went to Madrid in 1845, and through the influence of his uncle, Serafin Estebanez Calderon, a Senator and a well-known writer, found employment in a railroad office, an easy berth in which he could follow literature concurrently with his paid duties. In the course of four years he published a history of the decadence of Spain and an historical novel, besides many pieces of poetry and newspaper articles. In 1849 he embraced the journalistic profession, becoming the editor of "La Patria," a journal of the Opposition, whose conductor was necessarily involved in dangerous political conspiracies against the palace favorites then in power. He sided with the military party in the struggle that ended in the revolution of 1854. During the rising he remained in Madrid, where, as the directing spirit of the revolutionary junta, he exhibited political tact and a fearless spirit that attracted the regard of O'Donnell, the head of the revolution. He was elected Deputy for Malaga. Canovas allied himself to the faction of Espartero, and was thenceforward constantly in office, first as Governor of Cadiz, in 1855. As minister to Rome, in 1856, he drew up an historical memorandum on the relations of Spain to the Holy See that served as the basis for the concordat. From 1858 to 1861 he was Undersecretary of State in the Ministry of the Interior, and in 1864 was called into the Cabinet. In 1865 he became Minister of Finance and Minister of the Colonies under O'Donnell, and in the latter capacity drew up the law for the abolition of slavery. On the eve of the revolution of 1868 he stood up in the Cortes for the application of Liberal principles in the monarchy. When the Republicans triumphed he was banished. He devoted himself to the restoration of the Bourbons, and was the chief of the movement that placed Alfonso XII upon the throne. As leader of the Alfonsists, the party that had upheld the claims of the legitimate and constitutional monarchy, he was called to the premiership in 1874, after the pronunciamiento of Gen. Martinez Campos, but in the following year retired in consequence of differences in his party. After three months the division was healed, and he was recalled to the head of the Government, which he directed with tact and discretion till the return from Cuba of Gen. Martinez Campos in 1879. He became Premier for the third time after ten months of Liberal administration under Martinez Campos. Early in 1881 his ministry was overthrown on a question of finance, and he was succeeded by Sagasta. In January, 1884, the fusionists, under Sagasta, were defeated in the Cortes, and Canovas again formed a ministry, which was upheld in the general election that followed. In the crisis of November, 1885, he was defeated by Sagasta once more and compelled to resign. Canovas became President of the ministry again in July, 1890, after the fall of the Sagasta ministry, and was confirmed by an overwhelming victory in the general election. He entered upon the office for the last time on March 23, 1895. On June 2, 1897, he offered his resignation to the Queen Regent, but was persuaded to remain in office. He met his death at the baths of Santa Agueda, where an Italian anarchist named

Golli, trusting to avenge the cruelties practiced upon his Barcelona comrades in prison, lay in wait for several days, and finally approached the Premier in the gallery of the bathing establishment and fired three shots from a revolver, one of which took effect in the forehead and one pierced his breast.

Cavaleaselle, Giovanni Battista, an Italian art historian, born in Legnano in 1820; died in Rome early in November, 1897. He studied art in the academy at Venice, and followed in turn painting and engineering until he met in Germany the English art writer, Sir Joseph Crowe, with whom he entered into a literary partnership. In 1848 he interrupted his labors to throw himself into the political national movement. Caught by the Austrians at Cremona, he was condemned to death, but made his escape and took refuge in Rome, where he fought under the triumvirate. When the Pope returned to the papal states Cavaleaselle was banished and retired to London, where he collaborated with Crowe, then English commercial *attaché* in Paris, in a large work on the Flemish school of painting. He returned to Italy after a few years, and then took up his abode in Leipsic in order to bring out the celebrated "History of Italian Painting," of which likewise Crowe was part author. Subsequently he established himself in Italy, became an adherent of the royal Government after 1870, and was appointed director general of fine arts.

Cave, Sir William Lewis, an English jurist, born in Desborough, England, July 3, 1832; died near Epsom, Sept. 7, 1897. He was educated at Oxford, was called to the bar, and by his logical acumen and his knowledge won early a high place at the bar, though he had no gift of eloquence and was blunt and direct in his speech. He edited "Addison on Contracts" and other text-books, was for some time recorder of Lincoln, gained an intimate knowledge of criminal law as editor of reports of Crown cases reserved, had an unrivaled knowledge also of real estate and rating questions and of some departments of commercial law, and was retained in almost all important cases years before he was made a Queen's counsel, in 1875. In 1881 he was appointed a judge of the Queen's bench. His decisions were fearless, if sometimes overconfident, and were always given in language unmistakably clear. He was especially sound in criminal law, differing often from Lord Coleridge. When the new bankruptcy law came into operation he settled many questions of practice and helped to reconcile the legal and mercantile communities to its novelties.

Dawes, William, an English architect, born in Gloucester in 1840; died Feb. 16, 1897. He practiced his profession in Manchester, where he built several schools, but to the general public was known as a humorous writer under the name of Elizer Goff. His first book, "Elizer Goff: His Travels, Tribbles, and Other Amoozements," was published in London in 1872, and was followed by "Elizer Goff: His Christmas Book" (1872); "Elizer Goff's Kronikle of a King" (1878); "Elizer Goff's Great Fite" (1881); "The Bore and Pigskin Papers" (1883); "Central African Buster, etc." (1886); and "Senior Devle" (1886).

Drummond, Henry, a Scottish theologian, born in Stirling, Scotland, in 1851; died in Tunbridge Wells, England, March 11, 1897. His father was a justice of the peace at Stirling. The son was educated at the Universities of Edinburgh and Tübingen, became a minister of the Free Church of Scotland, and, after a short stay in Malta as a missionary, was appointed in 1877 lecturer on science at the Free Church College in Glasgow. In 1884 he was raised to the rank of professor. He accompanied Sir Archibald Geikie on geological expedi-

tions to the Rocky mountains and Africa, and traveled in Australia, China, and Japan. As conductor



of a workingmen's mission in Glasgow he had great influence as an evangelist over young men, and as a teacher and theological writer he aroused enormous enthusiasm. His first published book, "Natural Law in the Spiritual World" (1883), created a sensation, at first in Scotland and afterward in all English-speaking countries, and was read in translations in several others. His Lowell Lectures, delivered in the United States, in which he endeavored to show that a struggle for the life and benefit of others is not less a factor in the evolution of society than the selfish struggle for individual existence, was published under the title of "The Ascent of Man" (1894). Several of his devotional books, especially "The Greatest Thing in the World" and "Pax Vobiscum," have been very popular. Prof. Drummond was the author also of some graphic and fascinating books of travel, the most interesting of which is his "Tropical Africa."

Eddy, E. M. G., an Australian railroad administrator, born in England, July 24, 1851; died in Brisbane, Australia, June 21, 1897. He entered the service of the London and Northwestern Railway in 1865 as a clerk in the superintendent's office, became district superintendent at Chester in 1875, was transferred to a similar post in the London division in 1878, and became assistant superintendent of the whole line in 1885. The carrying of the line up the west coast to Edinburgh and the fast express service between the metropolis and the Scotch capital was chiefly due to him. When the general manager of the Caledonian Railway became seriously ill in 1887 Eddy was called to take the chief executive command of that line for the interim, and from this post he was invited in August, 1888, to assume the office of Chief Commissioner of Railways in New South Wales. He accepted on the condition that he should have a free hand in the administration and financial management of the colonial railroads and tramways. He went out to Australia with the avowed intention of proving that state railroads could be made a success, and he achieved his purpose by dint of a bitter contest with the forces of state socialism and political interests, though the more recent developments of state socialism damped his earlier zeal. He revolutionized the railway and tramway system of New South Wales and retrieved the financial fortunes of the Government. Against an accumulated deficit of nearly £142,000 in the seven years preceding, he showed for the six years of his administration an accumulated increase of £2,030,000, raising the gross revenue between 1888 and 1896 from £2,300,000 to £3,110,000, and the net revenue from £765,000 to £1,322,000, while the percentage of working expenses to gross earnings went down fully 10 per cent. At the same time rates and fares were largely reduced, roadbeds, train service, and rolling stock were enormously improved, and the staff, though reduced in number, received higher salaries.

Edwards, Charles A., a British soldier, born in 1864; died in British Central Africa, May 10, 1897.

He came from a Welsh family that had contributed several members to the Indian civil service and the British army. After serving in Burmah in the Welsh Fusiliers, he qualified for the Indian staff corps and became a lieutenant in the finest of the Sikh regiments. In 1892 he was sent to Central Africa as second in command of the Indian contingent. In the following year he took out another hundred Sikhs, and in 1895 he joined Sir Harry Johnston in India, and assisted in placing the affairs of the Indian contingent in Central Africa on a footing satisfactory to the Indian Government. The Sikhs now serving in Central Africa were recruited by him, and he created and organized the small native army under English officers and Sikh noncommissioned officers. This force, composed of former slave-raiders as well as slaves, has been a powerful instrument in suppressing slave raids and a bulwark against Arab and Zulu aggressions.

Elias, Ney, an English explorer, died in London, May 31, 1897. He went out to China at an early age, and was employed for a time in a business office. In 1871 he conceived the daring project of returning to Europe overland, and with a single Chinese servant he made his way from Peking through the scenes of a sanguinary Mohammedan rebellion then going on, across the desert of Gobi by an untraveled route, across Siberia in the depth of winter, emerging at St. Petersburg. He formed a plan then to visit the forbidden city of Lhasa, but was hindered by political difficulties, and took service under the Indian Government, which sent him to Yunnan and afterward to Ladak, and thence on a mission to Chinese Turkestan, with the object of establishing political relations between the mandarins and the Indian authorities. He visited the same countries again in 1885, traversed the entire length of the Pamirs and Badakshan and Afghan Turkestan, and then returned to India by way of Chitral and Gilgit. In 1889 and 1890 he demarcated the frontier between Siam and the Shan States of Burmah. In 1891 he was appointed consul general of Great Britain at Meshed, Persia.

Falke, Jakob, a German historian, born in Ratzeburg in 1825; died in Vienna, June 12, 1897. He studied philology and history at Erlangen and Göttingen, taught in the gymnasium of Hildesheim in 1850, and was afterward tutor in the family of Prince Solms-Braunfels till 1853, when he went to Vienna and devoted himself to antiquarian researches. He was conservator of the Nuremberg German Museum from 1855 till 1858, then returned to Vienna, and became custodian and in 1885 director of the Austrian Museum. He was the author of a large number of interesting historical works relating to aesthetics and fashion. In "German Costumes and Fashions" he treats of the history of dress in connection with the changing spirit of the times. Some of his other writings are "A Contribution to the History of Costume in the Middle Ages," "History of Modern Taste," "Art at Home," "Hellas and Rome," and "History of Costume among Civilized Nations."

Fournier, Alix, a French composer, born in 1866; died in Joinville in September, 1897. He produced songs that have been sung everywhere, such as "Chanson Molalave," "Floreat," "J'ai vu s'envoler mon beau rêve," "Soir tombe," "Ave Maria," and "Le Fil de la Vierge," also several cantatas and the opera "Stratonice," rich in science and harmonic combinations and in unexpected touching lyric passages.

Fourtou, M. de, a French statesman, born in Ribérac in 1836; died in Paris, Dec. 6, 1897. Under the empire he was appointed mayor of his native place. In 1871 his citizens sent him to represent them in the National Assembly. He took his place

in the Right Center, and in 1872 M. Thiers intrusted to him the portfolio of Public Works, but in a few weeks he retired with Jules Simon. He entered for five days the last Cabinet formed by M. Thiers on May 19, 1873, as Minister of Worship. On Nov. 26, 1873, after the septennate was voted, he was called to the Ministry of Public Instruction, Worship, and Fine Arts. His assumption of office was signalized by the retirement of numerous professors suspected of liberal tendencies and by the re-establishment of the censure. In 1877 he was made Minister of the Interior in the Broglie Cabinet. In 1877 Marshal MacMahon called him to this post again. He was the minister who counter-signed the manifesto of Sept. 19, 1877, in which Marshal MacMahon announced that if the Deputies elected would not act in harmony with the Government he would depend on the Senate alone. The new Chamber appointed a committee to inquire into the abuses of power of which the Cabinet was accused, and on May 23, 1878, the ministers had to resign. In 1880 M. de Fourtou was made a Senator. He sat on the Right, but never took a prominent part in the discussions. In 1889 he re-entered the Chamber of Deputies, and there he preserved an attitude of complete silence and indifference. He once fought a duel with Gambetta.

Franks, Sir Augustus Wollaston, an English archaeologist, born in Geneva, Switzerland, in 1826; died in London, May 22, 1897. He was educated at Eton and Cambridge, being graduated in 1849. His antiquarian and artistic tastes manifested themselves early, and even before he took his degree he had published "A Book of Ornamental Glazing Quarries" (1849). He became an assistant in the British Museum in 1851, and for many years was keeper of the Department of British and Mediæval Antiquities, resigning in 1895. In 1853 he was elected a fellow of the Society of Antiquaries, was twice director of that society, and was its president from 1892 until his death. In 1888 he was knighted. He was long recognized as almost the highest authority in such departments as the arts of the Renaissance and Oriental ceramics. He made many valuable contributions to the museum, including a superb collection of Chinese and Japanese porcelain and pottery, exhibited for years at the Bethnal Green Museum. His personal influence secured to the British Museum also gifts and legacies of other valuable collections. He published "Recent Excavations and Discoveries on the Site of Ancient Carthage" (1860); "Horæ Ferales," by J. M. Kemble (edited, 1863); "Guide to the Christy Collection of Prehistoric Antiquities and Ethnography" (1868); "Catalogue of a Collection of Oriental Porcelain and Pottery," a work of much value (1876); and "Japanese Pottery" (edited, 1880).

Fresenius, Carl Remigius, a German chemist, born in Frankfort-on-the-Main in 1818; died in Wiesbaden, June 11, 1897. After leaving school and passing through an apprenticeship with an apothecary he prepared himself for his later vocation in the University of Bonn, whence he went into the laboratory of Liebig, who, in 1841, made him his assistant. After taking his doctor's degree in 1842 he settled in the following year in the University of Giessen, which he left in 1845 to become Professor of Physics, Chemistry, and Technology in the agricultural institute at Wiesbaden. In 1848 he founded the chemical laboratory that in the course of a half century has extended his fame to all countries. About 1860 he added to it a school of pharmacy, and in 1895 a bacteriological laboratory. In 1862 he started the journal of analytical chemistry which, together with his manual of qualitative analysis, established his reputation as chief of analytical chemists. He published works on the

measurement of alkali and acid reactions, on a new method of testing potash and soda, on acid fermentation of fruit and wine, on a new method of detecting arsenical poisoning, on the ammonia in the atmosphere, etc., and innumerable analyses of medicinal spring waters. His methods of instruction and his laboratory apparatus have been adopted generally.

Ghika, Prince Ion, a Roumanian statesman, born in 1817; died in Bucharest, May 4, 1897. His family had long been conspicuous in the history of the Danubian principalities, and he, after studying in Paris, where he imbibed the humanitarian and democratic spirit of the romantic school, endeavored to awaken among his countrymen ambition for national reform and independence. He took part in the Ibraila conspiracy in 1841, and was shut out for a time from public life and honors. After devoting himself during this period to literary and scientific work and to his duties as Professor of Mathematics and Political Economy in the University of Jassy, he became once more an active politician when the principalities seemed ripe for a new revolution. As one of the leaders of the National party he had a great deal to do with organizing the revolutionary movement of 1848. The Provisional Government of the principalities sent him as its diplomatic agent to Constantinople, where he continued to reside as an exile after the fall of his political friends at Bucharest. In 1854, on the recommendation of Lord Stratford de Redcliffe, he was appointed by the Sublime Porte to the governorship of Samos, and for five years he administered the affairs of the island with remarkable success. In 1859, when Prince Couza had at last accomplished the union of Moldavia and Wallachia, Prince Ghika returned to Bucharest, became a prominent member of the Liberal Opposition, and was a leader in the movement that culminated in 1866 in the deposition of the reigning prince and the election of Prince Karl of Hohenzollern-Sigmaringen as constitutional ruler of Roumania. Prince Ghika was Prime Minister in 1867, and again in 1870, and held portfolios in several other cabinets. In 1880 he was appointed Roumanian minister in London, where he remained until failing health compelled him to resign in 1887. He was a distinguished and a voluminous author, and for his literary services was elected President of the Roumanian Academy.

Gilbert, Sir John, an English artist, born in Blackheath, near London, in 1817; died in Villers-sur-Mer, France, Oct. 6, 1897. He entered a real-estate agent's office in London, where, instead of familiarizing himself with the details of the profession, he educated himself as an artist. When but nineteen years old he exhibited his first picture, "The Arrest of Lord Hastings by the Protector, Richard II, Duke of Gloucester," at the Suffolk Street Gallery, London. In 1838 a portrait by him was accepted by the Royal Academy. One of his pictures was accepted by the British Institution in 1839, and from that time till his death he was constantly represented at this gallery, and occasionally at the Royal Academy. Although exhibiting in the art galleries, Gilbert was not above taking commissions for work in black and white. In this connection he received from Henry Vizetelly, acting in behalf of Herbert Ingram, proprietor of Old Parr's Life Pills, and subsequently founder of the "Illustrated London News," in 1841, a commission to supply him for advertising with an engraving of Old Parr's gravestone in Westminster Abbey, and with "designs to be made of Old Parr gathering medicinal herbs, of his introduction to King Charles, and of other incidents in the old Shropshire peasant's apocryphal long life." This led to Gilbert's connection with the "Illustrated London News" in

the following year. The first design for illustrated journalism, from his pencil was one of a state fancy-dress ball held by command of Queen Victoria at Buckingham Palace. Writing on the subject of Gilbert's remarkable versatility, in his "Gleanings back through Seventy Years," Ingram says: "In 1842 it would have been well-nigh impossible to have kept an illustrated paper going had not Mr. John Gilbert's facile and imaginative pencil been available for the purpose." When, in 1843, the "Pictorial Times" was launched, its proprietors immediately secured the services of John Gilbert, who contributed to its pages considerably more drawings than to the "Illustrated News," although subsequently he was retained on the staff of the latter journal for some years. Gilbert also drew weekly illustrations for the "London Journal," and for a time was connected with "Punch," but was forced out by its editor, Douglas Jerrold. Years afterward "Punch" renewed its connection with him. Gilbert illustrated many of the best editions of the British classics, and concluded with an edition of Shakespeare, on which he was engaged many years, and which was considered to contain the finest complete set of illustrations ever made. He was elected an associate of the Society of Painters in Water Colors in 1852, and one year later was made a member. He painted "The Queen inspecting the Coldstream Guards in the Hall of Buckingham Palace" in 1856, and after viewing this picture John Ruskin remarked that Gilbert, unlike other painters of royalty, had "retained his presence of mind" and given a scene perfectly natural as well as perfectly artistic. In 1871 Gilbert became President of the Society of Painters in Water Colors. He soon afterward received the honor of knighthood, was elected an associate of the Royal Academy in 1872, and was made a full member in 1876. Among other honors conferred upon him are the Cross of the Legion of Honor, the freedom of the city of London (he was the only artist to be so honored), honorary membership in the Royal Society of Painters in Water Colors of Belgium, and in the Society of Artists of the same country. He was elected President of the Liverpool Society of Painters in Water Colors and honorary member of the Royal Society of British Artists. Some years before his death he decided to present his work to the nation, and accordingly in 1893 he distributed his paintings among the public art galleries of London, Liverpool, Manchester, and Birmingham. Most of his pictures are historical. They comprise such subjects as "The Murder of Thomas à Becket," "Charge of the Cavaliers at Naseby," "Wolsey and Buckingham," and "The Entry of Joan of Arc into Orleans." In 1874 he exhibited at the Royal Academy "The Field of the Cloth of Gold"; in 1875, three pictures, among which was "Tewkesbury Abbey: Queen Margaret carried Prisoner to Edward after the Battle of Tewkesbury"; in 1876, "The Crusaders," and "Richard II resigning the Crown to Bolingbroke"; in 1887, "Cardinal Wolsey at Leicester Abbey" and "Doge and Senators of Venice"; in 1889, "Ego et Rex Meus" and "Onward." The range of Gilbert's power, the vividness of his dramatic sense, the perfect command of his materials, added to the individuality by which he revolutionized the art of drawing on wood, place him immeasurably above his contemporaries in his own line.

Godefroid, Félix, a French musician, born in Namur in 1818; died in Villers-sur-Mer in July, 1897. He was admitted to the Paris Conservatory at the age of twelve, and at the age of nineteen he composed his famous "Dance of Sylphs." The first harpist of his time, he introduced important improvements in the mechanism of his instrument, increasing the size of the strings and the volume of

sound. He wrote masses and other pieces for the harp and orchestra, and many charming harp solos.

Godfrey, G. W., an English dramatist, died in London, April 10, 1897. He was for many years a clerk in the Admiralty Office, retiring in 1894. His plays were therefore written in his leisure hours, but such was his knowledge of stage craft and the brightness of his dialogue and biting satire on the manners and customs of modern society that the best actors appeared in the parts, and they made great hits on the London stage. Their titles are "Queen Mab," "The Queen's Shilling," "Vanity Fair," "The Parvenu," "My Milliner's Bill," and "The Mysogynist."

Goto Shojiro, Count, a Japanese statesman, born in 1837; died in Tokio, Aug. 4, 1897. He was a leader in the movement that culminated in the restoration of the Mikado in 1867, and to his services in that period he owed his title and a considerable hereditary income. In later events he failed to display sufficient force and sagacity to bring him to the front. He associated himself in 1873 with the Saigo party, which advocated recourse to arms in Korea. In 1887 he fell into disgrace through his connection with a weak political agitation.

Goulbourn, Edward Meyrick, an English clergyman, born in London, Feb. 11, 1818; died in Tunbridge Wells, May 3, 1897. He was educated at Eton and Oxford, and became a fellow of Merton College in 1841. In 1850 he succeeded Dr. Tait as head master of Rugby School, from which he retired in 1858. In the following year he became vicar of St. John's, Paddington, his fame as a preacher at this time being very general. He was a profound scholar as well as an acute reasoner, and to his possession of these qualities was added a grace of delivery that invariably charmed his hearers. In 1866 he was appointed Dean of Norwich, and he resigned that office June 16, 1889. From that time he lived in semi-retirement at Tunbridge Wells. As a writer his reputation was very wide in the religious world, his best-known work being "Thoughts on Personal Religion" (1862), a book which has exerted a strong influence in deepening religious feeling. His other works include "The Doctrine of the Resurrection of the Same Body," forming the Bampton Lectures for 1850 (1850); "Devotional Forms" (1851); "Rudimentary Treatise on Grammar" (1852); "Parochial and Other Sermons" (1853); "Introduction to the Devotional Study of the Holy Scriptures" (1854); "The Idle Word: Short Religious Essays on the Gift of Speech" (1855); "The Book of Rugby School" (1856); "The Inspiration of the Holy Scriptures" (1857); "Sermons" (1862); "The Education of the World," a reply to "Essays and Reviews" (1862); "Popular Objections to the Book of Common Prayer considered" (1868); "The Functions of Our Cathedrals" (1869); "The Principles of the Cathedral System" (1870); "The Great Commission" (1872); "The Child Samuel" (1876); "The Collects of the Day: An Exposition" (1880); "Everlasting Punishment" (1880); "Meditations upon the Liturgical Gospels for the Minor Festivals" (1886); "Three Counsels of the Divine Master for the Conduct of the Spiritual Life" (1888); "The Ancient Sculptures in the Roof of Norwich Cathedral," with Henry Symonds (1876); "Life, Letters, and Sermons of Herbert de Losinga" (1879); "Farewell to Norwich Cathedral" (1891). Although in early life attached to the evangelical school, in the latter part of his career he was counted among the moderate High Churchmen.

Guarino, Giuseppe, an Italian prelate, born in Montedoro, March 6, 1827; died in Messina, Sept. 22, 1897. He rose to be Archbishop of Messina and a cardinal, receiving the berretta Jan. 16, 1893.

Havelock-Allan, Sir Henry Marshman, an English general, born in Chinsurah, India, Aug. 6, 1830; died at Ali Mesjid, in the Khaibar pass, Dec. 30, 1897. His father was Gen. Henry Havelock, and his mother was a daughter of Dr. Marshman, a Baptist missionary in India. He entered the army as an ensign in 1846, received a lieutenant's commission when eighteen years of age, and was a captain at twenty-seven. On his father's staff he saw service in the Persian campaign, distinguishing himself in the capture of Mohumrah. He was his father's aid through the mutiny campaigns, and was present at the battles of Futtehpur, Aoung, Pandoo, Nuddee, Cawnpore, Busserut, Gunge, Mungarwar, and Alumbagh, and in the relief of Lucknow and the defense of the residency, and in both these actions was wounded. After he was promoted captain he took part under Gen. Franks in the actions of Nusrutpur, Chanda, Umeerpur, and Sultanpur. In 1858 he was breveted major and was created a baronet, his father, for whom the honor was intended, having died. On the staff of Gen. Luard he was present at the relief of Azimghur and in the operations against the Jugdespur rebels. Later in the year he commanded a cavalry detachment in Oude under Lord Clyde, and was present at Burgudeea, Musjeedia, and Raptée. For his brilliant services in India he was frequently mentioned in dispatches, and was made a brevet lieutenant colonel, though barely thirty years of age. After two years of staff duty at Aldershot, he took part, in 1863, in the war against the Maoris of New Zealand, being present at Rangariri, Paterangi, and Orakau, and in command at the battle of Wairre. From 1867 till 1869 he was assistant quartermaster general in Canada, becoming in 1868 a colonel, and then served in the same capacity on the staff in Ireland till 1872. He was made a major general in 1878 and lieutenant general in 1881. His passion for seeing fighting was such that he acted as a newspaper correspondent in order to witness the actions of the Franco-German and Russo-Servian wars, and in 1882 he went to Egypt and was in the foremost fighting line at Kassassin, causing an insurance company to cancel the policy on his life. When not in active service Sir Henry Havelock took an earnest interest in politics. He entered the House of Commons as an advanced Liberal in 1874, and represented Sunderland till 1881, when he was appointed to the command of a brigade at Aldershot. In 1884 he was returned as a Liberal for Durham, and in 1886 was elected again as a Liberal-Unionist. Losing his seat in 1892, he was returned again in 1895. The surname Allan was coupled with his own in 1880, in compliance with the testamentary request of a relative. Sir Henry Havelock-Allan was a member of the political staff that accompanied Sir William Lockhart in the campaign against the Afridis, and while riding out to visit a newly recaptured post in the pass he went ahead of the escort, and was killed by Afridi sharpshooters lying in wait for stragglers.

Heaton, John Aldam, an English decorative artist, born in Yorkshire in 1830; died in Hampstead, London, Nov. 20, 1897. His early training among the looms of his native shire gave him the technical knowledge of fabrics that was afterward so useful to him, and his extraordinary sensitiveness to color enabled him to arrange the greatest variety of combinations of tint and ornament. He designed innumerable patterns in furniture, wall papers, and stained glass, and in his early days was to some extent a follower of preraphaelite ideas. In 1889 he published in two folio volumes "Furniture and Decoration in England during the Eighteenth Century," which ranks as the final authority on the subject.

Heemskerck, M. A. J., a Dutch statesman, born in 1818; died at the Hague, Oct. 10, 1897. He belonged to the old Conservative party, and formerly was a leading figure in the politics of the Netherlands. He possessed vast knowledge and great political sagacity, was more than once intrusted with the formation of a cabinet, and several times was a cabinet minister.

Hewlett, Henry Gay, an English writer, born in London, April 4, 1832; died Feb. 25, 1897. His wide acquaintance with black-letter history and law, almost in effect a family inheritance, led to his appointment in 1865 as keeper of the Land Revenue Records and Record Agent for the Crown, which place he resigned in 1895. He was long the friend of Henry Chorley, the well-known critic, and as his literary executor edited the "Autobiography, Memoirs, and Letters of Henry Fothergill Chorley" in 1873. His published works include "The Heroes of Europe: A Biographical Outline of European History, A. D. 700-1700" (1860); "Shakespeare's Curse, and Other Poems" (1861); "A Sheaf of Verse" (1877); "Rogeri Wendover Liber qui dicitur Flores Historiarum" (1886); "Post-Norman Britain" (1887); and "The Wayfarer's Wallet," verse (1888).

Holden, Sir Isaac, a British inventor, born in Hurlst, near Paisley, in 1807; died in Keighley, Yorkshire, Aug. 13, 1897. He was the son of a coal miner, attended a grammar school at Kilbarchan for two years, worked a short time in a cotton mill, returned to school at the age of thirteen, and after learning Latin and bookkeeping became a teacher at Paisley, and in 1828 a teacher of mathematics in an academy at Leeds. Subsequently he taught Latin and Greek, science, and history in Reading, and while there made experiments which resulted in the discovery of the lucifer match, but did not secure a patent. He had hoped to become a preacher, having embraced the Wesleyan doctrines at an early age, but abandoned his ambition and in 1830 entered the service of a wool-comber at Collingworth. Finding here full scope for his inventive powers, in a few years he completely revolutionized the process of wool-combing. In 1846 he removed to Bradford, and in association with S. C. Lister, afterward Lord Masham, perfected many improvements in wool-combing machinery. In 1848 they established shops at St.-Denis, in France, and after these were closed, in 1860, they opened still larger works at Bradford, which grew to be the most extensive in the world, employing, with the branch shops in Croix and Rheims, more than 4,000 persons. The firm acquired an honorable reputation for efforts to improve the social and intellectual status of the work people. Mr. Holden entered the House of Commons as a Liberal in 1865, resigned his seat in favor of his son-in-law, Alfred Illingworth, in 1868, and was not successful in his efforts to obtain another till 1882. He was re-elected in 1885 and 1886, finally retiring in 1892. He was created a baronet in 1893.

How, William Walsham, an English prelate, born in Shrewsbury, Shropshire, Dec. 13, 1823; died at Leenane, Connemara, Ireland, Aug. 10, 1897. He was a graduate of Oxford, and after taking holy orders became curate of St. George's, Kidderminster, in 1846. His next curacy was at Holy Cross, Shrewsbury, which he received in 1848 and relinquished in 1851 to become rector of Whittington, Shropshire. He remained at Whittington twenty-eight years, during which time he became widely known as a writer, and in 1879 was appointed to the living of Saint Andrew Undershaft in London. This office he held a few months only, till his consecration as Suffragan Bishop of Bedford in July of that year. In his new office his work lay wholly in East London, where he not only won the regard of his clergy,

but the love and respect of even the worst characters in that part of the metropolis. He was a total abstainer and took an active part in temperance work, but without bitterness or intolerance. When the see of Wakefield was created, in 1888, he was appointed its bishop, and he held that office at the time of his death. Few prelates were more generally loved than the Bishop of Wakefield. He avoided controversy wherever possible, and was almost as popular with nonconformists as with Churchmen. His abilities as a diocesan were not undervalued by various prime ministers. While Bishop of Bedford he was offered the important bishopric of Manchester on the death of Bishop Fraser, in 1885, and in 1889 the high office of Bishop of Durham was pressed upon his acceptance. Both these offers he declined, as he did the archbishopric of York, which is generally supposed to have been offered to him in 1891. In the present year he came prominently before the public as the author of the "Jubilee Hymn," and one of his latest acts was to give the profits of this hymn to the Prince of Wales's Hospital fund. As a hymn writer he will be longest remembered. A large number of his hymns will be found in nearly all important collections of religious poetry. As regards both sentiment and literary form they are among the best of their class. His published writings include "Plain Words" (1859-'75); "Collection of Lyrical Pieces" (1860); "Psalm LI: Sermons" (1861); "Pastor in Parochia," his most famous work (1868); "Private Life and Ministrations of a Parish Priest" (1873); "Plain Words to Children" (1876); "Commentary upon St. John" (1879); "The Papal Claims in the Light of Scripture History" (1881); "Commentary upon St. Matthew" (1881); "Lectures on Pastoral Work" (1883); "The Boy Hero" (1884); "Words of Good Cheer" (1885); "Was Lost and is Found," verse (1885); "Poems" (1886); "Hymns" (1886); "Ballad of the Chorister Boy" (1887); and "Letter Booklets" (1888).

Hutton, Richard Holt, an English journalist, born in 1826; died in London, Sept. 9, 1897. He came from a family prominent among the Unitarians, and was educated at University College, London. He taught mathematics at Bedford College, wrote for the "National Review" and other journals, and theological articles for the "Inquirer," until he passed over to the Church of England, and became literary editor of the "Spectator" in 1861. He wrote on political, theological, and philosophical subjects, and was the author of "Studies in Parliament," a life of Newman, and other books.

Jennings, Sir Patrick Alfred, an Australian politician, born in Newry, Ireland, in 1831; died in Sydney, New South Wales, July 10, 1897. He went to Victoria in 1852 as a gold seeker, and was fairly successful, became a magistrate at St. Arnaud, and in 1863 removed to New South Wales, where he became a sheep raiser, leasing a run in the Riverina district, which the squatters wished to separate from New South Wales and erect into a separate colony. The agitation led to increased representation in the Parliament, and he obtained a seat in the Legislative Council, which he resigned in 1869 to enter the Assembly, to which he was elected from the Murray district. He was afterward asked to join the ministry, but failed to be elected at Mudjee, and remained out of Parliament till 1880. He served meanwhile as commissioner for the colony at various international exhibitions, and was knighted for his services in organizing the first Australian exhibition in 1879. He returned to office as vice-president of the Executive Council in 1883, became colonial Treasurer in the Dibbs ministry in 1865, and in 1886 formed a ministry, but resigned in 1887, and was sent to England as representative at the

colonial conference. He entered the Legislative Council in 1890, and was a delegate to the Federal convention held in Sydney in 1891. He was created an hereditary marquis by the Pope.

Jervois, Sir William Francis Drummond, an English general, born in Cowes, Isle of Wight, in 1821; died Aug. 17, 1897. He was the son of a general officer, was educated at Woolwich Academy, and entered the Royal Engineers in 1839, becoming a captain in 1847, brevet lieutenant colonel in 1861, colonel in 1872, major general in 1877, and lieutenant general in 1882. From 1841 till 1848 he was employed in making roads and bridges and establishing military posts at the Cape of Good Hope, where he took part in an expedition against the Boers in 1842 and in the Kaffir war of 1846, during which he made a map of Kaffraria. In 1852 he designed the fortifications of Anglesey. He served on a committee that effected great improvements in barrack accommodation, became assistant inspector general of fortifications in 1856, and was secretary of a committee to report upon the defenses of the country in 1859, as well as of the permanent Defense Committee, and became the confidential adviser of Lord Palmerston and his successors on matters connected with defense. He was appointed deputy director of fortifications in 1862. He was sent in 1863 on a special mission to report upon the fortifications of Canada, New Brunswick, and Nova Scotia, and drew up the plans for the fortification of Quebec adopted by the Imperial Government, designed the fortifications at Portsmouth, Plymouth, Pembroke, Portland, Cork, the Thames, the Medway, and other places. He planned improvements and additions to the fortifications of Bermuda, Halifax, Malta, and Gibraltar, and in 1871 designed fortifications carried out at Bombay, the Hugli, Aden, and other places by the Indian Government. In 1874 he was created a knight commander of the order of St. Michael and St. George, and in the following year was appointed Governor of the Straits Settlements. During the two years that he held this post he suppressed a formidable revolt on the Malay Peninsula. Going to Australia in 1877 to advise the colonial authorities on the defense of their chief ports, he was appointed Governor of South Australia. In 1882 he was made Governor of New Zealand, and while there planned the fortifications constructed in the principal ports. Until he retired in 1889 he continued to be the chief adviser of all the Australasian governments on all matters connected with defense.

Jones, William Basil, an English prelate, born in Gwynfryn, Wales, Jan. 2, 1822; died in Lampeter, Jan. 14, 1897. He was educated at Shrewsbury School, gained a classical scholarship at Trinity College, Oxford, in 1840, and several other scholarships in the university, where he remained as a tutor and fellow, first of Queen's and afterward of University college till 1865, acting also as examining chaplain for Dr. Thomson, Archbishop of York, from 1861 and vicar of Haxby from 1863 till he left the university to enter upon a pastorate at Bishopthorpe. He was made Archdeacon of York in 1867 and a rural dean in 1869. In 1874 he was nominated Bishop of St. David's in succession to Bishop Thirlwall. The evil of the nonresidence of the Welsh clergy, which Bishop Thirlwall had made efforts and sacrifices to remove, was considerably abated in this see through the energy of the new bishop. In the exciting questions of ritualism, board schools, and the burial of nonconformists he took a moderate and conciliatory attitude, and tried to have the principle prevail that Wales should be treated in all ecclesiastical as well as social and political matters as a part of England. Dr. Basil Jones was the author of "Vestiges of the

Gael in Gwynedd" (1851); "Notes on Œdipus Tyrannus" (1862); of numerous published sermons; and, with E. A. Freeman, of "The History and Antiquities of St. David's."

Joergensen, Adolf Ditlev, a Danish historian, born in Gravenstern, Schleswig, June 11, 1840; died in October, 1897. He was educated at Flensburg and at the University of Copenhagen, and became a teacher in the grammar school at Flensburg in 1863. When the Germans occupied the province in 1864 they dismissed him from his post. He then devoted himself to the study of Danish history, received an appointment in 1869 in the royal archives, of which he was made keeper a few years later, and which he thoroughly classified. Among his chief works are "Contributions to the History of the Middle Ages" (1871) and "The Founding and First Development of the Scandinavian Church" (1874-'78).

Kneipp, Sebastian, a German therapist, born in Stefansried, Bavaria, May 17, 1821; died in Worishofen, Swabia, June 17, 1897. He was trained as a weaver, and followed the trade till his majority, when he prepared himself for the Catholic priesthood and studied medicine in order to develop the system of water cure that he had tried experimentally in his own case and under which he had brought himself into a vigorous state of health after having been weakly and apparently consumptive from early youth. He began to apply his treatment to the country people of the neighborhood in 1848 with such success as to bring patients from far and wide and extend his reputation to distant countries. Father Kneipp took no pay for his medical advice and treatment, but lived simply on his stipend as a priest. He attended personally to every case, and administered the baths with his own hands until, after the publication of a book on his method of hydrotherapy, the crowds of patients that flocked to the village to seek his cure necessitated the employment of assistants. Hence the Kneipp Verein was established to carry on the work. It has been supported by charitable contributions, and has grown into a large institution, caring for 1,200 patients or more. In 1894 Father Kneipp was called to Rome to treat Pope Leo, to whom he brought relief in serious gastric troubles. A sanitarium, based on the Kneipp system, was established in New Jersey in 1896. The main elements of the treatment consist in the application of sunshine, fresh air, and water. Its most striking feature is a walk in the early morning, barefoot, through the dew or snow. Other important features are baths of certain kinds taken at stated times, the use of clothing that admits light and air, total abstinence from alcohol, and limitations on the eating of meat.

Knight, Charles Parsons, an English artist, born in Bristol, Feb. 15, 1829; died in London, Jan. 22, 1897. He was educated by his father, Canon Knight, of Bristol Cathedral, and began his career as a midshipman, but left the service at the end of his first voyage. His short experience of the sea was of much service to him in his later profession, since few artists of his time surpassed him in drawing waves, depicting light effects in water, and representing ships' hulls and rigging. His studies were pursued at the life school of the Bristol Academy, as well as along the coasts and rivers of Somerset and Devon, and the first pictures ever exhibited by him were of the harbor of Bristol and the windings of the Avon. His first picture at the London Academy, "Durham from the North," was exhibited in 1857. A picture exhibited in London in 1861, "The Stone Walls of Old England, Speeton Cliffs, Yorkshire," is one of his most brilliant works. As a general thing, the public did not

greatly care for his pictures, while artists admired and praised them. His themes in the main were drawn from England, Scotland, and South Wales, and were often views of the coast.

Legge, James, a Scotch scholar, born in Huntley, Aberdeenshire, Scotland, in 1815; died in Oxford, Nov. 29, 1897. He was graduated at the University of Aberdeen in 1835, and subsequently studied at the Highbury Theological College. In 1829 he went to China, living in Hong-Kong from 1842 to 1873, and was pastor of the Congregational church there for the greater part of the time. From 1873 until his death he was Professor of Chinese at Oxford. He was a profound as well as industrious scholar, and received from the French Institute in 1875 the Julien Prize for his translation of the Chinese classics. His translations and other writings include "The Notions of the Chinese concerning God and Spirits" (1852); "Confucian Analects," edited and translated (1861); "Works of Mencius," edited and translated (1861); "The Shu King; or, Book of Historical Documents," edited and translated (1865); "Life and Teachings of Confucius" (1867); "The Shi King; or, Book of Poetry," edited and translated (1871); "The Ch'un Ch'in with the Tso Chwan," edited and translated (1872); "The Life and Works of Mencius" (1875); "The Book of Ancient Chinese Poetry, in English Verse" (1876); "Sacred Books of China," translated (Oxford, 1879-'86); "The Religions of China: Confucianism and Taoism, described and compared with Christianity" (1880); "Record of Buddhist Kingdoms," translated (1886); and "The Nestorian Movement of Hsi-an-fû in Shen-Hsi, China" (1888).

Lockwood, Sir Frank, an English lawyer, born in Manchester in 1846; died in London, Dec. 19, 1897. He was the son of a business man. He entered Caius College, Cambridge, in 1865, and was called to the bar at Lincoln's Inn in 1874. He was one of the most successful of English advocates, especially in the defense of prisoners, and one of the most popular members of the bar possessing versatile talents and a sparkling wit. His historic ability would have made him famous on the stage. He had a genius for caricature, which he turned to account in drawings published in "Punch" and illustrations for one or two books. No one excelled him as a merry after-dinner speaker and storyteller. At the bar he was impressive, severe, denunciatory, ironical, witty, suave, as the exigencies of the case demanded, and his cross-examinations were greatly dreaded by witnesses. He was elected to Parliament in 1885 as a Liberal for York city, and delighted the house with his bright and ingenious speeches. In October, 1894, he was appointed Solicitor-General, and was knighted.

Luys, Jean Bernard, a French alienist, born in Paris in 1828; died there in August, 1897. He was physician in chief to the Ivry asylum and the author of important works on the nervous system, including "Iconographie des Centres Nerveux," "Physiologie et Pathologie Cérébrales," and "Hypnotisme Experimental."

Malcolm, Sir George, an English general, born in Bombay in 1818; died in Leamington, April 6, 1897. He was an India merchant's son, and after receiving his education at Addiscombe entered the Bombay army in 1836. In the Afghan campaign of 1838 he served in the commissary general's department, and was present at the capture of Ghuzni and the occupation of Cabul. From 1840 till 1842 he was constantly engaged against the Beluchis in command of a detachment of the Sind horse in eastern Kutchi, in 1843 he participated in operations against Mir Shah Mohammed, and in 1844 and 1845 served again in Kutchi in Sir Charles Napier's campaign against the hill tribes. In the

Punjab campaigns of 1848 and 1849 he was present at Multan and Gujarat and took part in the final defeat of the Sikhs and the occupation of Peshawar, receiving the brevet of major. He commanded a detachment of Mahratta horse in Persia in 1857. In 1858 he commanded the field force that reduced the fortress of Sherapur, and was in command later of the force that captured Murgoond. He commanded a division in the Abyssinian war of 1868. He became a colonel in 1860, major general in 1867, lieutenant general in 1875, and general in 1877.

Marquardsen, Heinrich von, a German politician, born in Schleswig, Oct. 26, 1826; died in Erlangen in November, 1897. After completing his juristic studies he settled in Heidelberg in 1856 as *Privatdocent*, and in 1861 was called to Erlangen as regular professor of German public law. He earned a high reputation for learning in public and private law, produced a large number of works, and was a member of the Institute of International Law from its foundation. In 1869 he was elected to the Bavarian Chamber, in which he sat till 1893. In 1871 he was elected to the German Reichstag from the district of Erlangen and Fürth, which had already sent him in 1868 to the Customs Parliament in Berlin. He was a member of the Reichstag till his death, and was one of the Liberal party, and by reason of knowledge of parliamentary institutions and all branches of law and his great skill in debates he had a strong influence in shaping legislation. He was one of the authors of the press law and a prominent member of the committee that revised the procedure of civil and criminal courts.

Mecklenburg-Schwerin, Friedrich Franz, III, Grand Duke of, born at Ludwigslust, March 19, 1851; died in Cannes, April 10, 1897. He married, in 1879, the Russian Grand Duchess Anastasia Michailovna, and succeeded his father, Friedrich Franz II, in 1883. He was a Prussian cavalry general. His successor is Franz Friedrich IV, his son, born April 9, 1882.

Meilhac, Henri, a French dramatist, born in 1830; died in Paris, July 6, 1897. He was one of the most skillful and prolific playwrights in France, and not one is more popular or widely known. In the time of the empire he enlivened Paris with the gay operettas to which Offenbach fitted his lively and humorous music, such as "La Belle Hélène," "La Grande Duchesse," "La Vie Parisienne," "La Perichole," "Les Brigands." The "Petit Duc" of Lecocq was also his libretto. For more than forty years he delighted Paris theater goers with a constant succession of comedies, in nearly all of which he had the collaboration of able dramatists, such as Ludovic Halévy, André Gille, or Louis Ganderax, but which are known by his name. Some of the most successful were "Frou-Frou," "L'Été de la St. Martin," "Les Sonnettes," "Toto chez Tata," "Ma Camarade," "Pépa," and "Fanny Lear." He was part author of the operas "Carmen" and "Manon." Toward the end of his career he attained great successes with "Ma Cousine" and "Décoré" at the Variétés and with "Petite Marquise" at the Théâtre Français, where "Grosse Fortune" was also brought out. These were all the work of his unaided pen. At the Palais Royal his "Gotte" and "La Boule" were produced. Before he began to write for the stage he drew humorous pictures with amusing legends for the "Vie Parisienne." Until he joined with Ludovic Halévy he determined never to have a collaborator. Among his early works was "Le Copiste," the little masterpiece called "L'Autographe," "Un Petit-Fils de Mascarille," and "La Vertu de Célimène," which attracted the serious attention of critics. Some of his other works are the one-act dramas "La Clef de Merella," "Les Brebis de Panurge," "Le Brésilien,"

"L'Ingénue," "Le Petit Hôtel," "Le Roi Candaule," and "Lolotte"; and "Le Reveillon" and "La Cigale," in three acts. Meilhac was elected to the French Academy in 1889.

Meyer, Juergen Bona, a German philosopher, born in Hamburg in 1829; died in Bonn, June 30, 1897. He became *Privatdocent* at the University of Berlin in 1862 after writing a work on the natural history of Aristotle, and in 1866 was called to Bonn, where he taught until his death. He published treatises on the philosophy of Kant, philosophical questions of the time, and the end of the universe and universal sorrow, besides numerous philosophical essays.

Monescillo y Viso, Antolino, a Spanish prelate, born in Corral de Calatraba, Sept. 2, 1811; died Aug. 12, 1897. He rose to be Archbishop of Toledo, and was created a cardinal Nov. 10, 1884.

Montpensier, Infanta Marie Louise Ferdinande, Duchess of, born in Madrid, Jan. 30, 1832; died in Seville, Feb. 2, 1897. She was the daughter of Ferdinand VII of Spain and the younger sister of Queen Isabella, the grandmother of the present King of Spain. She married in 1846 the Duke of Montpensier, son of Louis Philippe. Her great fortune, estimated at 100,000,000 francs, is divided between her son, Don Antonio, husband of the Infanta Eulalia, and her daughter, the Countess of Paris.

Mundella, Anthony John, an English statesman, born in Leicester, 1825; died in London, July 14, 1897. He was the son of an Italian refugee, and in 1848 he joined a hosiery firm in Nottingham which built up an immense business. As one of the most successful business men of the place he was made alderman and sheriff. He was an advocate of conciliation in labor disputes, and helped to organize a board of arbitration in the Nottingham hosiery trade. Sheffield, which knew him from lectures that he delivered on this subject, elected him a member of Parliament in 1868 over J. A. Roebuck, who had disappointed the Radicals and trade unions. He continued to sit as one of the members for Sheffield till the redistribution, when he was elected for the Brightside division, which he represented until he died. He looked sharply after the trading interests of Sheffield, laboring to keep Government orders for material there, opposing the establishment of a Government gun factory, and securing the insertion in the customs and inland revenue bill of 1892 of a clause prohibiting the importation of foreign goods bearing private trade marks. He was also the prime mover in the trade-mark conference at Rome in 1886. His industry and ability were recognized in the House of Commons soon after he entered it. Having shown a great interest in educational subjects, he was appointed in 1880 vice-president of the council on education in Mr. Gladstone's Government, and in this capacity he devoted himself to promoting the development of the board schools without seeking to hamper the voluntary schools. When Mr. Gladstone formed the short-lived ministry of 1886 he took Mr. Mundella into the Cabinet as President of the Board of Trade. He worked indefatigably and gained a high reputation for energy and administrative ability, though his legislative projects for the regulation of railroad and canal traffic and the suppression of fraudulent marks on merchandise failed to pass. When the Home Rule ministry of 1892 was formed he returned to the same office, and carried through a bill for the arbitration of labor disputes and one for regulating the hours of railroad servants. In May, 1894, he resigned because he had been a director in a New Zealand loan company that had pursued unbusinesslike methods.

Mutsu, Munemitsu, Count, a Japanese statesman, died in Yokohama, Aug. 10, 1897. He was prominent in Japanese politics before the Chinese war, which found him in the responsible office of Minister of Foreign Affairs, which he continued to fill till 1897.

Newman, Francis William, an English scholar and philosopher, born in London, June 27, 1805; died in Weston-super-Mare, Somerset, Oct. 4, 1897. He was two years younger than his famous brother, Cardinal Newman, whom he survived seven years. He was educated at Oxford and was a fellow from 1826 to 1830, resigning in the latter year because of conscientious scruples against signing the Thirty-nine Articles for his master's degree. After holding professorship in Bristol College and Manchester New College, successively, he was appointed Latin professor in University College in 1846, and he remained there until his resignation in 1863. The divergence in faith and thought between the brothers Newman began in their undergraduate days at Oxford and is typical of the two most prominent aspects of religious thought of the century. "Have a care," exclaimed the elder brother in response to some doubts uttered by Francis; "if you go that far, you will go further." "When I see further I will go further," was the reply of Francis, and on that principle he always acted. The estrangement between the brothers on account of religious differences lasted forty years, but when they were old the breach was healed and nothing was said about their points of difference. The year after the cardinal's death, however, Prof. Newman unwisely published some rather peevish reminiscences of his brother, which showed complete misapprehension of the cardinal's thought, and which can be excused only by reason of the author's failing mental powers. To the spiritual history of these two brothers the poet Clough alludes in his poem "Qua Cursum Ventus." The contributions of Prof. Newman to the religious thought of his time were important and far-reaching. "The Soul," the most noted work of his, having been for nearly half a century the delight of the spiritually minded. His personality was most interesting and the remarkably wide reach of his mind made conversation with him a continual stimulus. He was an ardent vegetarian, but could hardly be called an ascetic. He was twice married, and for many years of his later life he resided at Weston-super-Mare, not far from Bristol. His writings, which are very varied, embrace "A Grammar of the Berber Language"; "Lectures on Logic" (1838); "The Difficulties of Elementary Geometry" (1841); "Catholic Union" (1844); "A State Church not Defensible" (1846); "A History of the Hebrew Monarchy" (1847); "Contrasts of Ancient and Modern History" (1847); "The Constitution and Moral Right or Wrong of our National Debt" (1849); "The Soul: Its Sorrows and Aspirations" (1849); "Crimes of the House of Hapsburg" (1851); "Royal Rome" (1852); "Personal Narrative" (1856); "The Iliad of Homer faithfully translated in Unrhymed English Metres" (1856); "Solomon's Song of Songs: A New Translation" (1857); "Theism" (1858); "Hiawatha translated into Latin" (1862); "English Institutions and their Reforms" (1865); "A Handbook of Modern Arabic" (1866); "Miscellanies" (1869); "Dictionary of Modern Arabic" (1871); "Europe of the Near Future" (1871); "Religion not History" (1877); "Libyan Vocabulary" (1882); "A Christian Commonwealth" (1883); "Essay on Diet" (1883); "Miscellanies," Volume II (1887); "Kabail Vocabulary" (1888); "Reminiscences of Two Exiles and of Two Wars" (1888). His most noted work was probably his "Phases of Faith," but "The Soul" represents him at his best.

Oertel, Max Josef, a German pathologist, born in Dillingen, Bavaria, March 20, 1835; died in Munich, July 19, 1897. After first studying philology and history at Munich, he devoted himself to natural science and medicine, and in 1860 became assistant to Prof. von Pfenfer in the latter's private hospital. He made a special study of laryngeal diseases, and when a chair of laryngology was founded at Munich in 1867 he became the incumbent. Prof. Oertel acquired a high reputation by his researches into the etiology and pathological anatomy of diphtheria, and was the first one to trace the cause of this malady to the development of a germ, the *micrococcus diphtheriticus*. The results of his studies were published in a monograph on the "Epidemic of Diphtheria." His noted work on "Therapeutics of Disorders in the Circulation of the Blood" put forward a new and effective method of treating and removing these conditions.

Oliphant, Mrs. Margaret Oliphant (Wilson), an English novelist, born in Wallyford, near Musselburgh, Midlothian, Scotland, in April, 1828; died in Wimbledon, England, June 25, 1897. While she was still a child her parents removed to Liverpool, and there, and in the neighboring Birkenhead, her youth was mainly spent. On her marriage in 1852 to Mr. Oliphant, an artist in stained glass, she went with her husband to London, but at the period of his death in 1859 she was living with him in Rome. Later she removed to Windsor, which was her home for nearly thirty years, till three years previous to her death she removed to Wimbledon. For many years her family consisted of two sons and two orphan nieces whom she educated and cared for. The elder son died in 1890 when he had nearly reached the age of thirty-five, and the second son, with whom she wrote "The Victorian Age of Literature," after many years of invalidism, died in 1894. She began to write early, and as pictures of Scottish life and character her "Mrs. Margaret Maitland" and "Adam Graeme," written in her early days of authorship, are much superior, in the opinion of sober critics, to any of the recent Scottish fictions so popular in the present decade. But the best among all her many novels are those comprising the "Chronicles of Carlingford," and of these "Salem Chapel" and "Phoebe Junior" are the chief. In these, and several later ones, the wit and humor displayed, the keen analysis of character, and the shrewd yet kindly wisdom apparent throughout were the delight of a wide circle of readers, and placed her high among novelists of the second rank and even, in the minds of many, established a claim to admittance into the first. But the defect of her work, as a whole, lay in its construction; her plots are often ineffective and conventional, and the strain of continuous production for so many years sometimes made itself manifest in the later half of a story whose opening was singularly promising. She understood both the shallows and the depths of human character, and could describe them as felicitously as she could accurately observe them; but, as one critic has said, "the genius that builds up a great work of imagination



complete in all its parts, the architectonic faculty, was denied her." At one period of life she wrote several short tales of the supernatural, among which "The Beleaguered City" is the finest, though "The Little Pilgrim" is probably the best known. They were not at first printed with her name on the title page, and appeared thus, as she herself explains, in a letter which never has appeared in print, "from a mere caprice, or rather, in the first case [an allusion to "The Little Pilgrim," the earliest of them all], from a desire for the freedom of saying my say upon very serious subjects without the impertinence of a personality." Besides her many novels and tales she wrote biographies and historical works, the quality of which varies considerably. Her biography of Edward Irving is a remarkably sympathetic piece of work, and her life of her kinsman, the gifted and erratic Laurence Oliphant, is in many respects admirably done. But her life of Sheridan must be placed at the other end of the scale from these, and her "Makers of Florence" and similar works, though widely popular, are more entertaining than valuable. A few among the best of her later fictions are "Within the Precincts," a locality easily recognized as Windsor, "Harry Joscelyn," "The Ladies Lindores," and "The Sorecress." As an author Mrs. Oliphant was without doubt the most industrious woman that England has ever seen; for, besides the astonishingly large number of books that bear her name upon the title page, she wrote an immense number of reviews and other articles, few of which appeared with her signature and the precise number of which she herself probably never had estimated. The quality of this part of her work was often of great excellence, for she was a clear-eyed critic and had the courage to utter just what she thought. Perhaps her latest contribution to a periodical was the article in "Blackwood's Magazine" for June, 1897, entitled "'Tis Sixty Years Since," a masterly survey of the Victorian period. It was her custom to begin writing after the members of her household had gone to bed and to remain at her desk until 3 or 4 o'clock in the morning. In this way she secured herself from interruption, and, pursuing this custom year after year, she was enabled to pour forth an astonishing amount of writing. Through all her literary life her associations with the publishing house of Messrs. Blackwood were on the most friendly footing, her latest work of importance being the history of their establishment, which was published posthumously. As a contributor to "Blackwood" she was for a long series of years the most regular as she was one of the most valued. When one considers the vast amount of her work, the high quality of it as a whole is surprising. She attained a praiseworthy level of production very early, and, in spite of occasional departures from this standard, continued upon this plane throughout, a remarkable instance of the association of ceaseless literary activity prolonged over nearly a half century, with the preservation of a high average of work. She had very little sympathy with certain tendencies in modern fiction, and in private life was very severe in her judgment of them. She was well aware that life has a seamy side, but she never chose to depict that side in the very modern realistic fashion. She looked out upon life in a cheerful, healthy way, regarded humanity with kindly tolerance, and exerted a wholesome, beneficent influence over the English fiction of her day. Her work was all conscientiously performed, and dying she had no cause to wish a line of it blotted. A nearly complete list of her published works includes "Passages in the Life of Mrs. Margaret Maitland" (1849); "Merkland" (1850); "Caleb Field" (1851); "Harry Muir" (1853); "Katie Stewart" (1856); "The Quiet Heart" (1856); "Zaidee"

(1856); "Magdalen Hepburn: A Story of the Scottish Reformation" (1856); "The Athelings" (1857); "Adam Graeme of Mossgray" (1857); "Lilliesleaf" (1857); "The Three Gifts" (1857); "The Days of my Life" (1857); "Sundays" (1857); "Orphans" (1858); "The Laird of Norlow" (1858); "Lucy Crofton" (1859); "Agnes Hopetoun's Schools and Holidays" (1859); "The House on the Moor" (1860); "The Last of the Mortimers" (1861); "The Life of Edward Irving," a biography (1862); "Chronicles of Carlingford: Salem Chapel" (1863); "Chronicles of Carlingford: The Rector and the Doctor's Family" (1863); "Heart and Cross" (1863); "Chronicles of Carlingford: The Perpetual Curate" (1864); "Agnes" (1865); "A Son of the Soil" (1866); "Chronicles of Carlingford: Miss Majoribanks" (1866); "Madonna Mary" (1866); "The Monks of the West," translated from the French of Count de Montalembert (1867-'79); "The Brownlows" (1868); "The Minister's Wife" (1869); "Historical Sketches of the Reign of George the Second" (1869); "The Three Brothers" (1870); "John: A Love Story" (1870); "Saint Francis of Assisi" (1871); "Squire Arden" (1871); "Ombra" (1872); "Mémorial of Count de Montalembert" (1872); "Chapters of Recent French History" translated from the French of Montalembert (1872); "At his Gates" (1872); "May" (1873); "Innocent: A Tale of Modern Life" (1873); "The Makers of Florence" (1874); "A Rose in June" (1874); "For Love and Life" (1874); "The Story of Valentine and his Brother" (1875); "White-ladies" (1876); "The Curate in Charge" (1876); "Phoebe, Junior, a Last Chronicle of Carlingford" (1876); "Mrs. Arthur" (1877); "Young Musgrave" (1877); "Carità" (1877); "Dante" (1877); "Dress" (1878); "The Primrose Path" (1878); "Within the Precincts" (1879); "The Greatest Heiress in England" (1879); "He that Will not when he May" (1880); "A Beleaguered City" (1880); "Cervantes" (1880); "Harry Joscelyn" (1881); "The Literary History of England 1790-1825" (1882); "In Trust" (1882); "A Little Pilgrim in the Unseen" (1882); "It was a Lover and his Lass" (1883); "The Ladies Lindores" (1883); "Sheridan" (1883); "Hester" (1883); "The Wizard's Son" (1884); "Sir Tom" (1884); "Two Stories of the Seen and the Unseen: The Open Door, Old Lady Mary" (1884); "Madam" (1885); "Oliver's Bride" (1886); "A Country Gentleman" (1886); "Effie Ogilvie" (1886); "A House Divided against Itself" (1886); "The Son of his Father" (1887); "The Makers of Venice" (1887); "Joyce" (1888); "The Second Son" (1888); "Mémorial of Principal Tulloch" (1888); "The Land of Darkness" (1888); "Molière," with F. Tarver (1889); "Neighbors on the Green" (1889); "Lady Car" (1889); "A Poor Gentleman" (1889); "Mrs. Blencarren's Troubles" (1890); "Royal Edinburgh" (1890); "Sons and Daughters" (1890); "Kirsteen" (1890); "Jerusalem, the Holy City" (1891); "The Heir Presumptive and the Heir Apparent" (1891); "The Marriage of Elinor" (1892); "The Victorian Age of English Literature" (with F. R. Oliphant), 1892; "The Cuckoo in the Nest" (1892); "Diana" (1892); "Thomas Chapnergh: A Biography" (1893); "Lady William" (1893); "The Sorceress" (1893); "Prodigals and their Inheritance" (1894); "Historical Characters of the Reign of Queen Anne" (1894); "A House in Bloomsburg" (1894); "Sir Robert's Fortune" (1894); "The Makers of Modern Rome" (1895); "Old Mr. Tredgold" (1895); "The Story of a Governess" (1895); "Who was Lost and is Found" (1895); "A Child's History of Scotland" (1895); "Two Strangers"; "The Unjust Steward" (1896); "Jeanne D'Arc: Her Life and Death" (1896); "The Modern Sin"; "The Ways

of Life" (1897); "Annals of a Publishing House: William Blackwood and his Sons, their Magazine and Friends" (1897).

Palgrave, Francis Turner, an English poet, born in 1824; died Oct. 24, 1897. He was a son of Sir Francis Palgrave; went from the Charterhouse School to Oxford, and was elected a fellow of Exeter College after taking a first-class in classics in 1847. From 1850 till 1855 he was vice principal of the Kneller Hall Training School, and he then became examiner and assistant secretary in the Education Office, where he remained until he was elected Professor of Poetry at Oxford in 1885, on the death of Principal Shairp. He published "Idyls and Songs" (1864); a book of hymns in 1867; "Lyrical Poems" (1871); "Visions of England" (1882); and "Amenophus and Other Poems" (1892). He was the author also of critical essays on art. His chief work was a collection of the songs and lyrics of English poets, published in 1861 under the title of the "Golden Treasury," which was followed by other anthologies, such as the "Children's Treasury," "Treasury of English Sacred Poetry," and volumes selected from the poetry of Shakespeare, Tennyson, Keats, and Herrick. Shortly before his death he completed a second series of the "Golden Treasury," containing the work of Victorian poets.

Pearson, John Loughborough, an English architect, born in Brussels, Belgium, July 15, 1817; died in London, Dec. 11, 1897. He was the son of William Pearson, an English painter in water colors, and at the age of fourteen entered the architect's office of Ignatius Bonomi, in Durham. After a time he went to London, studied with Salvin, and later with Philip Hardwick, whose assistant he became. His private practice began with the erection, in 1843, of St. Ann's Chapel, Ellerker, Yorkshire, the drawings of which make it manifest that even thus early he had acquired an extensive knowledge and appreciation of mediæval design. The first work that brought him prominently forward was the Church of the Holy Trinity at Westminster, which was greatly admired by Barry, Scott, and Pugin, but in the main did not differ greatly from the better class of Gothic at that time in its accurate following of mediæval detail. Before this he had engaged in several restorations, one of the most important of which was that of the church of Stow-in-Lindsey, Lincolnshire, where he restored the Norman vaulting. He early discovered that vaulting was neither so difficult nor so expensive as had been thought, and from about this time covered his larger churches with brick vaults on stone ribs. In this portion of his career he came under the influence of early French work, and throughout his life he was affected by its spirit, his spires in particular exhibiting this. His first really individual work was St. Peter's, Vauxhall, built in 1861, a church whose somewhat forbidding exterior hardly prepares one for its impressive interior. In 1871 he designed St. Augustine's, Kilburn, the most important of all his parish churches. The originality of treatment apparent in this church is equally observable in the London Church of St. John, Red Lion Square, which was designed in 1874, and displays an unusual amount of constructive skill. The detail of both churches, as well as that of much of Mr. Pearson's later work, is thirteenth century English. Of a little later date than these are the churches of St. Michael, Croydon; St. John, Upper Norwood; and St. Alban, Birmingham—all vaulted, cruciform structures, with aisles and chapels, and each possessing very distinctive features. Later notable buildings designed by him are the churches of St. Stephen, Bournemouth; St. Agnes, Toxtith Park; All

Saints, Hore; the strikingly original parish church of Headingley, near Leeds; the Catholic Apostolic Church at Maida Vale; the Astor estate office on the Thames Embankment, erected in 1893; and additions to Sidney Sussex and Emmanuel College, Cambridge. As a restorer of English cathedrals he was perhaps best known, and he was the most conservative as well as the most learned of English restorers. In his management of restorations, decayed material was removed to be replaced with new, isolated stones were removed one by one, disintegrated masses taken down and replaced, stone for stone, moldings and ornaments were copied from the originals, if anything was left to copy; if not, they were confessedly new and would be so seen by any architect, at least, even though following the style and motive of the old work. In 1870 he became architect to Lincoln Cathedral, and on the death of Street, in 1881, succeeded him as architect to Bristol Cathedral, completing the nave and western towers, and designing the reredos. The extensive restorations in Peterborough in the same decade, which involved the taking down and rebuilding of the lantern tower, were conducted by him, as were the very recent repairs of the west front. He was also architect to Rochester and Chichester Cathedrals, the recent conservative restoration of the western façade of the former structure being his; while at the time of his death he was engaged upon a design for the completion of the northwest tower at Chichester. Extensive alterations at Wakefield Cathedral had been planned by him in the last months of his life, and he had long been consulting architect to the cathedrals of Exeter and Gloucester. The alterations at Westminster Hall, completed in 1884, were by him; but his most important work as a restorer was at Westminster Abbey. Here he restored the upper portion of the north transept front and the south aisles of nave and choir, works which have not been suffered to pass without criticism, but which the judgment of experts on the whole has highly approved. The great work of Mr. Pearson, the only modern Gothic structure that fully deserves to be called a cathedral, is Truro Cathedral, on the plans of which he began working in 1878. This great building is of the double cruciform plan, and when completed will possess all the important features of the great mediæval cathedrals of England. It will consist of nave and aisles, with southern porch, western spired towers and porch, greater transept with lantern and spire, choir with aisles and eastern transepts, and on the north a cloister garden and octagonal chapter house. The foundation stone was laid May 20, 1880, and in November, 1887, the completed portion was opened for service. Mr. Pearson did not confine himself to the working out of one especial phase of Gothic, but his favorite style was the early pointed; to this he imparted his own individuality, setting his impress upon all that he did, and escaping most successfully the monotony which this development of Gothic sometimes exhibits. He was full of original ideas, and one of the first to break away from the old habit of copying and to design modern buildings in the true mediæval spirit, and was, in fact, the founder of the school of modern Gothic architecture. Like other architects, he had mannerisms, among which was a fondness for small details. He liked to place lofty flanking turrets beside his gables, to minimize his spires in order to display tower angles, and, in general, to emphasize vertical lines. He designed a great number of schools, mansions, country seats, vicarages, and other structures; but these, however excellent of their kind, probably contributed little to his reputation. On Dec. 15 his funeral took place in Westminster Abbey, his body being laid to rest

close to the pulpit in the nave, and very near the graves of his distinguished predecessors, Barry, Street, and Sir Gilbert Scött.

Plunket, William Conyngham, Baron, an Anglican prelate, born in Dublin in 1828; died there, April 1, 1897. He was the son and heir of the third Lord Plunket by a daughter of C. K. Bushe, Lord Chief Justice of Ireland, was graduated at Trinity College, Dublin, in 1853, ordained in 1857, and became chaplain to his uncle, Thomas Plunket, Bishop of Tuam, from whom in 1858 he received the living of Kilmoglan and Cummer in the west of Ireland, where he took a great interest in the missions for the conversion of Catholics to the English Church, a movement which roused fierce and violent opposition among the Irish, but received warm support in England. When the Irish Church was disestablished in 1869, Lord Plunket, who in that year had become precentor of St. Patrick's Cathedral, took a prominent part in the work of reconstructing its machinery on the new basis of a voluntary organization with lay representation, and exerted an effective influence in preserving its intrinsic identity with the English establishment, which the extreme Protestant party was disposed to sacrifice. In 1876 he was elected Bishop of Meath, and in 1884 he was translated to the metropolitan see of Dublin when it was vacated by the resignation of Archbishop French. As Archbishop of Dublin he played an important part in the recent history of the English Church in Ireland. He was associated with the evangelical party, and sustained amicable relations with the dissenting bodies. His bold course in seeking to found a Reformed Episcopal Church in Spain under Bishop Cabrera gave rise to an episode in international politics. He was interested in the promotion of Irish elementary schools and served as one of the commissioners of national education. He founded the Church of Ireland training college and the Alexandra school. He was an ardent supporter of all philanthropic enterprises that he deemed to be of benefit to Ireland.

Pollock, Sir Charles Edward, Baron, an English jurist, born in London in 1823; died there, Nov. 21, 1897. He was a son of the veteran Chief Baron Sir Frederick Pollock and the grandson of a Scotch saddler who was the leader in his trade in London in the last century, and whose numerous descendants have attained the highest place in the law, the army, literature, and official life. He had no university training, but read law with his father and served as his private secretary when he was Attorney-General, was called to the bar in 1846, reported cases for some years and wrote books on county court procedure, merchant shipping, the law of evidence, and other subjects. His practice gradually increased, and the ablest and most ambitious of law students sought to become his pupils. He was retained and employed as arbitrator in many important references. He became a bencher of the Inner Temple in 1866, joined the fraternity of sergeants at law in 1872, and returned to his old inn in 1882 after that society was dissolved. He was raised to the bench in 1873, and knighted. As a judge he exhibited often his remarkable erudition, especially in curious and antiquarian phases of the law, but he was too kindly and sympathetic to be a great judge, and as referee had fallen too much into the habit of compromise.

Pulszky, Ferencz Aurel, a Hungarian patriot, born in Epirus in 1814; died Sept. 9, 1897. A book of sketches of travel in England procured his election to the Hungarian Academy at the age of twenty-three. He entered politics, and in 1839 was elected to represent his native county of Saros in the Hungarian Chamber. In 1848, while Hungary was still governed from Vienna, he was nominated

secretary in the Hungarian Ministry of Finance, but as soon as the revolution broke out he threw up his office and plunged with ardor into the movement, and was a member of the National Government. Kossuth sent him in 1849 to represent Hungary abroad. After the patriots were vanquished he remained as an exile in foreign parts, and accompanied Kossuth on his travels and sojourn in America, about which he subsequently wrote a volume that was published simultaneously in English and German. Meanwhile the council of war sitting in Buda-Pesth had condemned him to death *in contumaciam*. In 1860, attracted by the movement for Italian national independence, Pulszky hastened to the scene of the conflict and enrolled himself in Garibaldi's legion. He was captured at Aspromonte and kept a prisoner at Naples for a while, and then released. When the amnesty of 1866 and the reconciliation with Austria reopened to Pulszky the gates of his country he returned to Hungary and was one of those who rallied to Deak and the policy of conciliation on the basis of the autonomy of the Hungarian state. He was a member of the Hungarian parliament from 1867 till 1875. In 1869 he was appointed director of the National Hungarian Museum, and in 1872 he was made director general of all the museums, public collections, and libraries of Hungary. In 1884, in spite of his advanced age, he re-entered the Chamber, and gave proof, as in the various other functions that he discharged, of remarkable energy and indefatigable industry. Among the productions of his pen are an archæological study of the age of copper in Hungary and a volume of autobiographical reminiscences.

Preyer, Thierry Wilhelm, a German physiologist, born in Manchester, England, in 1841, died in Wiesbaden, July 15, 1897. He studied in Bonn, Berlin, Heidelberg, Vienna, and Paris, taking his doctor's degree in philosophy in 1862 and in medicine in 1866, and in 1869 he became Professor of Physiology at Jena. He conducted laboratory investigations in quantitative spectral analysis, the qualities of the different senses, and the perception of sound. His best known work is "The Soul of the Child." Other books of his are "Prussic Acid," "On the Task of Natural Science," "On the Causes of Sleep," "The Struggle for Existence," "Elements of General Physiology," and "Hypnotism."

Renouf, Sir Peter Le Page, an English archæologist, died in London in October, 1897. He was a disciple of Newman, and published some essays on religious history. Then he devoted himself to the study of Oriental languages and to researches in Egyptology. His principal works are a treatise on the religion of ancient Egypt, published in 1879, and an edition of the papyrus of Ani, issued in 1890. He was honorary conservator of the Egyptian collections in the British Museum.

Richter, Albrecht, an Austrian politician, born in Bohemia in 1845; died in Vienna, March 3, 1897. Dr. Richter was a prominent lawyer in Vienna, who, as a member of the Municipal Council, resisted with vigor and eloquence the anti-Semitic movement from its incipency. In 1894 he was elected burgomaster of the Kaiserstadt, but the Windischgrätz ministry, dominated at the time by Clerical and anti-Semitic influences, vetoed the election on the ground that Dr. Richter, who had married a Jewess and stood outside of the pale of the Catholic Church, belonged to no recognized religious confession. This decision gave an impetus to the anti-Semitic movement, and paved the way for the eventual triumph of Dr. Lueger. Dr. Richter was one of the principal promoters of the various schemes for the extension and improvement of the city of Vienna.

Riehl, Wilhelm Heinrich von, a German historian, born in Biebrich in 1823; died in Munich, Nov. 16, 1897. After studying theology and philosophy at different universities, he devoted himself to historical studies at Gießen. He became a journalist at Frankfurt in 1845, and was afterward connected with papers in Karlsruhe, Wiesbaden, and Augsburg until 1853, when King Maximilian appointed him Professor of History at the University of Munich. In 1885 he became director of the National Museum and conservator of Bavarian monuments of art and antiquities, while still retaining his professorship. Prof. Riehl was a composer, and published several musical works. His books on the history of civilization and manners are very numerous, and he wrote several historical novels. Among his best known works are "Middle-Class Society," "Country and People," "Family Book of Travels," "Stories from Ancient Times," and "Studies of the History of Civilization during Three Centuries."

Rocca, Enrico Morozzo della, an Italian general, born in 1807; died in August, 1897. As a cadet of a Piedmontese family whose nobility dates from the thirteenth century, he was placed at court when nine years old as a page to the Prince of Carignano, and later passed through the military academy, which he left in 1825 to join the staff with the grade of lieutenant. He did good work in geodetical and topographical surveying till Carlo Alberto, whom he had served as page, came to the throne in 1831, and called him to court to be squire to the Duke of Savoy. After the defeat at Novara and the abdication of the King in favor of Vittorio Emanuele, the latter intrusted to Gen. della Rocca the portfolio of Minister of War, which he was not long able to retain amid the continual political storms of the period. He continued, however, to be one of the intimate confidential advisers of his sovereign, and it was he and Cavour, his old comrade, who urged Vittorio Emanuele to take part in the Crimean expedition with the view of securing the future co-operation of Napoleon III in the unification of Italy.

Rosmead, Lord (formerly Sir HERCULES ROBINSON), a British administrator, born in Rosmead, County Westmeath, Ireland, in 1824; died in London, Oct. 28, 1897. He was a son of Admiral Hercules Robinson, was educated at Sandhurst, held a commission in the army for a short time, then served in various positions in the Irish civil service, and in 1854 was appointed President of Montserrat and Lieutenant Governor of St. Christopher. On completion of his term of five years he was made Governor of Hong-Kong. He served in 1863 on a commission to inquire into the financial condition of the Straits Settlements. In 1865 he was transferred from Hong-Kong to Ceylon, where he served until he was appointed, in 1872, Governor of the self-governing colony of New South Wales. He heartily indorsed the incipient project of Australian federation, and was already an Imperialist, bringing to a successful issue the annexation of the Fiji Islands in 1874. In 1879 he went to New Zealand, but was governor of that colony only a year and a half, when he was called away to undertake the difficult duties of Governor of the Cape of Good Hope and High Commissioner of South Africa. He had hardly reached Cape Town when, on Dec. 16, 1880, the Transvaal declared its independence. The campaign that followed ended with the disastrous battle of Majuba Hill, after which he made peace in accordance with the demands of the Liberal party at home, though much against the sentiment of the English party at the Cape. In the nine years that followed Sir Hercules Robinson, to whom in the delicate situation of South Afri-

can affairs the home Government allowed extraordinary liberty of action, and who by his tact and diplomacy and his sagacity in yielding to forces that he could not resist, and displaying unexpected energy and activity wherever English prestige and power could be advanced, played a greater part than any other colonial governor of the century. Trusted by the Liberal party, he, in conjunction with Cecil Rhodes, made it responsible for the most ambitious of forward movements, and they even gained the support of the Dutch of Cape Colony for their imperial designs, playing upon their fears of German expansion. The Afrikaner Bond, formed with sentiments of direct antagonism to English rule under the system of conciliation adopted by Sir Hercules Robinson, became the mainstay of the policy of British imperial extension. After Bechuanaland was made a British protectorate, in 1885, Sir Charles Warren, who led the expedition that occupied the country, proposed to divest Sir Hercules Robinson of the office of high commissioner and have the Imperial Government take the direct and sole control of the territories to be acquired in the north, holding that the Governor of Cape Colony was too much under the influence of the Cape Dutch and their brothers of the Boer republics. This controversy revived the jealousies between the Dutch and the English which the conciliatory policy of Sir Hercules Robinson had succeeded in allaying, but his final victory restored to a considerable extent the mutual confidence between the parties. In the year in which his term expired the British South Africa Company obtained a charter to administer the territories that the Portuguese had been forced by menaces to relinquish, up to and beyond the Zambesi as far as Lake Tanganyika. Sir Hercules Robinson retained the confidence of the Dutch to the last, and, when a convulsion in the Transvaal seemed again to be impending, the Liberal Government, in 1895, sent him out again as Sir Henry Loch's successor, although his appointment was the subject of sharp criticism, because during his retirement he had entered into relations with various South African companies. Cecil Rhodes was still Premier, and no break had occurred between him and the Dutch leaders, and hence the former conditions were expected to be restored by him and Sir Hercules Robinson, whom President Krüger had said that he preferred to all other British governors. With his usual diplomatic skill he endeavored to compose the quarrels between the Uitlanders and the Transvaal Government. Then came the Jameson raid and the explosion of the plot in which his own officers were implicated, of which Cecil Rhodes was the main instigator. He himself rested under suspicion, as well as the colonial authorities at home. Panic and universal distrust pervaded South Africa, and race feeling was aroused almost to the pitch that would precipitate civil war. In these trying circumstances the aged and sickly governor acted with energy and discretion, displaying his political ability as he never had done before. He promptly disavowed Dr. Jameson's action, and endeavored to arrest his march. Then he proceeded to Pretoria, and negotiated the release of Dr. Jameson and his fellow officers. His failure to obtain any immediate redress for the grievances of British subjects, and thus rehabilitate British prestige and justify the revolutionary conspiracy, was keenly criticised by the imperialists in England and South Africa, but the best politicians concluded that he had extricated his Government from a difficult and humiliating situation as well as could be done. His career, however, was considered at an end; and after being elevated to the peerage, having already received the colonial order of knighthood and a

baronetage for his previous services in South Africa, he remained a short time to inaugurate a new policy of conciliation, and was then replaced, in the spring of 1897, by Sir Alfred Milner.

Ross, Alexander Milner, a Canadian naturalist, born in Belleville, Ontario, Dec. 13, 1832; died in Detroit, Mich., Oct. 27, 1897. He came to New York city when a boy, was for a time a compositor on the "Evening Post," and subsequently studied medicine under Dr. Valentine Mott, receiving a degree in 1855. He joined Walker's filibustering expedition to Nicaragua, and later served with John Brown in Kansas. During the civil war he acted as surgeon in the National army, and at its close served similarly in the Mexican army under Juarez. He then returned to Canada and became an enthusiastic collector and classifier of Canadian fauna. He was a member of the College of Physicians and Surgeons of Quebec and Ontario, and was appointed Commissioner of Agriculture for Ontario. In 1876 he was knighted by the Emperor of Russia and the Kings of Italy, Greece, and Saxony, and in 1877 by the King of Portugal. The Kings of Belgium and Denmark made him their consul in Canada, and in 1879 he received from the French Government the decoration of the Académie Française. His writings include "Recollections of an Abolitionist" (Montreal, 1867); "Birds of Canada" (1872); "Butterflies and Moths of Canada" (1873); "Flora of Canada" (1873); "Forest Trees of Canada" (1874); "Ferns and Wild Flowers of Canada" (1877); "Mammals, Reptiles, and Fresh-water Fishes of Canada" (1878); "Vaccination a Medical Delusion" (1885); and "Medical Practice of the Future" (1887).

St. Martin, Vivien, a French geographer, born in Martin-do-Fontenay, Calvados, in 1802; died in Paris, Jan. 3, 1897. He went to Paris at an early age, and when only twenty-three published a universal atlas that was regarded as one of the most complete of the time. In 1828 he founded, with M. Balleul, the "Bibliomappe," a periodical that developed a popular taste in geographical studies, but ceased to appear in 1830. In 1838 he published a new work on French geography. From 1836 he was engaged for several years in translating Sir Walter Scott's novels and on historical books. Resuming his geographical work, he edited "Nouvelles Annales des Voyages" from 1845 to 1854, and published two volumes of the "Histoire Universelle des Découvertes Géographiques," which was interrupted by the revolution of 1848. This important work on the history of geography and geographical discoveries was finally completed on a smaller scale in 1873. He published monographs on the primitive peoples of the Caucasus, ancient Asiatic geography and ethnography, Greek and Latin geographical knowledge of India, and northern Africa in classic antiquity. From 1863 till 1873 he edited the "Année Géographique," an annual record of exploration, besides writing constantly for the press. In 1876 he undertook the editorship of the "Nouveau Dictionnaire de Géographie Universelle," which was only completed in 1896. He presented, in 1888, to the Academy of Inscriptions a mass of materials that he had collected for a historical dictionary of ancient geography.

Sanfelice di Acquavella, an Italian prelate, born in Aversa, April 18, 1834; died in Naples, Jan. 3, 1897. He was Archbishop of Naples, and was created a cardinal on Mar. 24, 1884. Cardinal Sanfelice endeared himself to the people among whom he lived by his heroic charitable labors during the cholera year and at the time of the earthquake at Casamicciola, when he opened all the churches for the reception of the sufferers, and was indefatigable in his care of the wounded.

Siciliano di Rende, Camillo, an Italian prelate, born in Naples, June 9, 1847; died May 16, 1897. He became Archbishop of Benevento, and was created a cardinal on March 14, 1887.

Skelton, Sir John, a Scottish historian, born in Edinburgh in 1831; died there, July 20, 1893. He was the son of a writer to the Signet, was educated at St. Andrews and Edinburgh universities, embraced the profession of the law, was admitted into the faculty of advocates in 1854, and after a career of successful practice was appointed by Mr. Disraeli in 1868 Secretary of the Board of Supervision, of which he became chairman in 1892. After the Local Government Board for Scotland was established in its place he was elected the first vice-president of that body. After his retirement in 1897 he received the honor of knighthood. He published a treatise on the treatment of pauperism in 1876, and a handbook on public health in 1890. Under the pseudonym of "Shirley" he contributed to the Scotch magazines. Among his published works are a volume of essays entitled "Nuga Critica" (1862), "A Campaigner at Home" (1865), "The Impeachment of Mary Stuart" (1876), "Essays in Romance" (1878), and the novel of "Crookit Meg" (1880). In later years he distinguished himself by his earnest and able efforts to rehabilitate the reputation of Mary, Queen of Scots. His chief historical works were "Maitland of Lethington and the Scotland of Mary Stuart" (1887) and "Mary Stuart" (1893). His "Table Talk of Shirley," of which one volume appeared in 1895 and a second in 1897, contains anecdotes and reminiscences of many literary characters of the past generation.

Steenstrup, Japetus, a Danish scientist, born in Vang in 1813; died in Copenhagen in July, 1897. He became professor of mineralogy and botany at the Academy of Sorø in 1841, and in 1845 professor of zoölogy in the University of Copenhagen and at the same time director of the Zoölogical Museum. He resigned his chair in 1885. The number and value of his works in natural history and anthropology gave him a wide reputation in the world of science, and caused the Institut de France and the Academies of Science in Rome and St. Petersburg to elect him a corresponding member. His researches in natural history led him to occupy himself with early man, and in the latter part of his life he published works dealing with extinct fauna, prehistoric mounds, Kjökkenmöddings, and the discovery of Gundestrup.

Stephan, Dr. von, a German postal reformer, died April 8, 1897. He had been for many years the head of the Imperial Post Office, was its organizer in the early period of the empire, and originated a very perfect system and introduced many improvements in the postal service. The postal card was his invention.

Sterneck, Baron, von Ehrenstein, an Austrian admiral, born in 1830; died in Vienna, Dec. 5, 1897. He entered the navy at the age of seventeen, and became commander of a frigate in the North Sea in succession to Admiral Tegethoff in 1864. In 1866 he commanded Admiral Tegethoff's flagship at the battle of Lissa, which he won for the Austrian fleet by ramming with his ironclad and sinking the "Re d'Italia," the largest of the Italian vessels. For this he was decorated with the Maria Theresa order. After the war he took a prominent part in the work of reorganizing the Austrian navy, and on the death of Tegethoff he succeeded to his post at the head of the service. He continued the task of his famous predecessor with a success that naval authorities of other countries have regarded with admiration in view of the small means placed at his disposal for the creation of a modern navy.

Stoughton, John, an English historian, born in Norwich, Nov. 18, 1807; died in Ealing, Oct. 25, 1897. He was educated as a solicitor, his father's profession, but decided to become a Christian minister, chose the Congregational denomination, entered Highbury College at the age of twenty-one, and after completing his studies became associate pastor of the Congregational Church at Windsor. Ten years later he took charge of the church at Kensington, where he remained until he retired in 1874. He continued to an advanced age to fill the chair of Historical Theology at New College, which he had accepted in 1872. He received the degree of D. D. from Edinburgh University in 1872. Dr. Stoughton was much interested in the work of the missionary and Bible societies and in the Young Men's Christian Association and the Evangelical Alliance from their inception, and was one of the founders of the Congregational Union, the object of which was to promote co-operation among the Congregational churches without destroying their individual independence. He was identified with every movement to bring about harmonious feeling and action between Churchmen and nonconformists, and was a close friend of Dean Stanley and others of the evangelically inclined clergy. Dr. Stoughton made a life-long study of the Puritan period of English history. He first published "The Ecclesiastical History of England from the Opening of the Long Parliament to the Death of Oliver Cromwell" (1867), treated the next succeeding period in "The Church of the Restoration," and followed this up with volumes on the reigns of Queen Anne and the first three Georges, and concluded the series with "Religion in England from 1800 to 1851."

Sylvester, James Joseph, an English mathematician, born in London, Sept. 3, 1814; died March 15, 1897. He was educated at St. John's College, Cambridge, where, however, he could not take his degree on account of being a Jew. He was for some time Professor of Natural Philosophy in University College, London, and subsequently Professor of Mathematics at the University of Virginia. He held the same chair at the Royal Military College, Norwich, 1855-'71, and at Johns Hopkins University, Baltimore, 1873-'83. In December, 1883, he became Professor of Geometry at Oxford, and he held that chair ten years. He was a mathematician of extraordinary gifts, which could be best appreciated only by specialists, and was a member of many learned societies in Europe and America, having been a fellow of the Royal Society for nearly fifty years. He founded the "American Journal of Mathematics," of which he was the first editor, and published many scientific papers, and was the discoverer of a much discussed theory of reciprocants. His only works in book form are "Nugæ Mathematicæ" (London, 1866) and "Laws of Verse, or Principles of Versification exemplified in Metrical Translations" (1870).

Teck, Mary Adelaide Wilhelmina Elizabeth, Duchess of, an English princess, born in Hanover, Nov. 27, 1833; died in Richmond, Oct. 27, 1897. She was the second daughter of Adolphus Frederick, seventh son of George III, and was a first cousin of the Queen of England, and on the side of her mother, a daughter of the Landgrave of Hesse, was first cousin also of the Queen of Denmark. Her childhood was spent between London and the castle of Rumpenheim. After her father's death in 1850 she lived with her mother at Kew. On June 12, 1866, she married Count Francis Paul of Hohenstein, the only son of Duke Alexander of Württemberg and the Countess Hohenstein. Her husband, who was three years younger than she, retired from the Austrian army, in which he had won distinction in the Italian campaign of

1859, and the two resided in Kensington Palace, where their four children were born. He had been created Duke of Teck by the King of Württemberg. Princess Victoria Mary, their eldest child, born May 26, 1867, was married in 1893 to Prince George of England, Duke of York, the heir to the throne, having previously been engaged to the Duke of Clarence. Prince Adolphus, the second child, born Aug. 13, 1869, married in 1894 Lady Margaret Grosvenor, daughter of the Duke of Westminster. The two younger children, Prince Francis Joseph and Prince Alexander, were born in 1870 and 1874. Later they lived at White Lodge in Richmond Park, of which the Queen gave them the use. The Duchess of Teck was exceedingly philanthropic, spending in charity a fifth of the annual allowance of £5,000 given her by Parliament.

Themptander, Oskar Robert, a Swedish statesman, born in 1845; died in Stockholm, Jan. 30, 1897. He was appointed Minister of Finance on March 8, 1881, and on May 16, 1884, became Minister of State, and remained at the head of the Government till February, 1888, when his ministry resigned after a victory at the polls of the Protectionist Agrarian party.

Tolain, Henri Louis, a French politician, born in Paris in 1828; died there, May 4, 1897. He was a journeyman carver, and in 1861 was one of the artisan delegates sent to the London exhibition. He was one of the founders of the International in 1864, attended all the congresses of that body, and in 1868 suffered imprisonment for taking part in its deliberations. When, however, the Collectivist theories of Karl Marx were adopted as its programme, he seceded and formed the *Fédération Ouvrière*. He was a candidate for the Corps Législatif in 1864, and in February, 1871, he was elected from Paris to the National Assembly. Attempting to mediate between the Government and the Commune, he was arrested by the latter. In 1875 he became a Senator. He was a vigorous opponent of the monarchist and Boulangist movements. In 1888 he represented France, with Jules Simon and Burdeau, at the labor conference in Berlin called by the young Kaiser Wilhelm.

Tunner, Peter von, an Austrian metallurgist, born in 1808; died June 13, 1897. He was the founder and the first professor in 1840 of the School of Mines in Leoben, Styria. In 1878 he received a medal from the Iron and Steel Institute of Great Britain, in recognition of his important discoveries connected with the metallurgy of steel. He wrote many valuable treatises on the processes in the manufacture of iron and steel.

Twiss, Sir Travers, an English jurist, born in London, March 19, 1809; died there, Jan. 15, 1897. He entered University College, Oxford, at the age of seventeen, was graduated with honors in mathematics and classics, became a fellow of his college and a tutor and public examiner successively in classics and mathematics. Having adopted Niebuhr's views on early Roman history, he published in 1837 an epitome of the historian's work, which he followed up with an edition of Livy with Latin notes. In 1842 he was elected Drummond Professor of Political Economy, and at the end of his term he published "A View of the Progress of Political Economy in Europe since the Sixteenth Century" (1847). In 1846 he published an essay on the Oregon boundary question, which then threatened to lead to a rupture between England and the United States. This was the first of a long series of productions on questions of international law that established his reputation as a high authority on the subject. He published in 1848 a treatise on the relations of the Duchies of Schleswig and Holstein to the Danish Crown and the German Federation.

When Great Britain was wrought up to a high pitch of excitement by the establishment of a Roman Catholic hierarchy in England, he discussed the question in "Letters Apostolic of Pius IX considered with reference to the Law of England and the Law of Europe," in which he combated the papal pretensions both in Great Britain and the British colonies. He held the professorship of International Law at King's College, London, from 1852 to 1855, resigning then to accept the chair of Regius Professor of Civil Law at Oxford, which he held for fifteen years, being succeeded by James Bryce. He had been an advocate of Doctors' Commons since 1840, in which year he was also called to the bar at Lincoln's Inn. In 1849 he was appointed commissary-general at Canterbury, in 1852 vicar-general of the archbishop, in 1858 chancellor of the diocese of London, and in 1862 advocate-general of the Admiralty. After the abolition of Doctors' Commons in 1857, he was made in 1858 a Queen's counsel, with other eminent civilians, and was knighted in the same year. He was a member of a commission that investigated in 1867 the laws of neutrality and of the commission of 1868 that reported on the naturalization and allegiance laws, and in 1869 he served on the commission that dealt with the marriage laws of Great Britain and Ireland and the colonies. He served also on the commission on rubrics. He was one of the arbitrators who settled the boundary between Canada and New Brunswick. In 1884 he drew up at the request of the King of the Belgians a constitution for the Independent State of the Congo. In 1885 he acted as legal adviser of the British Government at the West African Conference in Berlin. He published lectures on international law in 1856. In 1861 he published "The Law of Nations considered as Independent Political Communities." His principal works on the subject are "The Law of Nations in Time of Peace" and "The Law of Nations in Time of War," which he translated into French with the assistance of Prof. Alphonse Rivier, of Brussels. He was one of the founders in 1872 of the Institut de Droit International, and one of the chief promoters of the Association for the Codification of the Law of Nations instituted in 1873.

Vacherot, Étienne, a French philosopher, born in Langres in 1809; died in Paris, July 30, 1897. He was educated at the Paris Normal School, and had been Professor of Philosophy at different colleges in the provinces when Victor Cousin selected him in 1837 as his chief subordinate in the Normal School. In 1839 he took Cousin's place in the lecture room, and became very popular with the students. His history of the school of Alexandria was condemned by the clergy, and to his principal assailant, Abbé Gratry, he replied in such caustic and irreverent terms that he was suspended from his functions. When Louis Napoleon became Emperor he refused to take the oath of allegiance, and was dismissed. He expounded his liberal views in articles for "L'Avenir" and also in his "Métaphysique et Science," and his "Démocratie," though a purely theoretical work, contained an indirect condemnation of the Napoleonic system so severe that he was tried and sentenced to a year's imprisonment, while his counsel, Émile Ollivier, then a valiant assailant and afterward the oratorical champion of the empire, was suspended from the Paris bar. In 1868 Vacherot succeeded Cousin in the Academy of Moral Sciences. Ollivier on becoming Premier in January, 1870, offered him a place in the Council of Education, but he haughtily replied that, having been deprived of his civil rights, he was ineligible. He was one of the mayors of Paris during the siege, was elected to the Assembly, and was one of three Deputies of Paris who voted in

favor of concluding peace with Germany. He supported the Broglie Cabinet, but voted for the Republican Constitution. He retired from the Chamber in 1876, and in subsequent years wrote for the "Revue des Deux Mondes," and published some political treatises. His writings were admired alike for the vigor and the elegance of his style. He was disappointed in the republic, and was converted to monarchistic principles.

Vaughan, Charles John, an English prelate, born in Leicester in 1816; died in Llandaff, Oct. 15, 1897. He came of a family that had won high distinction in various professions. His father was a clergyman. He and his brothers were trained at Rugby under Dr. Arnold. He had a brilliant career at Cambridge, was elected a fellow of Trinity in 1839 and immediately after he was ordained in 1841 was presented to St. Martin's, Leicester, one of his father's former incumbencies, where he remained three years. He was a candidate in 1842 for the head mastership of Rugby, rendered vacant by the sudden death of Dr. Arnold, and in 1844 he was chosen head master of Harrow, vacant through the resignation of Dr. Wordsworth. Under his direction the school rapidly recovered from its previously weak and declining condition. In 1860 he became vicar of Doncaster and Chancellor of York. In 1869 Mr. Gladstone appointed him master of the Temple, and in 1879 he became Dean of Llandaff. He resigned the mastership of the Temple in 1894. He was a member of the committee that revised the translation of the New Testament, and edited several of the Epistles, but his sermons, of which many volumes were published, were marked by their devotional spirit, and contained scarce a trace of biblical or ecclesiastical erudition or theological dialectics. He insisted on assuming the Gospel without argument, and presented the spiritual aspects of religion in an inspiring and forcible style.

Wattenbach, Wilhelm, a German historian, born in Hamburg in 1820; died in Frankfort, Sept. 20, 1897. After studying in various universities he went to Berlin and became a collaborator, and afterward one of the chief editors, of the "Monumenta Germaniæ Historica." While making researches for this work in the Vienna archives and in various old convents he found time to complete a book on the ecclesiastical history of Bohemia and Moravia. This was followed by studies of the sources of mediæval and ancient history. In 1862 he became Professor of History in the University of Heidelberg. Soon after that he published two books on Greek palæography and an introduction to the study of Latin palæography, also a book on the manuscript work of the Middle Ages. He wrote also sketches of travel, describing holiday jaunts in Algiers, Spain, Portugal, Sweden, and the mountains of Saxony. In 1876 he published a popular history of the papacy.

Wirth, Franz, a German publicist, born about 1822; died in Frankfort-on-the-Main, May 15, 1897. He was one of the German Democrats of 1848, and in later years called himself a Social Democrat, though he was not a thorough upholder of the principles and purposes of the party of that name. He was always an advocate of peace and disarmament, founded a branch of the Peace Society in Frankfort in 1886, and was a constant contributor to the periodicals devoted to that cause, and was one of the two German members of the International Peace Bureau at Bern.

Wolter, Countess **O'Sullivan**, known as CHARLOTTE, an Austrian actress, born in Cologne, March 1, 1834; died in Vienna, June 14, 1897. She received her training in Vienna, made her *début* at Buda-Pesth in 1857 as Jane Eyre, played for a while

at Brünn, and then for two years at Berlin in the Victoria Theater, where her success in the dramas of Grillparzer attracted the attention of Laube, by whom in 1862 she was engaged for the Court Theater in Vienna, which she helped greatly to maintain in its leading place among the theaters of German lands during thirty-six years that she was connected with it. Her voice, figure, carriage, and features were adapted to the representation of a great variety of heroic parts, and she possessed a rare power of expressing all kinds and degrees of emotion. Her *répertoire* contained a large number of the principal modern dramas, but she was greatest in the classic rôles of Phædra, Lady Macbeth, Iphigenia, Cleopatra, Medea, Countess Orsina, Lady Milford, Sappho, Messalina, Antigone, and Maria Stuart. At the beginning of her Vienna career she married Count O'Sullivan de Grass, secretary of the Belgian legation.

Yon, Edmond Charles, a French artist, born in Paris, March 31, 1841; died there, March 26, 1897. He began his career by making wood engravings and etchings very ably treated for different illustrated publications. Later he devoted himself exclusively to landscape painting, exploring Montmartre before its rural beauties vanished, and afterward painting the banks of the Seine, Marne, and Oise, rendering with great delicacy the transparency of grass and reeds. He made interesting landscapes also of Holland and the south of France. For thirty years he exhibited regularly in the salons of the Palais d'Industry and in the exhibitions of the aquarellists and pastellists.

OHIO, a Central Western State, admitted to the Union in 1803; population according to the last census (1890) 3,666,719, it being the fourth in rank of the States; area, according to the United States Geological Survey, 41,060 square miles, of which 40,760 is land surface and 300 water surface. Capital, Columbus.

Government.—The State officers during 1897 were: Governor, Asa S. Bushnell; Lieutenant Governor, Asahel W. Jones; Secretary of State, Charles Kinney; Auditor of State, Walter D. Guilbert; Treasurer of State, Samuel B. Campbell; Attorney-General, Frank S. Monnett; Judges of the Supreme Court, William T. Spear, Marshall J. Williams, Joseph B. Bradbury, John A. Shauck, Thaddeus A. Minshall, Jacob F. Burkett; Clerk of the Supreme Court, Josiah B. Allen; Commissioner of Common Schools, Oscar T. Corson; Dairy and Food Commissioner, Joseph E. Blackburn; Board of Public Works, Charles E. Groce, Edwin L. Lybarger, Frank A. Huffman—all Republicans.

Finances.—At the opening of the fiscal year ending Nov. 15, 1897, the balances in the treasury aggregated \$525,125.09. The receipts during the year were: General revenue fund, \$4,687,096.71; sinking fund, \$530,381.36; school fund, \$1,743,775.11; university fund, \$239,898.39; total, \$7,206,151.57. The disbursements were: General revenue fund, \$4,433,044.48; sinking fund, \$581,436.62; school fund, \$1,759,687.50; university fund, \$193,618.10; total, \$6,966,777.70. The aggregated balance in the treasury, Nov. 15, 1897, was \$764,498.96. Of the general fund receipts during the year, \$2,444,971.03 was from general taxes, \$1,002,523.02 from taxes on liquor traffic, \$13,524.42 from taxes on cigarette traffic, \$24,887.21 from taxes on collateral inheritances, \$526,750.46 from excise taxes, \$267,366.34 from Ohio Penitentiary, and the remainder from miscellaneous sources. The balance to the credit of the general revenue fund, Nov. 15, 1897, was \$435,374.57.

On July 1, 1896, at the maturity of the \$500,000 temporary loan, which was effected in 1894, \$250,000 was paid from the sinking fund revenues, and

the remaining \$250,000 was refunded at 3 per cent. until July 1, 1897, at which time it was paid. This reduced the bonded indebtedness of Ohio to \$1,291,665, which will be discharged at the rate of



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\$250,000 annually. The so-called irreducible debt, which is not a debt, but a trust created by the sale of school lands, for which due account is given annually by interest paid to the school fund, will remain undisturbed.

Local Taxes.—The Auditor, in his annual report, calls attention to the increase in local taxes during the past seven years. For 1890 the taxes levied for county, township, school, and municipal purposes amounted to the sum of \$30,145,325.37. The taxes levied for 1897 for the same purpose amount to \$35,551,534.47. For the same period there is a decrease of \$80,866.14 in the amount levied for State purposes, exclusive of levy for university purposes.

Charities.—The whole number of inmates maintained in the sixteen benevolent and educational institutions of the State for 1897 was 19,772, an increase over the previous year of 1,117. In 1896 the amount expended for current expenses and for repairs and improvements was \$2,226,885.53, and in 1897 the expenditures for the same purposes were \$2,458,869.83. The increase is largely due to the erection of new buildings. The total net current expenses, including salaries, and crediting each institution with the amount of its earnings, were \$1,681,733.62 in 1896; in 1897 they were \$1,767,411.50, an increase in 1897 of \$85,677.88. At the beginning of the year there were 14,384 persons maintained in the State institutions. At the close of the year there were 15,348. The whole number of persons employed Nov. 15, 1897, was 1,989.

Penal Institutions.—The average number of prisoners in the Penitentiary in 1897 was 2,274, an increase of 100 over 1896. The *per capita* earnings of the prisoners in 1897 were \$119.64, and the *per capita* expense \$134.85. The total earnings were \$272,068.26, and the necessary expenses, including salaries of managers, officers, and guards, were \$306,650.22. Near the beginning of the fiscal year

there were about 600 able-bodied prisoners in the idle house, but since April 1, 1897, all who could work have been employed. In September, 1896, the Ohio State Reformatory, which at the close of the fiscal year of 1897 had cost for construction \$1,008,032.20, was opened. Nov. 15, 1897, the number of prisoners in the Reformatory was 349.

Paupers.—The report of the State Board of Charities as to the number of paupers cared for in the county and city infirmaries is made to Sept. 1, 1897. At the beginning of the twelvemonth there were in the several infirmaries 5,409 males and 3,454 females. The total number received during the year with the number remaining in the infirmaries Sept. 1, 1896, was 15,869 persons, of whom 10,000 were males and 5,869 females. The number remaining at the close of the fiscal year was 9,323, of whom 5,743 were males and 3,580 females. Of this number 2,284 males and 1,469 females were unable to read and write.

National Guard.—The strength of the Ohio National Guard, including the 233 men and 19 commissioned officers of the Naval Brigade, on Sept. 30, 1897, was 5,781 enlisted men and 458 commissioned officers.

Legislature.—The constitutional provision for biennial sessions of the Legislature was again observed, there being no adjourned session in 1897.

Supreme Court Decisions.—Two important decisions were made by the Supreme Court nullifying acts of the Legislature. In 1896 an act was passed providing for the registration of land titles, and for simplifying and facilitating the transfer of real estate (Torrens system of land titles). The Supreme Court declared the law invalid, for the reasons, among others, that it contravenes the Constitution in that, although it is a general law, it is not of uniform operation throughout the State, and authorizes, by its "assurance fund," the taking of private property for private purposes without the owner's consent, and impairs the obligation of contracts.

The Legislature had provided by joint resolution for submitting to the people, at the election in 1897, the question whether a convention should be held for the revision of the Constitution of 1851. To prevent the defeat of the proposition by neglect to vote upon it, the joint resolution provided that the affirmative and negative forms of the proposition be printed at the bottom of the regular tickets on the Australian ballot, and that a straight ticket marked by a cross in the circle at the top should be counted as an affirmative vote on the proposition. The resolution also provided for the length of time the convention should sit, and the compensation of the members. The court decided that the proposition must be submitted in the regular way, on separate ballots, an absolute majority of all the votes cast at the election of members of the Legislature being necessary to carry the proposition. The decision was also, in effect, that legislation can not be enacted in the form of a resolution. The proposed amendment was therefore not submitted to the voters at the November election.

The Urbana Lynching.—Early in June a widow of excellent family and widely respected in Urbana was assaulted at her home by a negro and brutally outraged, the crime being of the most revolting character. A negro named Charles, alias "Click," Mitchell, was arrested, identified by his victim, and taken to jail. The excitement became so great that the prisoner was hurried into the courthouse, where he pleaded guilty, and was immediately sentenced to the penitentiary for life, that being the highest penalty in Ohio for this crime. Before he could be taken to Columbus a mob surrounded the jail, which was guarded on the inside by an Urbana company of Ohio National Guards. Shortly before three

o'clock on the morning of June 4 the mob began battering in the door of the jail. The militia inside fired from the windows and the door upon the crowd outside, and two men were killed and ten wounded by the volley. The mob broke and ran, but soon reassembled, and a deputation waited on the sheriff, demanding that he send away the troops, and assuring him that if he were overpowered and the prisoner taken from him he would not be blamed. A military company sent from Springfield by order of Gov. Bushnell arrived on the scene, and some one, assumed to be acting for the sheriff, ordered the Springfield troops to return to the train, which they did. The Urbana company stacked their arms and promised not to fire again. At 7.45 A.M. the mob returned to the jail, broke in the door, secured the keys to Mitchell's cell, put a rope around the negro's neck, and dragged him across the courthouse yard, the mob kicking and beating him all the way. He was then strung up to a tree and left to die. The affair created intense indignation throughout the State, but in the immediate neighborhood the indignation was all against the troops for firing upon the crowd, and against the sheriff for calling out the troops. Gov. Bushnell directed an inquiry into the responsibility for the mismanagement of the troops, and urged upon the local authorities that the lynchers be brought to punishment, but nothing was done. No indictments were brought by the Champaign County grand jury, either against the lynchers of Mitchell or against the soldiers.

Political.—The year was made exceptional in the political history of the State by the fact that eight distinct political parties had full State tickets in the field, and also on account of the prominence given to the question of electing a United States Senator by the Legislature to be elected in November. Hon. John Sherman was called by President McKinley to become Secretary of State, and Gov. Bushnell appointed Marcus A. Hanna to fill the vacant seat in the United States Senate until the new Legislature met in January, 1898, when an election would be held to fill out the remainder of the term ending March 4, 1899, and also for the full term of six years immediately following.

The first to hold its convention was the State Prohibition party, which met at Columbus, April 7, and nominated the following ticket: For Governor, John C. Holliday; Lieutenant Governor, John Danner; Attorney-General, O. J. Ross; Treasurer of State, Samuel Wells; Judge of Supreme Court, E. J. Pinney; Clerk of Supreme Court, H. T. Lutz; Member of Board of Public Works, Madison L. Christian; Commissioner of Public Schools, T. H. Paden. The platform favored the entire suppression, through legal enactments duly enforced in State and nation, of the manufacture, importation, exportation, interstate transportation, and sale of alcoholic liquors for beverage purposes; arraigned the Republican and Democratic parties for maintaining the present Dow tax, which puts the State in complicity with the traffic; and declared that "no citizen should be denied the right of full suffrage on account of sex."

The Ohio State Liberty party, originally Prohibitionists until the split at the Pittsburg convention in 1896, met in convention at Columbus, May 26, and nominated the following ticket: For Governor, John Richardson; Lieutenant Governor, T. M. Hillman; Treasurer of State, T. A. Rodefer; Supreme Judge, J. S. Wertman; Attorney-General, J. W. Roseborough; Member of Board of Public Works, J. B. Bolander; School Commissioner, Archibald Walker. The convention resolved that the Government ought to suppress intoxicants as a beverage, but sell them for other purposes without profit. Equal suffrage, gold and silver 16 to 1, and legal

tender paper issued by the Government direct and up to the demand, were the principal platform planks.

The Republican State Convention was held at Toledo, June 23. The ticket nominated was as follows: For Governor, Asa W. Bushnell; Lieutenant Governor, A. W. Jones; Supreme Judge, Jacob F. Burkett; Attorney-General, Frank Monnett; State Treasurer, Samuel Campbell; School Commissioner, L. D. Bonebrake; Member of Board of Public Works, C. A. Goddard. The platform, after rejoicing over the victory of 1896 and the election as President of "that splendid son of Ohio, William McKinley," and reaffirming the principles of "the platform upon which that victory was won," declared:

"The Republican party has always been the friend of the downtrodden and oppressed, and has always deeply sympathized with the struggle of any people for independence. We extend our sympathy to the patriots of Cuba in their efforts to achieve freedom from Spanish cruelty and oppression, and hope that the day of their deliverance is near at hand. We commend the course of the President and express our confidence in his speedy and patriotic disposition of the Cuban question in accordance with wise statesmanship and a vigorous foreign policy.

"We believe that the administration in negotiating the treaty for the annexation of Hawaii has acted wisely, and we express the hope that the Senate will ratify the same.

"We denounce the violation of the spirit of the civil-service act by President Cleveland in those orders which extended its operation beyond its purpose and intent, and demand such revocation of orders or modification of the law as will accomplish its manifest purpose.

"Faithfully wedded to the principle of protection, we demand for the wool-growers of Ohio such ample protection of wool as shall speedily increase American flocks sufficiently to supply all American needs.

"We indorse the wise, faithful, and satisfactory administration of Gov. Bushnell, and congratulate the people of this State upon the financial condition of their commonwealth, which demonstrates that the legislative power of the State was economically and honestly exercised by a Republican Legislature.

"The thanks of the people of this State are due to Senators Foraker and Hanna for their splendid efforts during the present session of Congress, and we congratulate the people on their representation in the United States Senate.

"Desiring to continue such representation, and appreciating his services to the party and to the people of the State and nation, and his eminent and proved fitness for the position, we indorse the candidacy of the Hon. Marcus A. Hanna for United States Senator to succeed himself, and pledge the support of the party in the next General Assembly to his election to both the short and the long terms."

The Democratic State Convention met in Columbus, June 30, and nominated the following ticket: For Governor, Horace L. Chapman; Lieutenant Governor, Melville D. Shaw; Supreme Court Judge, J. B. Spriggs; Attorney-General, W. H. Dore; Treasurer of State, James F. Wilson; Member of Board of Public Works, Peter Deignan; School Commissioner, Myron E. Hard. The platform as reported to the convention contained the following:

"The Democrats of Ohio, in convention assembled, reaffirm and indorse the declaration of principles contained in the platform adopted by the Democratic party in the national convention at Chicago in 1896, which platform declares the money question paramount to all others at this time.

"We are opposed to the issuing of interest-bearing bonds of the United States in times of peace, and condemn the trafficking with banking syndicates which, in exchange for bonds and at an enormous profit to themselves, supply the Federal treasury with gold to maintain the policy of gold monometallism."

After adopting this platform as reported by the committee, the convention added the following:

"We hereby declare all trusts and monopolies hostile and dangerous to the people's interest and a standing menace to the perfecting of our free institutions, and we demand the rigorous enforcement of any antitrust laws, and such additional legislation as may be necessary for their immediate and final suppression.

"We demand the immediate recognition of the belligerent rights of the republic of Cuba as an act of justice to an American nation struggling for liberty against foreign oppressors, and we denounce and protest against the action of Senator Hanna in voting to nullify the memorial presented to Congress unanimously by the Legislature of Ohio in favor of Cuban patriots."

The State convention of the People's party met in Columbus, Aug. 11, and nominated the following ticket: For Governor, J. S. Coxey; Lieutenant Governor, Horace Whitcomb; Judge of Supreme Court, C. C. Pomeroy; Attorney-General, C. A. Reeder; Treasurer of State, F. M. Morris; School Commissioner, Silas E. Shook; Board of Public Works, J. A. Sanders.

The platform reaffirmed adherence to the principles of the People's party as enunciated in the Omaha and St. Louis platforms. Regarding State matters it said: "It is high time that the Ohio senatorship be taken out of the market, out of the hands of the political auctioneers, who have heretofore been wont to knock it down to the highest bidder. No millionaire plutocrat nor his henchman, no owner of a public franchise, can be a fit representative of the interests of plain people of the State of Ohio in the United States Senate.

"We denounce the Republican party for passing the fifty-year franchise bill, and we likewise denounce the Democratic party for not having the courage to brand it as an infamous robbery and pledging its repeal."

Resolutions extending sympathy to the striking miners and pledging them moral support, and approving the actions of the Nashville conference, were attached.

The National Democrats (gold) met in Columbus, Sept. 9, and nominated a State ticket: For Governor, Julius Dexter; Lieutenant Governor, A. E. Merrill; Judge of Supreme Court, John H. Clark; Attorney-General, Daniel Wilson; Treasurer of State, Samuel Stevens; School Commissioner, W. H. Johnson; Member of Board of Public Works, H. D. Coffinberry. The platform included these declarations:

"We declare for the maintenance of the gold standard, for the retirement of the greenback, and for the extension of the civil service merit system, wherever possible, in the nation and in this State.

"We demand retrenchment of expense and scope of government, so that there be left the utmost freedom of individual effort consistent with safety and peace. We denounce the recent tariff legislation as encouragement of extravagance and infringement on private rights, an unfair tax on all for the benefit of some of the people and an arbitrary interference by legislation with the natural laws of trade.

"We denounce in the Dingley bill the heavier duties on lumber, wool, and hides, as increasing the cost of clothing and shelter to the people.

"We condemn the proposed annexation of the Hawaiian Islands as introducing into our Union a large Asiatic and tropical population utterly unfitted for American citizenship; as the beginning of a policy of territorial expansion certain to entail upon our country large taxation to sustain strong armies and navies in distant lands and on distant seas; and as constituting a menace to peaceful industry by exposing our country to foreign wars.

"We disapprove the hostile action of the Republican party of Ohio in its attack on civil-service reform, and we express our thanks to President McKinley for his support and extension of the merit system."

A State Negro Protective party was organized in Columbus, Sept. 22, and the following ticket was nominated: For Governor, Samuel J. Lewis; Lieutenant Governor, Jason M. Tilley; Judge of Supreme Court, Graham Deuwell; Attorney-General, Charles F. Annestead; Member Board of Public Works, John McKee; Treasurer of State, B. W. Maxwell; School Commissioner, C. D. Horner. The principal plank in the platform was this:

"We demand an immediate recognition of our rights as citizens, such as have been repeatedly pledged and as often violated, and which are guaranteed by the Constitution and laws of the land. A decent regard for our own feelings and the feelings of those we love and cherish compels us to take immediate political action, that we may show to the world that we are no longer the plaything of politicians or chattels for sale to the highest bidder."

The Socialist-Labor party placed a partial State ticket in the field, as follows: For Governor, William Watkins; Lieutenant Governor, Daniel W. Wallace; Treasurer of State, Edward Larsen; Member Board of Public Works, John T. Jones; School Commissioner, Charles Bonsall.

A convention of Silver Republicans was held in Columbus, May 27, and resolutions were adopted declaring for the immediate remonetization of silver at the present legal ratio of 16 to 1, but no State ticket was put in nomination.

The election in November resulted in the success of the entire Republican State ticket. The vote on Governor was as follows: Asa S. Bushnell (Republican), 429,915; H. L. Chapman (Democrat), 401,750; John C. Holliday (Prohibition), 7,558; J. S. Coxey (People's party), 6,254; Julius Dexter (National Democrat), 1,661; William Watkins (Socialist-Labor), 4,242; S. J. Lewis (Negro Protective), 476; John Richardson (Liberty), 3,106. Bushnell's plurality, 28,165.

The pluralities of the other successful Republican candidates were: Lieutenant Governor, Asahel W. Jones, 27,020; Treasurer of State, Samuel B. Campbell, 26,497; Judge of Supreme Court, Jacob F. Burkett, 25,690; Attorney-General, Frank S. Monnett, 25,999; Member of Board of Public Works, Charles A. Goddard, 25,977; School Commissioner, Lewis D. Bonebrake, 26,544. The Legislature elected was: Senate—Republican 17, Democrats 18, Independent Republican 1; House—Republicans 62, Democrats 47.

OKLAHOMA, a Territory of the United States, organized in 1890. Population, according to the Auditor's census, Feb. 1, 1894, 212,635; according to the Governor's report, June 30, 1896, 275,587.

Government.—The following were the Territorial officers during the year: Governor, William C. Renfrow, Democrat, succeeded in May by Cassius M. Barnes, Republican; Secretary, Thomas J. Lowe, succeeded in July by William M. Jenkins; Treasurer, Martin L. Turner, succeeded by Frank M. Thompson; Attorney-General, C. A. Galbraith, succeeded by Harper S. Cunningham; Auditor and

Superintendent of Education, A. O. Nichols, succeeded by S. N. Hopkins in October; Oil Inspector, M. A. Moseley, succeeded in July by Amos A. Ewing; Adjutant General, J. C. Jamison, succeeded by Philip C. Rosenbaum; School Land Commissioner, William Blincoe, succeeded by Charles Filson; Bank Examiner, F. M. Richardson, succeeded by John M. Pugh; Marshal, C. H. Thompson, appointed in November; Chief Justice of the Supreme Court, Frank Dale; Associate Justices, J. C. Tarsney, J. R. Keaton, A. G. C. Bierer, and J. L. McAtee; Clerk, Edgar W. Jones. All the justices are Democrats.

Finances.—The bonded indebtedness is \$48,000, and bears interest at 6 per cent. The warrant indebtedness, June 30, was \$190,938. The total Territorial tax is $4\frac{3}{10}$ mills, divided as follows: General Territorial tax, 3 mills; Normal School tax, $\frac{1}{2}$ mill; university tax, $\frac{1}{2}$ mill; college building bond interest tax, $\frac{1}{5}$ mill; for the care and education of deaf mutes, $\frac{1}{20}$ mill; for the care and education of the blind, $\frac{1}{20}$ mill. The assessed valuation in 1897 was \$31,541,563. The Supreme Court of the Territory decided this year a new case involving the question of the powers of the Board of Equalization, denying its power to raise the aggregate valuation as shown by the assessment rolls of the counties. This reverses the decision made by the same court last year.

Education.—The school population in 1896 was 88,705. There are 1,909 organized school districts, of which 1,500 have comfortable schoolhouses. The receipts for 1896 were \$441,534.55, and the expenditures \$365,288.33.

The Normal School, at Edmond, has about 200 students.

The university, at Norman, had an enrollment of 218 in December.

The Agricultural and Mechanical College, at Stillwater, received this year from the Government \$38,000, including the income of the experiment station, which is a department of the college. There are about 140 students.

Haworth Institute, at Chilocco, has 500 students, representing all the Indian tribes of the Southwest.

Charities.—The insane are cared for by contract with the Oklahoma Sanitarium Company, near Norman. The number, July 1, was 143. During the year 22 died, and 59 were released. For the care of each patient \$25 a month is paid. The cost of transportation was \$2,987.

The Legislature this year made provision for education of the deaf and dumb.

Convicts.—The Territory had 148 convicts in the Kansas Penitentiary, June 30. The cost for the year was \$16,504.35.

Militia.—The strength of the National Guard is 500 officers and enlisted men, in 12 companies of infantry, and a regimental band.

Products.—There have been raised in Oklahoma this year about 150,000 bales of cotton, about 22,000,000 bushels of wheat, and other products, aggregating a gross sum of \$100,000,000. Of this amount the people consume 60 per cent., leaving \$40,000,000 of field products for export.

Banks.—The October statement of the national banks shows that their combined resources are \$1,093,128.82, and the average reserve is 46.68 per cent. There are 5 national and about 50 Territorial banks. The latter in June had resources amounting to \$2,294,263.64, and an average reserve of about 51 per cent.

Three Territorial bank charters were issued in December. The Stock Exchange Bank of El Reno failed Dec. 14. Dec. 29 the president, cashier, assistant cashier, and one of the directors were ar-

rested on the charge of receiving deposits when the bank was known to be insolvent.

The Oklahoma Bankers' Association was organized in June.

Railroads.—There are about 500 miles of railway. A branch of the "Frisco" from Red Fork to Guthrie is under construction. It will give closer connection with St. Louis, and will open coal fields of great richness. The Kansas, Oklahoma Central, and Southwestern has been chartered.

School Lands.—The commissioner's report for four years ending May 26 shows that the total cash collected is \$336,633.04, and notes on hand amount to \$371,533.08.

Indians.—There are in the Territory 12,631 Indians, under the care of 5 agencies. The Tonkawas, Pawnees, Sac and Fox, Iowas, Pottawatomies, Shawnees, Kickapoos and Cheyennes, and Arapahoes who have taken their land in severalty and had the remainder to throw open to settlement, are making the greatest progress. A large majority of them live on their allotments and have engaged in farming.

High Waters.—Floods in the Cimarron, Cottonwood, and other streams caused great loss of life and property in April.

Decision on Copyright.—In March Judge Dale, in the District Court, rendered a decision without precedent in the United States. It was in a case brought by the Territory against the State Capital Printing Company for printing and selling statutes which the Territory had copyrighted. Judge Dale holds that the Government is not a "person" or "citizen" in any sense, and that no one but persons or citizens are entitled to hold copyrights; that a State government is not an institution organized for profit out of anything arising from its sovereignty; that the laws belong to the people, and any citizen has a proprietary interest in them and can publish them if he sees fit.

Legislative Session.—The Legislature was in session from Jan. 17 to March 12. J. W. Johnson was President of the Council and William Garrison president *pro tem*. J. C. Tousley was Speaker of the House.

The election laws were radically changed, and are described as being in their present form the most intricate in the United States. The anti-fusion provision of the former law is repealed.

A new fee and salary law was made, prescribing salaries and percentages of fees to officials. The original bill made large reductions, but the bill as passed is described as not having materially lowered the compensation of officials, even if it did not raise them; as in some instances a reduction of salary was accompanied by an increase in the percentage of fees to be retained by the official. The fees of witnesses in criminal cases were fixed at \$1 a day and 5 cents a mile.

One of the most important acts was a banking law, creating a banking board, providing for the incorporation of banks, fixing the liability of stockholders and officers, the amount of assets, providing for proceedings in cases of insolvent banks, exempting banks from attachment and execution, and creating the office of bank examiner with power to compel reports. The affairs of every bank are to be examined at least once a year, and the examiner is to be appointed by the banking board.

It was provided that all school property should be insured on the Swiss plan—by Territorial assessment.

An act was passed to establish a normal school at Alva in the western part of the Territory and one establishing a normal school for colored youth at Langston, 20 miles northeast of Guthrie, inhabited exclusively by negroes. The town gives

40 acres of land and the Territory appropriates \$5,000 for the building. The institution will receive a part of the Federal fund for agricultural colleges.

An act for providing separate schools for the white and colored races makes it compulsory on school boards to maintain both for the same number of months in the year, and to divide the school money in proportion to the number of pupils of each race. This law was declared void by Judge Keaton in April on the ground that certain of its provisions were irreconcilable.

The usury law that was repealed in 1895 was reenacted; the only penalty for taking more than 12 per cent. is forfeiture of interest.

An act was passed making a change in the government of cities of the first class.

A long contest over a schoolbook bill resulted in the substitution for the original bill of one providing that no text-books in use in the public schools can be changed within five years; and that the superintendent of instruction shall contract for such books, provided the publishers agree to sell them at the lowest prices at which they are sold anywhere in the United States.

The appropriation bills aggregated \$282,000, which was \$100,000 more than had been appropriated by any preceding Legislature. Some were as follows: Care of the insane for two years, \$61,000, and for their commitment, \$4,600; for care of prisoners two years, \$28,500, and \$5,000 for commitment; for the Agricultural College, \$5,000, and \$1,000 for the regents of that college.

In all, 98 bills were passed. Among those not mentioned above were:

Regulating the practice of pharmacy.

Providing for the burial of honorably discharged Union and Confederate soldiers and sailors.

Requiring cotton sales to be registered at cotton gins.

Prohibiting the practices of Indian medicine men.

Creating a board of health, and regulating the practice of medicine.

Remitting penalties due on delinquent taxes for 1896, and providing that no penalty shall attach until the second Monday of March, 1897, after which 2 per cent. shall be added each month.

Raising the standard for teachers' certificates 10 per cent.

Establishing an irrigation law.

Taxing lands granted in aid of public institutions.

Permitting cattle to come into the Territory for feeding without tax.

Providing that any person or company that shall build a water reservoir and maintain it from April 1 to Dec. 1 shall have a reduction of taxes at the rate of \$8 for the first acre so covered, \$4 for the second, and \$1 for each acre additional—the reduction to be for a period not longer than three years.

Providing that all section lines be declared public highways, and prescribing the width. Forest trees may be grown on all roads that are more than 50 feet wide, to within 25 feet of the middle.

Providing for uniformity of marriages, and defining the manner of contracting them. This law makes it necessary to procure licenses; and marriage under the ages of eighteen for males and fifteen for females is prohibited, unless the court on application directs otherwise. Where an Indian has more than one wife he must select one and renounce the others. Marriages between whites and negroes are forbidden.

Providing that taxes must be paid in money, and not in Territorial, town, or other warrants.

Providing for a Territorial live-stock commission, to enforce the quarantine and sanitary laws, inspect cattle, shipping pens, and cars, and register all

brands and marks of cattle slaughtered or shipped out.

It was resolved to memorialize Congress to give free homes to the future State of Indianola, to be formed from the territory of the five tribes, and to recognize the Cuban insurgents.

A bill was passed by the lower house to abolish the militia, declaring it to be the instrument of a corrupt central government, used to protect corporations and oppress the people; but it was defeated in the upper house.

Among important bills that failed was one regulating railroads, two to control insurance, a woman-suffrage measure, a usury act, and one to amend the liquor laws by imposing a tax of \$500 in every county on the business of foreign wholesale brewers.

There were charges of bribery in connection with certain bills. The chairman of the investigating committee said that, while the committee did not have time to get positive proofs of corruption, there were strong evidences of bribery; that a fund of \$2,700 was used to kill one measure, and sums equally large to kill others. The President of the Council, or Senate, resigned March 6, saying that he would not preside over a body so corrupt; but his resignation was not accepted, there being no provision in the organic act for such an emergency. Two Senators resigned at the same time.

OLD CATHOLIC CHURCH.—The Old Catholic International Congress was held in Vienna, Sept. 1 to 3. In the absence of Prof. Von Schulte, Regierungs-Rath Philippi, of Basel, President of the Swiss Old Catholic Synod—who was also President of the first Old Catholic Congress held in Lucerne in 1892—presided. The Dutch Old Catholics were represented by Archbishop Gul, of Utrecht, Prof. Van Thiel, of the Old Catholic Seminary in Holland, and others; Germany and Switzerland by Bishops Weber and Herzog, and many clergymen and laymen; Russia by the Archpriest Janischeff, Prof. Kreesnoshen, and Gen. Kireoff; Servia by Bishop Rutzischisch; England and America by Dr. White as the representative of the Archbishop of Canterbury and the Protestant Episcopal Bishops of Springfield and Cairo; and the "Evangelical League" of Germany by Prof. Nippold. The Old Catholics of Italy and France were not represented. A considerable number of Austrian Old Catholics were present, and the Czech element was larger than had been anticipated. Among the points discussed were the principle of independent national churches, the establishment of an international faculty of theology, the creation of a fund for the temporary maintenance of priests who desire to leave the Roman Catholic Church, the dissemination of Old Catholic literature, and especially of the "Revue Internationale," and the spread of Old Catholic principles among the Austrian Slavic populations. The speeches on the significance of Old Catholicism in relation to the various movements toward union, made at the reception of Prof. Nippold, Aug. 31, and of Dr. Weihel on the recent adhesion of Prof. Bunkofer to the Old Catholic cause, were among the notable incidents of the meeting.

ONTARIO, a province of the Dominion of Canada; area, about 222,000 square miles; population in 1891, 2,214,321.

Government.—There was no change in 1897 in the Government. Mr. A. S. Hardy remained Premier, and his predecessor during twenty-five years. Sir Oliver Mowat, returned to Toronto as Lieutenant Governor in succession to Sir George Kirkpatrick, after a short time as Minister of Justice at Ottawa. The Legislature was opened on Feb. 9 by the Administrator, Sir Casimir Gzowski, in a speech

from the throne, of which the following are the essential parts:

"The 1st day of June next will be the one hundredth anniversary of the meeting of the Parliament of Upper Canada in the present capital of the province. During all the intervening years the province has steadily advanced in wealth and population.

"You will regret exceedingly to learn that the inhabitants of some parts of India are suffering from famine and the plague, and that local resources are inadequate to meet the emergency. I confidently rely upon your generous disposition to grant such aid for the relief of our afflicted fellow subjects as the circumstances appear to demand and the means at your disposal will permit.

"Judgment has recently been given by the Supreme Court of Canada in the case submitted between the governments of Canada and the provinces for the determination of their rights respectively in the public fisheries. It affords me much satisfaction to be able to inform you that the rights of the provinces are much greater than has been recognized by the Government of Canada, not only in the fisheries of the inland waters, but also in those of the Great Lakes and rivers. An appeal and a cross-appeal have been made to her Majesty in her Privy Council.

"It will be satisfactory to you to learn that the claims of the Government of Canada against this province for repayment of certain annuities heretofore paid by that Government to Indians under the Robinson treaty, and for additional and increased annuities which it is alleged may hereafter become payable, have upon appeal been disallowed by the Judicial Committee of the Privy Council. Since your last session the same tribunal has also given judgment on appeal in the case submitted to the Supreme Court of Canada respecting the powers of the Parliament of Canada and the provincial legislatures respectively, as to the right to prohibit the manufacture, sale, and importation of intoxicating liquors. A copy of the judgment will be laid before you.

"Increased interest has been manifested during the past year in the new settlements in Algoma, on Rainy river, at Temiscamingue, and at and near Dryden, on Wabigoon lake, and considerable farm land has been taken up by settlers. You will be asked to appropriate a reasonable sum for the purpose of aiding in the colonization of these new settlements.

"There has been no improvement in the condition of the lumber trade. The monetary stringency and business depression which prevailed in the United States during 1895, contrary to general expectation, continued during the past year, and the sawn-lumber trade consequently remained depressed. I am glad to be able to state, however, that there is an increasing demand for our timber and lumber in the English market.

"The past year has been one of growing activity in mining affairs. Furnaces for smelting iron, nickel, and copper ores, and mills for reducing and refining gold ores, and for the treatment of other minerals, have been steadily operated.

"Progress has been made during the past year in consolidating the public laws of the province, and it is hoped the work of consolidation may be completed during the session."

A good deal of important legislation in connection with mines, municipalities, and railways was passed. The India famine fund was voted \$6,000 on motion of the Premier, seconded by the Opposition leader, and a long and loyal address to the Queen was carried unanimously, the members standing and singing the national anthem. The

following railway resolutions were presented by the Provincial Treasurer and passed:

"That there be granted out of the consolidated revenue fund, for the construction of portions of railways and other works hereinafter mentioned, the sums following, that is to say: (1) To the Ontario and Rainy River Railway, for a distance not exceeding 70 miles, a cash subsidy of \$3,000 a mile. (2) To the Montreal and Ottawa Railway, \$34,000; and that the portion of the unearned subsidy of \$100,000, which was granted to the Vaudreuil and Ottawa Railway Company in 1892, and which was, in the year 1893, transferred to the Central Counties Railway Company, which unearned portion amounts to \$66,000, be transferred to the Montreal and Ottawa Railway Company to assist in the construction of 50 miles of the said railway. (3) To the Manitoulin and North Shore Railway, a distance not exceeding 13 miles additional, a cash subsidy of \$3,000 a mile, \$39,000. (4) To the Tilsonburg, Lake Erie and Pacific Railway, for a distance not exceeding 3,262 miles, a cash subsidy of \$2,000 a mile. (5) To the Ottawa and Parry Sound Railway, for a distance not exceeding 10 miles, a cash subsidy of \$2,000 a mile.

The bill relating the Court of Appeal reconstituted the court with five judges, instead of four as heretofore.

The bill respecting Queen's counsel limits the number to be appointed to twenty during any four years.

The act relating to arbitration was entirely recast, and now includes many of the provisions of the imperial act.

The wills act provides that marriage shall not revoke a will, except under special circumstances mentioned in the bill; and the married women's property act provides that the contract of a married woman shall bind her, whether she has separate property or not.

The clause requiring both parties to a proposed marriage to attend before the issuer of marriage licenses, on obtaining a license, was repealed, and the old law was restored. Either may now obtain a marriage license.

The Educational Council for the purpose of conducting examinations prescribed by the Education Department and the annual examination for matriculation at the University of Toronto will hereafter be composed of twelve persons. The senate of the university will nominate six, and the Lieutenant Governor in council the other six.

Street cars and electric-railway cars, except where it shall be necessary for keeping the track clear of snow or ice, or for other acts of necessity or charity, are not to run on Sundays; but this is not to affect any right of the Toronto Street Railway or any other company which has heretofore run cars on Sunday, or which is entitled to run cars upon Sunday by its charter or by any special act.

The license bill which Mr. Harcourt had in charge was one of the controversial subjects of the session, attracting more attention outside than perhaps any other measure that the Assembly had to consider. The measure, after amendment, went through the house. Meanwhile protests poured in from nearly all the temperance societies of the province, and the Premier himself had met a very hostile reception in explaining its provisions to a large delegation on March 11. The objections were to the number of licenses issued, the omission to deal with the selling of liquor in clubs, the hours of closing, and the arrangement for canceling irregular licenses.

Finances.—The public accounts for 1896 were submitted by the Treasurer to the Legislature on Feb. 16, as follow: The receipts for the twelve

months ending Dec. 31, 1896, including a balance of \$87,580.89, amounted to \$3,212,609.51. Added to this amount are \$1,947.92 stationery account excess of distributions over purchase, and \$1,962,506 the amount withdrawn from special deposits, making the total income of the treasury \$5,542,700.26. On the other side of the account are expenditures aggregating \$3,703,379.73, and special deposits amounting to \$1,635,000, leaving a balance of \$204,320.53. The expenditure under treasury warrants aggregated \$30,383.59, made up as follows: Legislation, \$12,126.74; education, \$6,797.12; public institutions, \$9,713.17; public buildings, \$1,746.56. In addition to this there were unauthorized expenditures amounting to \$3,198.73. The consolidated revenue fund amounted to \$3,212,609.51, and the open accounts to \$278,061.94. Added to the Dominion subsidy of \$1,116,872.80 was a special grant of \$80,000. The interest on capital held and debts due by the Dominion to Ontario was \$260,554.79, and the interest on investments \$46,026.11. The Crown Lands Department brought in \$908,246.69, the largest item of revenue being \$812,421.78, from woods and forests; licenses brought in \$286,172.78; law stamps, \$63,566.82; Education Department, \$69,522.54; succession duties, \$165,383.40; casual revenue, \$109,189.43; public institutions, \$146,730.15. The sale of annuities brought in \$177,730.

The estimates for the year ending December 31, 1897, were as follow: Civil government, \$251,585; legislation, \$127,100; administration of justice, \$442,344; education, \$717,927; public institutions' maintenance, \$797,398; immigration, \$10,325; agriculture, \$195,022; hospitals and charities, \$185,948; maintenance and repairs of Government and departmental buildings, \$77,285; public buildings, \$138,177; public works, \$41,886; colonization roads, \$87,340; charges on crown lands, \$189,975; refund account, \$36,504; statute consolidation, \$40,000; miscellaneous expenditure, \$127,250; unforeseen and unprovided, \$50,000; total, \$3,516,068.

Mining.—Since the last meeting of the Legislature the mineral regions of northwestern Ontario had attracted increased attention. The Opposition press had been disposed to be critical with respect to the mining law and the want of a mining policy on the part of the Government. Finally, the Government's policy was submitted to the Legislature in the form of an agreement with the Engledeue syndicate, the mining bill, a grant for constructing wagon roads in the mining country, and subventions to a railway which it is claimed will open it up from east to west. Important changes were made in the mining laws a few years ago, but the new discoveries and the changed situation demanded new provisions. The principle of imposing a royalty on mining was then strongly criticised. It was said again and again that this was the cause of the stagnation in mineral production. In the new mining act the desire to see a healthy development of mining did not lead to a neglect of the public interest. It was provided that the Government may withdraw any lands from sale or lease which are reported to be particularly rich in ores. The annual report of the Ontario Bureau of Mines for 1896 gave the following table of production during the year: Gold, \$121,848; nickel, \$357,000; copper, \$130,660; iron, \$353,788; building stone, \$394,000; petroleum, \$1,955,295; tile and brick, \$721,000; natural gas, \$276,710. Gold discoveries and development continued through 1896, and greatly increased in 1897. English money was largely invested in the Rat Portage district and in the new gold regions of Michipicoten, near Sault Ste. Marie. A large tract of land was leased by the Government to the South African Company, and caused much discussion in the press and the Legislature. New

regulations as to locations, size of claims, terms of license, amount of deposit and purchases, etc., were made. The report says:

"Until very recently few companies had been organized in the province to carry on mining operations. Some were working under foreign charters, but of these the number actually engaged in the industry did not exceed half a dozen. In 1894, the first year in which mining corporations were empowered to sell stock at any fixed price above or below par, only five charters were granted under the Ontario joint-stock companies act, and the aggregate of their authorized capital was only \$2,170,000. Under the same act, in 1896, the number formed was 22, with an authorized capital of \$12,775,000; and the charters of 12 of these, representing an aggregate capital of \$9,475,000, were granted during November and December. In the first quarter of the present year the record of 1896 has been far surpassed, 33 mining companies having been organized and chartered, with a total authorized capital of \$22,665,000."

In the Algoma regions 9,701 acres were sold to prospectors for \$19,307, and 12,795 acres leased at \$1 an acre for the first year's rental.

Education.—The following figures illustrate the educational condition at the beginning of 1897: Number of public schools 5,660; number of Roman Catholic separate schools, 334; pupils in public schools, 444,778; pupils in separate schools, 39,773; average attendance in public schools, 247,459; average attendance in Roman Catholic separate schools, 24,090.

Agriculture.—The value of the farm land in Ontario at the end of 1896 was placed at \$557,468,270, compared with \$651,793,025 in 1883. That of farm buildings was \$205,235,429; implements, \$50,730,358; live stock, \$96,857,566. The chattel mortgages against the farmers were \$13,561,716 in amount.

The cheese production was 104,393,985 pounds, and the number of factories 1,147. There were 59 creameries, with a product valued at \$505,271, against \$287,559 in 1891.

The area and produce of the field crops of Ontario for 1897 were: Fall wheat, 950,222 acres, 23,899,051 bushels; spring wheat, 323,305 acres, 4,868,101 bushels; barley, 451,515 acres, 12,021,779 bushels; oats, 2,432,491 acres, 86,318,128 bushels; rye, 187,785 acres, 3,382,005 bushels; peas, 896,735 acres, 13,867,093 bushels; buckwheat, 151,669 acres, 3,464,186 bushels; beans, 50,591 acres, 981,340 bushels; potatoes, 169,333 acres, 16,100,797 bushels; mangel-wurzels, 41,175 acres, 18,103,387 bushels; carrots, 12,025 acres, 4,433,628 bushels; turnips, 149,336 acres, 68,297,148 bushels; corn for husking, 335,030 acres, 24,663,998 bushels; corn for silo and fodder, 209,005 acres, 2,669,822 tons; hay and clover, 2,341,488 acres, 3,811,518 tons. The area devoted to pasture is 2,658,245 acres. The estimated area in orchard and garden is 326,341 acres, while vineyards occupy 11,100 acres. The number of apple trees of bearing age is placed at 6,102,399, while there are 3,435,018 young apple trees planted in orchards. The yield of apples in 1897 is estimated to be 13,343,720 bushels, or an average of 2.19 bushels per tree of bearing age.

The wages of farm laborers, according to returns from farmers in 1897, were as follow: Yearly engagements with board, \$144; without board, \$236; per month, with board, \$14.29; without board \$24.47. Domestic servants averaged \$5.97 a month.

The statistics of live stock on hand July 1, 1897, were as follow: Horses, 613,670; cattle, 2,182,326; sheep, 1,690,350; hogs, 1,284,963; poultry, 8,435,341. The clip of wool in 1897 was 5,139,884 pounds. The number of colonies of bees was 166,811.

Health Statistics.—The report of the Provincial Board of Health gives the chief causes of death during successive years, and it is interesting to note that in recent years there has been a notable decline in the contagious diseases, or diseases preventible under the public health act. The decrease of 46 per cent. in deaths from typhoid fever during the past five years is of especial interest. With a system of public water works in at least 100 places, the former difficulty from polluted water has been removed. All these water-works systems are subject to the inspection of the department. The report deals extensively with death rates from tuberculosis, which shows for Ontario a mortality in 1896 of 2,758 persons, or 11 per cent. of the deaths from all causes. In the 13 cities it shows a percentage of 13.3 per cent. of all causes.

OREGON, a Pacific coast State, admitted to the Union Feb. 14, 1859; area, 96,030 square miles. The population was 13,294 in 1850; 52,465 in 1860; 90,923 in 1870; 174,768 in 1880; 313,767 in 1890. By the State census of 1895 it was 362,762. Capital, Salem.

Government.—The following were the State officers during the year: Governor, William P. Lord; Secretary of State and Auditor, Harrison R. Kincaid; Treasurer, Philip Metschan; Attor-



WILLIAM P. LORD, GOVERNOR OF OREGON.

ney-General, C. M. Idleman; Superintendent of Instruction, George M. Irwin; Adjutant General, B. B. Tuttle—all Republicans; Fish and Game Protector, H. D. McGuire; Dairy and Food Commissioner, H. B. Luce; Railroad Commissioners, I. A. Macrum, J. B. Eddy, and H. B. Compson. The Governor, in August, appointed W. W. Baker to succeed Mr. Luce and A. I. Wagner to succeed Mr. Compson, the Legislature having failed to elect their successors; but his right to do so was disputed, and the commissioners holding over refused to surrender the offices until the courts should decide; the case was not concluded at the end of the year. Chief Justice of the Supreme Court, Frank A. Moore; Associate Justices, Robert S. Bean and Charles E. Wolverton; Clerk, J. J. Murphy—all Republicans.

Finances.—The receipts of the treasury during the biennial period closing Jan. 1 were \$2,353,-

563.85, including the balance left from the preceding term. The disbursements were \$1,985,529.43, leaving a balance of \$368,034.42, of which \$121,986.93 was to the credit of the general fund. There was a floating debt of less than \$50,000.

The tax levy for the year was fixed at 4 mills. The total valuation of property in the counties was \$151,864,670, of which \$8,687,699 was entitled to exemption, leaving the taxable property \$143,176,971. The court sustained the counties in resisting the action of the board (see "Annual Cyclopædia" for 1896, page 624) so far as the valuation of personal property was concerned. The valuation for the tax of 1898 is: Gross, \$143,539,696; net, \$134,917,104.

In consequence of the failure of the Legislature to pass appropriation bills, the Auditor refused to honor any claims against the treasury for State institutions, salaries of commissioners, and the like, unless ordered by the court. Suits were brought, and the Supreme Court rendered a decision, Aug. 9, requiring the Auditor to draw warrants for the payment of the salaries of State officials and other claims specifically authorized by legislative action. As to other claims against the State, the decision made it the duty of the Secretary to pass upon the claims and allow or disallow them.

State Institutions.—Following were the amounts last appropriated for dependent classes and convicts: Insane, \$314,415; convicts, \$139,816; reforming boys, \$81,248; old soldiers, \$35,076; blind, \$18,330; deaf mutes, \$46,896; nonresident poor, \$8,000; Portland Home, \$5,000; Albany Orphans' Home, \$5,000; Salem Orphans' Home, \$5,000; Portland Baby Home, \$4,000; Refuge Home, \$5,000; Magdalen Home, \$4,000; Boys' and Girls' Aid Society, \$2,500; Patton Home, \$2,000; St. Mary's Home, at Beaverton, \$4,000; free kindergarten, \$1,500; total, \$701,783.

The Asylum for the Insane has more than 1,100 patients. The number of employees is about 140. The cost of taking patients to the institution during the last biennial period was \$28,153.

There were in May 354 convicts in the Penitentiary. The cost for conveying prisoners during the last biennial period was \$18,843. There are now 354 prisoners in the Penitentiary. About 100 are furnished work in the stove foundry, but as quite a large stock of stoves is already on hand, the lessees of the foundry are not pushing that work vigorously. A few others are furnished work at teaming, gardening, or on the farm. The rest are for the most part idle.

Education.—The annual distribution of school money in August, arising from the interest on the irreducible school fund, gave \$1.04 *per capita* to a school population of 129,956.

The State University, at Eugene, had in 1896-'97 more than 500 students. At the commencement in June 85 were graduated. The business and preparatory departments have been abolished and the course in pedagogy, and a chair of Modern Languages was established this year.

The Agricultural College, at Corvallis, had a total enrollment of 317, and graduated a class of 17. The extension of the course of study from three years to four is the principal cause for the reduction in the number of graduates, which was 51 in 1895 and 48 in 1896.

Railroads.—Oregon is credited with 51 miles of new track this year. The first train on the Columbia Southern was run Oct. 3. The road is to extend from Biggs station south through Sherman, Wasco, and Crook Counties to Prineville, about 120 miles. To Wasco, the present terminus, is only 10 miles. This new road will open one of the richest sections of the State.

The Coos Bay, Roseburg and Eastern Road is completed and in operation from Marshfield to Myrtle Point, 28 miles, and about 60 miles remain to be built.

The report of the Oregon Railroad and Navigation Company for the ten months ending April 30 shows the net earnings to have been \$1,630,634.87, an increase over the same period of the previous year of \$943,176.76.

The Oregon Short Line became an independent road March 15.

Products.—"The Oregonian" gave, at the close of November, a summary of the reports of products from 22 counties, as follow: Wheat, \$7,466,014; live stock, \$4,300,373; hay, \$2,908,500; gold, \$2,596,586; fish, \$1,867,400; hops, \$1,324,655; lumber, \$1,303,945; oats, \$1,250,850; fruit, \$1,191,620; wool, \$1,086,515; butter, cheese, and eggs, \$1,056,128; potatoes, \$76,800; other products, \$670,650; total, \$27,820,030.

Sugar-beet and flax culture are growing in the State, and promise to become important industries.

The Fish Commissioner's report has the following statements: "The canned products of the Columbia river salmon fishery this year amounted to 552,711 cases, of which 476,924 were packed in the spring and 75,817 in the fall. Of the total pack 409,954 cases were packed on the Oregon side and 144,777 cases on the Washington side of the river, the total value of the canned product aggregating \$2,219,311. In addition there were 5,060,160 pounds of salmon sold fresh and shipped East, the value of which was \$151,804. The salmon fishery of the Columbia river this year gave employment to 4,194 fishermen and 2,277 shoremen and cannery employees. The industry on the coast streams and bays furnished employment to 865 people."

The amount of gold produced in the State during the year was placed later at a much higher figure than appears in the summary above, more than \$4,000,000. There was renewed activity in gold mining, and new districts have been opened in the Cascade mountains.

Public Lands.—The number of acres of vacant public lands in the State is given approximately as 35,892,318, of which 23,682,023 have been surveyed.

A suit was decided in the United States court in September involving the possession of about 100,000 acres adjoining Columbia river on the south. This tract was formerly claimed by both the Northern Pacific Railway Company and the Dalles Military Wagon Road Company, through congressional grants to them respectively. The grant to the Military Wagon Road Company was made last, but the company and the other defendants, its successors in interest, claimed that the grant to the Northern Pacific Company, down the Columbia river, never took effect. The contention of the United States was that the first grant did become effective, and that, by an act of Congress passed in 1890, the land was restored to the public domain, and under this claim allowed much of the land to be entered by settlers at the Dalles Land Office. The decision was granted the Government.

About 1,700 acres, known as Tule lake lands, have been in controversy for some time. They were granted to the State as swamp lands, and were sold to settlers. The tract is designated on maps as Tule lake, and the question was whether it was a lake at the time it was granted or swamp lands as was claimed. The question was referred to Surveyor-General Hathersham, who decided that it was not a lake, thus making good the title of the State. It is said that confusion has been caused by many such tracts in eastern Oregon being laid down as lakes because they were at certain seasons overflowed.

Crater Lake.—From a paper by J. S. Diller, of the United States Geological Survey, it is learned that, all things considered, the lake is the most imposing crater lake in the world, yet it has "scarcely been mentioned in scientific publications, and its very existence even appears to be generally unknown to persons interested in such features." The lake, which has very transparent waters, is deeply set in the summit of the Cascade range of southern Oregon. It has an almost circular rim, with an average diameter of 6 miles, and is about 1,000 feet above the general level of the range, or from 6,759 to 8,228 feet above the sea. The precipitous rim is from 529 to 1,989 feet above the lake. It is composed wholly of lava streams and beds of volcanic conglomerate, and in one part fills an ancient valley and is intersected by a series of vertical dikes. The rim is larger than the original crater, and shows many changes from glacial action along with glacial *débris*, including boulders 10 feet in diameter. There are evidences that the volcano was active during the Glacial period.

Divorce.—A decision rendered by the Supreme Court in November has placed many Oregon people in an embarrassing position. The Oregon law makes the marriage of a divorced person within six months of the time the decree is granted illegal; hence many went into Washington and were married there within the specified time. This decision pronounces such marriages void.

Legislative Session.—The situation in the Legislature this year was peculiar, in that there was no organization of the House which the Senate and Governor could recognize as lawful, and therefore, although the legislators were at the capital fifty-three days, there was virtually no session of the House, and no business was completed. The situation arose from a contest over the speakership, resulting from the canvass of United States Senator Mitchell for re-election. The State Constitution provides that two thirds of each House shall constitute a quorum to do business; but a smaller number may meet, adjourn from day to day, and compel attendance of absent members. A quorum being in attendance, if either house shall fail to effect organization within five days the members of that house shall be entitled to no compensation from the end of the five days until organization is accomplished. No limit is prescribed for the length of the session, but pay is allowed at \$3 a day for forty days only. The members of the Legislature met Jan. 11. The Senate organized with Joseph Simon as president. The House organized temporarily, with E. J. Davis as temporary Speaker, and a Committee on Credentials was appointed, who failed to agree and did not report. A permanent organization could not be effected, because more than one third of the 60 members-elect refused to take the oath of office. Henry L. Benson was the candidate for Speaker of the supporters of Senator Mitchell, and Jonathan Bourne of those opposed. A caucus nominated Benson, but it lacked two votes of the necessary number, and at a joint caucus, Jan. 14, Senator Mitchell was nominated; but this also was short of the required strength, which was 46. On Jan. 21 the Benson or Mitchell party made an organization called "the rump Assembly" with 31 members, with the idea of receiving recognition as a majority, though not the requisite two thirds. They elected a temporary Speaker, who took his place beside Mr. Davis, the temporary Speaker elected at first, making two separate organizations in the same hall. The 31 members were then sworn in, and elected Mr. Benson permanent Speaker. Of those who refused to take the oath, 19 were Populists and 6 Republicans. The Senate was notified that the House was organized and ready

for business; but the President of the Senate refused to allow the communication to go on record, asking the Senate to reverse his ruling if it did not agree with him; but no objection was raised. Bills were introduced in "the Benson House," but the Secretary of State refused to authorize the printing of them. "The Davis House" met and adjourned from day to day.

On Feb. 2 a resolution was offered in the Senate that "the Senate proceed openly, by *viva voce* vote of each member present, to name one person for Senator in Congress from Oregon for the full term commencing March 4, 1897." President Simon addressed the Senate after the resolution was offered, saying: "Under the act of Congress passed in 1866 it is directed that a vote for United States Senator shall be taken on the second Tuesday after the organization of the Legislature. The Senate has already on two occasions placed on record its decision that the House is not legally organized. The chair is therefore constrained to hold that this resolution is not in order." A motion to overrule the chair was debated for two hours, after which the chair was sustained by 16 to 12.

A vote for Senator was taken in "the Benson House" the same day, which stood: Mitchell, 29; George H. Williams, 1.

The following resolution was adopted by "the Benson House" Feb. 19 by a vote of 16 to 11:

"Whereas, The following persons claim to have been duly elected to the nineteenth biennial session of the House of Representatives of the Legislative Assembly of the State of Oregon, to wit [naming 27 members].

"Whereas, They and each of them have during the whole of this session of said Legislative Assembly neglected and refused to take the oath and enter upon the duties of said office; and,

"Whereas, Each of said persons so claiming to have been elected were, on the 28th day of January, 1897, duly served with notice to appear at the bar of the House and take the oath of office; and,

"Whereas, Section 2551 of the Laws of Oregon, 2 Hill's Code, provides as follows: 'Every office shall become vacant on the occurring of either of the following events before the expiration of the term of such office: his refusal or neglect to take the oath of office within the time prescribed by law.' Now, therefore, be it

"Resolved, That the office of Representative in each of the following-named Representative districts to which the [said] persons claim to have been elected is vacant."

On March 1 the temporary House decided to adopt drastic measures to bring in absentees. Members of the original House present were sworn in by Chief-Justice Moore, and assistant sergeants-at-arms were appointed by temporary Speaker Davis and dispatched to different parts of the State with warrants to serve on absent members. Three or four were arrested, and in return two of the deputy sergeants were arrested on charges of assault and battery, but the cases appear to have been dismissed.

Many bills were introduced in the Senate and passed, but of course none of them became laws.

"The Benson House" adjourned *sine die* Feb. 24 and the Senate March 2, after passing a resolution declaring that it was manifest the House could not secure a quorum.

"The Davis House" adjourned March 5, after unanimously adopting resolutions which declared that "the purported permanent organization of the House called 'the Benson House' was unconstitutional and illegal, and not for the purposes of legislation, but was solely in the interest of the reelection of John H. Mitchell to the United States

Senate, and that all legislation would be subordinated to that end," and that "it was impossible to organize the House constitutionally while the so-called 'Benson House' was in existence," and "the members of the House now in attendance who have signed this resolution will return to their respective homes, at all times during our term of office awaiting the call of the Governor for a session of the Legislative Assembly, hoping that the members may yet, in a legal and constitutional organization, fulfill the pledges made by their respective political parties to the people of Oregon."

Senator Mitchell's term having expired March 4, Gov. Lord, on March 6, appointed Henry W. Corbett as his successor.

The Governor's biennial message was written, but was not delivered before the Legislature. It was published after the adjournment.

ORIENTAL CHURCHES IN THE UNITED STATES. Besides the members of the Russo-Greek Church in Alaska, the Oriental churches are represented in the United States by immigrants who have come over in late years with considerable rapidity from Slavic, Grecian, and Turkish countries, most of them belonging to the Greek Orthodox Church. The Greek Uniate Church, Gregorian

Armenian, and Maronite churches are also represented among them. Those attached to the Greek Uniate Church are said usually to go over to the Orthodox Church on coming to this country. The episcopal allegiance of the Greek churches in the United States is to the Bishop of Alaska and the Aleutian Islands, under the Holy Synod of Russia, whose residence is at San Francisco. Another episcopal see is in contemplation, to be established in Chicago. Including about 15,000 members—residents of European descent and Indians—in Alaska, the number of communicants of the Russian Church is given by A. A. Stamioni in the "Independent" as approximating 70,000. The addition of 10,000 others, comprising 6 churches, communicants of the Holy Synod of Greece, would bring the total Orthodox membership up to 80,000. The Maronite Church, or Syriac Uniates, and the Gregorian Armenian Church have each 4 or 5 churches and about 10,000 souls in the United States. In the city of New York there are 3 Orthodox churches, 1 Greek Uniate, 1 Maronite, and 1 Gregorian Armenian Church, besides a Syrian Protestant and an Armenian Protestant church. A journal is published in New York as the organ of the Greek Orthodox Church.

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PARAGUAY, a republic in South America. The legislative power is vested in a Senate of 13 members and a Chamber of 26, elected by the direct vote of male citizens over eighteen years old. The President, elected for four years, is Juan B. Eguisquiza, whose term expires on Nov. 25, 1898. Dr. Insfran is the Vice-President. The ministers in 1897 were: Interior, A. M. Martinez; Foreign Affairs and Colonization, J. S. Decoud; Finance, A. Cañete; Justice, Worship, and Public Instruction, R. Mazó; War, E. Aceval.

Area and Population.—The area is estimated at 98,000 square miles. The population is about 432,000. The number of foreigners is estimated at 17,000. Asuncion, the capital, has 45,000 inhabitants.

Finances.—The revenue in 1896 was 5,832,867 pesos, of which 5,080,622 came from customs. The expenditures were 7,109,581 pesos, leaving a deficit of 1,276,714 pesos. For 1897 the expenditures were estimated at 3,505,784 pesos, of which 1,181,844 were for the interior, 44,700 for foreign affairs, 273,144 for finance, 354,000 for justice, education, and worship, 400,620 for war and marine, and 1,251,476 for other expenses. At the end of the year there was a deficit of 856,000 pesos. The internal debt is 5,441,643, and the external debt 34,598,213 pesos.

Commerce.—The imports in 1896 were valued at 2,786,000 pesos in gold, and the exports at 12,292,000 pesos in paper, worth about 15 cents on the dollar. There were 415 steamships and 248 sailing vessels from foreign ports entered at Asuncion in 1896, having an aggregate tonnage of 176,638 tons, and 384 steamships and 226 sailing vessels cleared, tonnage 147,640. The chief imports are textiles, mostly coming from England, wines from Spain, and rice.

Communications.—The length of railroads in operation in 1897 was 155 miles. The telegraph lines have a total length of 360 miles. There were 46,075 internal and 12,874 foreign messages sent in 1896. The number of pieces of mail matter carried in 1896 was 777,617.

The Army and Navy.—The permanent military force, which discharges also the functions of a po-

lice, consists of a regiment of infantry, one of cavalry, and one of field artillery, numbering in all 82 officers and 1,345 men. There is also a company of fortress artillery. In case of war the National Guard, in which every man is bound to serve, is mobilized. The artillery is armed with 12 Krupp guns, 12 mitrailleuses, and 6 Maxims. In the forts there are 25 cannon of different calibers. The navy consists of a steamer of 440 tons and two river gunboats manned with 13 officers and 90 sailors, and a force of marines numbering 27 officers and 155 men.

Boundary Dispute.—Between the Paraguay river and Santa Cruz de la Sierra is a tract of country claimed both by Bolivia and by Paraguay. In the spring of 1897 the Bolivian Government accepted a proposal of an American company to build a railroad there. The Paraguayan minister to Bolivia, who had neglected to keep his Government informed, was dismissed, and troops were hurried to the frontier to occupy the disputed territory. Congress in July took measures for the organization of the National Guard in order to be able to follow up the determined attitude assumed by the Government. Bolivia also prepared for war by strengthening her military forces, but took no action in the debatable tract pending the report of a special commission sent to investigate and report on the boundary line.

PENNSYLVANIA, a Middle State, one of the original thirteen, ratified the Constitution Dec. 12, 1787; area, 45,215 square miles. The population, according to each decennial census, was 434,373 in 1790; 602,365 in 1800; 810,091 in 1810; 1,047,507 in 1820; 1,348,233 in 1830; 1,724,033 in 1840; 2,311,786 in 1850; 2,906,215 in 1860; 3,521,951 in 1870; 4,282,891 in 1880; and 5,258,014 in 1890. Capital, Harrisburg.

Government.—The State officers for the year were: Governor, Daniel H. Hastings; Lieutenant Governor, Walter Lyon; Secretary of the Commonwealth, Frank Reeder, succeeded by David Martin; Secretary of Internal Affairs, James W. Latta; Treasurer, Benjamin J. Haywood; Auditor, Amos H. Mylin; Attorney-General, Henry C. McCormick; Adjutant General, Thomas J. Stewart; Superintendent of Public Instruction, Nathan C.

Schaeffer; Insurance Commissioner, James H. Lambert; Commissioner of Banking, B. F. Gilkeson; Secretary of Agriculture, Thomas J. Edge; Superintendent of Public Buildings, J. C. Delaney; State



DANIEL H. HASTINGS, GOVERNOR OF PENNSYLVANIA.

Librarian, W. H. Egle; Dairy and Food Commissioner, Levi S. Wells; Forestry Commissioner, J. H. Rothrock; Factory Inspector, James Campbell; State Veterinarian, Leonard Pearson; Economic Zoölogist, B. H. Warren; Chief Justice of the Supreme Court, James P. Sterrett; Associate Justices, Henry Green, Henry W. Williams, James T. Mitchell, J. B. McCollum, John Dean, and D. Newlin Fell; Justices of the Superior Court, E. N. Willard, C. E. Rice, J. A. Beaver, J. J. Wickham, H. J. Reeder, George B. Orlady, P. P. Smith. All the above named are Republicans except Justices McCollum and Smith, Democrats.

Finances.—The annual statement of the Treasurer shows the receipts of the general fund for the fiscal year ending Nov. 30 were \$12,475,070.17, and the payments \$12,768,515.84. The total of receipts includes the whole amount received as State personal tax, three fourths of which is returned to the counties; personal fees, paid by and returned to State officers; fertilizer licenses and fines received from the Department of Agriculture, drawn out and expended by that department; also, amount paid by insurance companies on the Capitol building and contents destroyed by the fire of Feb. 2, and the 1 per cent. of the tax on foreign fire insurance companies distributed among the cities and counties of the State. The aggregate of these items is \$2,155,118.44.

The appropriations made by the last Legislature for all purposes for the two years ending June 1, 1899, were about \$24,200,000. Of the 72 channels into which payments were made during the fiscal year the common schools received the most, \$4,547,663.85 being paid to maintain them, and \$261,814.70 was expended on normal schools, while \$1,226,787.50 was paid to charitable institutions; to hospitals and asylums for the insane, \$587,554.18; penitentiaries, \$105,788.01; and reformatories, \$166,358.59.

The National Guard received \$347,665.23, and in round numbers \$130,000 was spent to suppress the disturbances at Hazleton. Public printing cost \$387,292.54.

The receipts came principally from these sources: Tax on capital stock, \$3,696,445.27; on corporate loans, \$1,076,242.65; on personal property, \$2,476,241.77; on collateral inheritances, \$894,956.64; on bank stock, \$596,011.20; on corporate gross receipts, \$675,432; on premiums, \$575,829.65; and on municipal loans, \$123,411.74. Mercantile licenses brought in \$541,237.35; wholesale liquor licenses, \$457,177.29; brewers' and distillers' licenses, \$126,109.41; bottlers' licenses, \$116,034.90, while \$602,717.23 was realized from bonus on charters.

The sinking-fund receipts were \$642,913, while payments were \$275,371.50.

Education.—The statement regarding public schools by the superintendent for the year ending June 1, 1897, shows that the number of school districts has reached 2,482, the number of schools 26,706, the number of teachers 27,249; that the total enrollment of pupils was 1,109,872, the average monthly cost per pupil was in Philadelphia \$2.26 and for the State outside of Philadelphia \$1.22, and the total expenditure was \$19,618,187.09. Of this amount \$1,113,379.02 was expended for text-books and supplies, \$3,688,604.36 for building, and \$15,929,582.73 for maintenance. The State appropriation for the year was \$5,500,000.

The University of Pennsylvania received a gift of \$100,000 in November from Thomas McKeen, of Philadelphia, toward the cost of a new law school. The building will be erected near the campus.

Pardee Hall, the finest building of Lafayette College, at Easton, was badly damaged by fire Dec. 18. The college graduated a class of 53 students in June, 1897.

A residence valued at \$600,000 is to be given by Mr. P. A. B. Widener for a free library in Philadelphia.

Banks.—The most important occurrence of the year in this department was the failure of the Chestnut Street National Bank of Philadelphia, Dec. 23. The Chestnut Street Trust and Saving Fund Company, the officers of which are identical with those of the bank, was closed for business the same day. The failure was said to be due mainly to the loss of money in a large paper mill at Elkton, Md., owned by the president of the bank, W. M. Gingerly, who was also the owner of the Philadelphia "Record."

The liabilities of the bank and trust company together were given as about \$3,000,000.

In November J. B. Firestone, former teller of the Dillsburg National Bank, was sentenced to five years in the Penitentiary for embezzlement of about \$13,500 from the bank. The First National Bank of Bethlehem lost nearly \$15,000 through its cashier, discovered in February. E. K. Smith, whose bank in Columbia failed for about \$200,000 in 1893, and who made a long fight to keep out of jail, was surrendered to the sheriff, Feb. 22, and taken to the Eastern Penitentiary.

Building and Loan Associations.—The assets of the domestic associations in 1896 were \$107,008,100.80; receipts and disbursements, \$47,831,450.61. Forty-two associations were organized in Pennsylvania, with a total of 85,512 shares. The number of foreclosures during the year was 941. The number of foreign building and loan associations from which reports were received by the Bank Department was 62. The Bank Commissioner says that, taken as a whole, the building and loan associations are in a sound financial condition, and that a vast majority of them are well and economically managed.

Insurance.—The report of the commissioner for the year ending Nov. 30, 1896, was submitted in March. It shows that Pennsylvania companies had a prosperous year, the premium receipts for 1896 being over \$400,000 more than the preceeding year, while the losses were only a little over \$200,000 greater. The losses paid were \$5,268,860.02, while the year before they were \$5,013,557.44. In marine and inland business the ratio of losses paid by Pennsylvania companies to premiums was 82.42 as compared with 110.36 in 1895.

A decision was given in Harrisburg, April 8, that persons under twenty-one years of age can not be legally insured.

Labor Interests.—The Factory Inspector's report in December shows that 3,317 orders were issued. Of that number 3,044 have been complied with. There were 940 accidents reported, 94 fewer than last year. Fifty of that number were fatal, 27 less than last year. A majority occurred in the iron and steel works in the handling of products where machinery could not be used.

Thirty bakers were prosecuted under the law.

There are 419,047 persons employed in the places under the jurisdiction of the department, and of this number 402,495 are subject to the inspection laws. There are 21,164 persons employed between the ages of thirteen and sixteen years. There are 9,661 persons subject to the sweat-shop laws and 6,891 subject to the bake-shop laws.

The strikes and lockouts in 1896 numbered 68, exclusive of one general strike among house painters that included 200 shops. Twenty-four of these strikes were ordered by labor organizations. Twelve were successful, 45 unsuccessful, and 11 partially so. The total number of days lost on account of the strikes was 325,854.

The great strike began early in July. The order of the national executive board of the United Mine Workers was obeyed by 10,000 to 15,000 men in the Pittsburgh district, July 6, and the strike soon became general. The strikers marched on the mines where men were still working, and camped in the neighborhood trying to induce them to strike, but not using violence. A meeting of operators at Pittsburg, July 27, where 89 coal companies' mines were represented, adopted the following among other resolutions:

"We favor the speedy adjustment of this strike and all questions and controversies connected therewith by conciliation, employed in a joint conference of miners and their employers, and, failing an adjudication, by a tribunal of arbitrators composed of three United States judges or three other gentlemen of national repute and in whom the entire country can repose confidence.

"We are ready and willing to advance the wages of the miners, but find ourselves unable to do this to the full extent demanded by them, viz., 25 per cent above the prices that were paid prior to the strike and now being paid by one of the largest coal companies in western Pennsylvania, which company presents the chief obstacle to the settlement of the present conflict."

Seven strikers were arrested, Aug. 5, at Middletown, for an attack upon nonunion men. The marching men in the Pittsburgh district paid no attention to the sheriff's proclamation warning them to refrain from assembling and marching; the court was applied to for an injunction to restrain them from interfering with miners still at work, and one was granted Aug. 12. The strikers disregarded the order of the court, and on an attempt of the deputy sheriffs to enforce it, Aug. 13, a lively scuffle occurred, during which one man was accidentally hurt, though no weapons were drawn and no blows were struck intentionally.

Sept. 6, 20 deputies from Washington, Pa., reached Finleyville, where they were met by a large crowd of strikers and their friends. Each deputy was armed with a rifle and a revolver, but in spite of this the strikers, headed by 100 Polish women, closed in on them, and the deputies received rough treatment. They were gradually forced back, and finally retreated to Gastonville, followed by about 200 men and women. At Gastonville the deputies took refuge in the office of the company, where they were kept all night, during which the building was bombarded with stones and bricks and an occasional shot was fired.

At seven o'clock in the morning the trouble reached a climax when the deputies sallied out from their quarters. Headed by the women, the strikers rushed on the deputies with stones and clubs and pick handles, and blows fell thick and fast. One big woman wrested a rifle from a deputy's hands and struck him on the head with it, inflicting serious injury. By this time 1,000 men, women, and children had joined the crowd. The deputies slowly made their way to Orangeville, never firing a shot, and took refuge in a vacant house, closely followed by the mob, which surrounded the building and threatened to burn it. Finally, one of the strikers approached the house with a flag of truce, and a conference was held. The deputies were ordered to leave town, and after a short parley decided to do so.

The crisis of the trouble was reached Sept. 10, when a band of deputy sheriffs fired into a mob of miners at Lattimer, killing or mortally wounding 24 and injuring about 40 others. Sheriff Martin, who was in command of the deputies, had ordered the marching strikers to turn back, and read the proclamation to them. A fight ensued, and the deputies were ordered to fire. Troops of the National Guard were sent to the scene of trouble.

Sept. 16, between 15,000 and 18,000 coal miners in the Pittsburgh district returned to work, in accordance with the action of a convention, authorizing the men to resume work in all mines complying with the provisions of the 65-cent scale adopted at Columbus.

There were outbreaks during the few days following, some of them by mobs of women, but no serious injuries were reported. At Hazleton 300 men were forced by the women to quit work; at Lattimer they made a raid upon men returning to work, but were checked by the militia. A breaker at Beaver Meadow was burned, Sept. 21, with a loss of about \$50,000.

The sheriff and his deputies who shot the strikers at Lattimer were arrested, and were held for trial. They entered bail in the sum of \$6,000 each, \$5,000 for murder and \$1,000 for feloniously wounding. On trial, they were acquitted.

The estimated cost of the strike for the Pittsburgh district alone was \$5,000,000 to \$7,000,000, of which \$2,250,000 was in wages lost by voluntary cessation of work.

Warrants were drawn on the State treasury for \$115,000 for the payment of expenses incident to the calling out of troops.

Memorials.—An equestrian statue of Washington, erected by the Pennsylvania Society of the Cincinnati in Philadelphia, was unveiled May 15. The Governor proclaimed a public holiday in accordance with a resolution of the Legislature, and the members attended in a body.

A statue of Stephen Girard on the west plaza of the City Hall in Philadelphia was unveiled May 20. The funds were contributed by alumni of Girard College and citizens of Philadelphia, and the date of the unveiling was the one hundred and twenty-seventh anniversary of the birth of Stephen Girard.

and the semicentennial of the completion of the college and its opening.

The monuments, tablets, and markings erected at Chickamauga, Lookout Mountain, Orchard Knob, and Missionary Ridge, to commemorate the services of the Pennsylvania State troops, were dedicated Nov. 15, under the auspices of the Chickamauga and Chattanooga National Military Park Commission and the Pennsylvania Commission.

Political.—The only State officers to be elected in November were the Treasurer and the Auditor. The Republicans held a convention in Harrisburg, Aug. 26, and nominated James S. Beacom for Treasurer and Levi G. McCauley for Auditor.

The Democratic convention met in Reading, Aug. 31. At a meeting of the State committee the evening before a resolution was adopted declaring William F. Harry's seat on the National Democratic Committee to be vacant. This action was in consequence of Mr. Harry's course in not supporting Mr. Bryan in the presidential canvass. The convention ratified the action and the selection of James M. Guffey to fill the place on the national committee. The resolutions reaffirmed the Chicago platform and demanded a complete investigation of the books and accounts of the State Treasurer. M. E. Brown was nominated for Treasurer and Walter E. Ritter for Auditor.

The Prohibition party nominated Rev. Silas C. Swallow, D. D., for Treasurer, and W. W. Lathrop for Auditor. Its platform "pledged the party to the destruction of the legalized liquor traffic, declared for suffrage without distinction of sex, arraigned the State administration for lavish expenditures, and opposed granting money for sectarian purposes."

The Socialist, Labor, and Liberty parties put out tickets also.

Following was the official vote as given out Nov. 14: Treasurer—Beacom, 372,448; Brown, 242,731; Swallow, 118,969; Thomas, 5,152; Steelsmith, 623; Thompson, 15,135; scattering, 81.

Auditor General—McCauley, 412,652; Ritter, 268,341; Lathrop, 58,876; Barnes, 5,048; Hogan, 842; scattering, 89.

Secretary of the Commonwealth.—The Secretary, Frank Reeder, resigned in September, at the request of the Governor. The principal reason the resignation was called for was said to be the fact that the Secretary was one of the signers to a bond indemnifying the State Treasurer for disbursements made by him to extra employees borne on the roll of the Legislature which were not authorized by law, while the appropriation bill was awaiting the action of the Governor, thus virtually guaranteeing his approval. The Deputy Attorney-General, J. P. Elkin, also was requested to resign, apparently for the same reason.

The Capitol.—The State Capitol, at Harrisburg, finished in 1821, was destroyed by fire Feb. 2. The property loss was estimated at \$1,500,000.

The Legislature was in session, and in order to provide a place for its meetings Grace Methodist Episcopal Church was rented and fitted up. The Legislature appointed a committee to investigate and report on the origin of the fire; the conclusion was that it was accidental. It was charged by the Rev. S. C. Swallow, D. D., afterward candidate for State Treasurer on the Prohibition ticket, that there was evidence to show that the fire was not accidental. He made other charges of dishonesty in regard to official transactions. His articles, published in his paper, the "Pennsylvania Methodist," created a sensation. He was summoned to appear before the legislative committee and give his authority, but refused and was declared in contempt. Suits for criminal libel were brought against him in

March. J. C. Delaney, Superintendent of Public Buildings, was the prosecutor in one, and W. F. Stewart, Secretary of the Soldiers' Orphans' School Commission, against which the clergyman had made charges, in the other. The suit of Mr. Stewart resulted in the verdict, which has since become celebrated, "Not guilty, but must pay the costs." That of Mr. Delaney resulted in conviction, with a fine of \$500, and appeal was taken by Dr. Swallow.

The Legislature made an appropriation of \$550,000 for a new Capitol, and commissioners were appointed.

A design by Henry Ives Cobb was accepted. The specifications say it is impossible to construct a proper legislative building with a high dome and all the requirements set forth in the programme for the appropriation of \$550,000, but it is possible to build two legislative chambers and sufficient offices and committee rooms, to answer the present needs of the State government.

Legislative Session.—The session of the Legislature began Jan. 5 and ended July 1. It was the longest in the history of the State except that of 1883, which, with the special session that immediately followed the regular one, extended into December. J. M. McCarrell was president *pro tempore* of the Senate, and H. K. Boyer was Speaker of the House.

The contest for the Republican nomination for the succession to the seat of United States Senator Cameron was settled in caucus, Jan. 5, by the choice of Boies Penrose, who received 133 of the 211 votes cast, John Wanamaker receiving 75, and Senator Cameron, J. B. Robinson, and C. E. Rice, each one. Mr. Penrose was elected, Jan. 18, by a vote of 42 in the Senate and 168 in the House. Chauncey F. Black, the Democratic candidate, received in both houses 39 votes.

Charges of bribery in connection with the senatorial contest were made, resulting in suits for bribery and criminal libel.

A law for taxing alien labor was one of the more important measures of the session. Employers are to keep account of all employees over twenty-one who are aliens; they are to deduct the tax of 3 cents a day from the wages of each for every day he works until he is naturalized. Quarterly reports are required from employers. After July 1, when the law went into effect, courts in Pittsburg and Philadelphia declared it unconstitutional. It has not yet been pronounced upon by the highest court.

The condition of the treasury and the prospect of a deficit of more than \$3,000,000 on Nov. 30 made it necessary that more revenue be provided for, or reductions made in expenses. Later the Auditor found reason to believe that the deficit would be between \$4,000,000 and \$5,000,000. The first bill passed for increasing revenue was the direct inheritance tax of 2 per cent. on estates over \$5,000, which is expected to bring in about \$1,000,000 annually. It has been attacked in the courts. A tax on bank stock and a 4-mill tax on matured stock of building and loan associations were laid. Other measures for increasing revenue were one increasing the bonus for charters from $\frac{1}{4}$ to $\frac{1}{3}$ of 1 per cent., and requiring them to be paid in advance, which will bring about \$300,000 additional, another taxing the bonds of certain corporations 4 mills, and others requiring a uniform license of \$1,000 for brewers, besides the 5 mills they pay on capital stock, and raising the retail liquor licenses. It was also provided that 2 per cent. interest must be paid by banks on State deposits, except that \$500,000 may be deposited in three active banks, on which the Treasurer shall receive $1\frac{1}{2}$ per cent. interest on daily balances. This law goes into effect in May, 1898.

An amendment to the election laws provides that no candidate's name shall appear more than once on the official ballot. The payment of the occupation or poll tax of an elector by any one other than himself is prohibited, and also the assessment of political contributions from officers of the State or of counties or cities, and any demand for such contributions.

A school law that was enacted is to give the country districts a larger share of the \$5,500,000 fund at the expense of the more populous districts. The school age is raised from thirteen to sixteen, but the law exempts children between fourteen and sixteen years that are regularly employed.

A new libel act provides that "in any civil action for libel the plea of justification shall be accepted as adequate when it is pleaded by the defendant that the publication is substantially true in every material respect and is proper for public information, and if such a plea shall be established to the satisfaction of the court and jury there shall be no recovery. In no civil action for libel shall damages be awarded beyond just restitution for injury actually sustained."

A road bill that passed provides for an assessment for road purposes: the act goes into effect after \$500,000 shall have been appropriated by the State to be distributed in proportion to the number of miles of public roads in each township; no township is to receive more State money than it raises by local taxation.

A division of forestry was created in the Department of Agriculture, with a commissioner of forestry to serve for four years.

Another act provides that the owner of land having on it forest or timber trees of not less than 50 trees to the acre, each tree to measure at least 8 inches in diameter 6 feet above the ground, with no portion of the land absolutely cleared of the trees, shall be entitled to receive annually during the period that the trees are maintained in sound condition a sum equal to 80 per cent. of all taxes annually assessed and paid upon the land.

Another act provides that the Forest Commissioner may bid in for the State any lands offered for sale for taxes which he thinks are desirable for forest reservations.

Still another act provides for taking by the State under the right of eminent domain and paying for the three forest reservations as follows: One of not less than 40,000 acres upon waters that flow mainly into Delaware river, one of not less than 40,000 acres upon waters that flow mainly into Susquehanna river, and one of not less than 40,000 acres upon waters that flow mainly into Ohio river.

The following bills also became laws:

Prohibiting and punishing the circulation or sending of anonymous letters containing libelous or defamatory matter.

Prohibiting adulteration of drugs and fixing penalties for it.

Permitting boroughs to make appropriations for public libraries.

Providing for recording of legal instruments made by married women.

The Governor kept the appropriation bills till after the adjournment, disallowed some, and cut down others. Among those signed were: For new buildings of the insane hospital in Harrisburg, \$167,000; for the school for training deaf children in speech before they are of school age, \$36,547.43; for the hospital for injured persons of the anthracite-coal region, \$70,000; Pennsylvania State College, \$87,332.50; University of Pennsylvania, \$200,000; Lehigh University, \$150,000; school among Cornplanter Indians, \$400; nautical schoolship, \$24,000; Philadelphia Polyclinic and College

for Graduates in Medicine, \$25,000; museums and School of Industrial Arts, \$40,000; for investigation of the diseases of domestic animals, \$15,000; Board of Health and its emergency fund, \$62,000; transportation of old soldiers to and from Chattanooga battlefield, \$20,000; Executive Committee Chickamauga and Chattanooga Battlefield Commission, \$5,000; copying rolls of volunteers of the civil war, \$2,400.

Other enactments were:

To protect employees of corporations in their right to belong to labor organizations.

Prohibiting the wearing of insignia of labor organizations by nonmembers.

Creating a State bureau of mining in connection with the Department of Internal Affairs.

Authorizing the transfer of wholesale or retail liquor licenses from one person to another and from one place to another.

Providing for the weighing of coal as it comes from the miners and before screening.

To protect the lives and limbs of miners from the dangers resulting from incompetent miners in the anthracite regions.

Providing that any person who shall willfully and maliciously damage or destroy any American flag or flagstaff which now or hereafter may be erected on any private or public building or place, or on any public or private highway or any public or private grounds, or use the flag for advertising any business or trade, shall be guilty of a felony, and upon conviction shall pay a fine not exceeding \$500 or suffer imprisonment not exceeding six months, or both.

Prohibiting importation of cattle into the State unless accompanied by a certificate showing that they have been subjected to the tuberculin test and are free from disease.

Regulating the employment and providing for the health and safety of persons where clothing, cigarettes, cigars, and certain other articles are made.

Requiring the branding of cheese.

Resolutions were passed expressing sympathy with Cuba and requesting the Pennsylvania Congressmen to vote for bills increasing the salaries of railway postal clerks and making the Vicksburg battlefield a national park.

The Legislature attended the dedication of the Grant monument in New York in April. There was some trouble over the bill for the expenses, which amounted to \$7,500. It was cut to \$3,000, and then vetoed by the Governor. The greater part of the bill was for catering on board a boat which the committee leased for the day for \$500. The charge for the wines and liquors furnished was \$3,026.60, and for cigars \$450.

A commission appointed by the Legislature of 1895 to ascertain the best methods of utilizing convict labor so as not to interfere with legitimate industries submitted its report, in which it was suggested that convicts might be employed to furnish supplies for the charitable institutions and in work on buildings for them, and recommended that machine labor be dispensed with in the prisons. The commission was continued at its own request. An appropriation of \$5,000 was made for its expenses.

The standing committees on public buildings of the Senate and House were instructed to act as a joint committee to inquire into the cause of the fire that destroyed the State Capitol building; the progress of the fire at the time the fire alarm was given; and the delay of the fire department to respond, as well as the delay in securing water and cause of the insufficient supply. More in reference to this matter may be found under the head "The Capitol."

Committees were appointed to investigate the

condition of the miners, one for the anthracite region and one for the bituminous. At a hearing in May miners who testified denounced the company stores as the greatest injustice with which they had to contend. About \$24,000 was the amount of the bills for these two committees.

The bill for expenses incurred in the Holler-Laubach senatorial contest in 1895, amounting to \$32,000, was disallowed that year. It was presented to this Legislature, itemized and footing up \$30,643.

An investigation of the Eastern Penitentiary was made in April by Judge J. G. Gordon. He reported that some of the insane prisoners had been treated most brutally. A committee of the Legislature was sent to investigate the penitentiaries. Its report censured Judge Gordon and declared "that no just foundation whatever has been shown for the charges against the Eastern Penitentiary, its system of confinement, its management, officers, discipline, dietary, or the judicious humanity of its general administrations."

The expenses of this committee amounted to \$14,976.20. The bills of all or most of the investigating committees were criticised as excessive.

PERSIA, an absolute monarchy in Asia. The Shah in Shah, or Emperor, is Muzaffereddin, born March 25, 1853, who succeeded his father, Nasreddin, assassinated on May 1, 1896. The Valiahd, or heir presumptive, is Mohammed Ali Mirza, born June 21, 1872.

Area and Population.—The area of Persia is estimated at 628,000 square miles and the population at 9,000,000. Teheran, the capital, has a population of about 230,000.

Commerce.—The principal article of import is cotton goods, in addition to which glass, paper, iron, copper, sugar, and tea are imported. The chief exports are silk, tobacco, skins, rugs, opium, gums, wool, dates, cereals, rice, cotton goods, pearl shells, arms, and drugs. The imports amount to about \$26,400,000, and the exports to \$15,600,000.

Frontier Disorders.—Armenians of Persia have been instigators and leaders of the insurrectionary uprisings in Van and Zeitun. The rebels against the Turkish Government received their arms from Persia, and when suppressed by the Turkish soldiery they took refuge in Persian territory. In August, 1897, the Vali of Van heard that Armenian agitators were again active, and sent out a company of soldiers, which surrounded the village of Perek and captured a number of prisoners after a sharp conflict with the revolutionaries, who began firing on the troops in the hope of breaking through the cordon. In the neighborhood of Haidieh a raid was met by a strong force of Turkish troops. After transporting their wounded over the Persian frontier the Armenians raised a band of 500 horsemen with the object of attacking the village of Bash Kouleh. However, the Kaimakan received ample re-enforcements and promptly checked the irruption. The Turkish authorities complained that the Persian local officials neglected to take the necessary measures against the marauders, and even lent their aid to the invaders. In repelling the raids the Kurdish irregulars crossed the border themselves on several occasions, sacked 9 Persian villages, and massacred over 300 Mohammedans and Christians, including women and children. After a full inquiry the Persian Government, which found that there had been no neglect of duty on the part of its officials, demanded satisfaction from the Ottoman Government, asserting that the violations of the frontier had taken place with the cognizance of the Turkish military authorities. The result of the inquiry showed that the bulk of the marauders were Turkish subjects, and that less than 300 came from Persia, crossing the frontier in disguise and in

small parties proceeding from different points. The Persian authorities removed 250 refugees from the frontier to the interior, and arrested 29 ring-leaders, of whom 26 were handed over to the Turkish and Russian authorities, being of their nationalities.

PERU, a republic in South America. The legislative power is vested in a Congress consisting of a Senate of 48 members and a House of Representatives containing 108. The President for the term ending Sept. 10, 1899, is Nicolas de Pierola. The Vice-Presidents are G. E. Billinghurst and A. Seminario y Vascones. The Cabinet in the beginning of 1897 consisted of the following members: President and Minister of Justice and Worship, Dr. Manoel P. Olasechea; Minister of Foreign Affairs, E. de la Riva Agüero; Minister of Finance and Commerce, S. Rey; Minister of Public Works, M. I. Cuadros; Minister of War and Marine, Col. J. Ibarra; Minister of the Interior, Lorenzo Arrieta.

Area and Population.—The area of Peru is 463,747 square miles, and the population is estimated at 2,980,000, including 350,000 uncivilized Indians. Lima, the capital, had 103,956 inhabitants in 1891. About 57 per cent. of the population are of pure Indian extraction, 23 per cent. of mixed race, and the other 20 per cent. are chiefly descendants of Spanish settlers, but include also 18,000 Europeans and 50,000 Chinese and other Asiatics.

Finances.—The budget for 1897 made the total receipts 10,721,523 sols, of which 6,272,570 came from customs, 2,518,561 from taxes, 1,163,680 from the salt monopoly, 293,167 from posts and telegraphs, and 473,545 from various sources. The expenditures were calculated at 11,308,243 sols, 586,720 more than the receipts. The amounts under the different heads were 364,371 sols for the legislative power, 2,573,273 for the executive, 477,532 for foreign affairs, 1,154,211 for justice and education, 3,252,170 for finance and commerce, 3,052,788 for war and marine, 217,654 for public works, and 216,244 for debts anterior to March 20, 1895. The internal debt amounts to 26,606,450 sols, on which the interest has been reduced to 1 per cent. The Government, to secure a release from the English railroad loans of 1870 and 1872, amounting to £31,500,000, not including arrears of interest since 1876, transferred by the Grace-Donoughmore arrangement of 1890 all its railroads, mines, lands, and guano deposits to the bondholders for sixty-six years.

The customhouse duties in 1896 showed an increase of 40 per cent. over the average collections for the previous five years. The old paper money, notes, and ineas, no longer a medium of trade, have been exchanged for internal bonds at the rate of 1 sol of internal debt for 15 sols of paper money, 1 ineas being reckoned at 8 sols of notes. The internal bonds themselves were selling in 1897 for 8 per cent. of their nominal value. Early in 1897 the Government closed the mints to the free coinage of silver preparatory to introducing the gold standard. A law placing the currency on a gold basis was introduced in Congress and was passed in the face of strenuous opposition. The owners of silver mines feared that it would ruin their industry. Discoveries of gold deposits in southwestern Peru at Sandia and Carabaya attracted hundreds of miners from California, who expected to find placers or washings in the rivers. On May 10 the Government ceased all coinage of silver, and decreed that Peruvian sols or other silver coins when brought in from abroad must be delivered at the mint to be melted into bars and returned to their owners as bullion. Silver coin sent from place to place in Peru must be accompanied by an invoice showing that it has not been imported and that the Govern-

ment has authorized the transportation. This law was intended to cheek the rapid depreciation of the Peruvian silver currency.

The Army and Navy.—The permanent army consists of 6 battalions of infantry, numbering 290 officers and 1,796 men, 2 regiments of cavalry, numbering 80 officers and 542 men, and 2 brigades of artillery, numbering 33 officers and 416 men, besides which there is a gendarmerie and civil guard numbering 3,150 men. The active army is raised by conscription, and the peace effective must not exceed 2,749 men, the annual contingent being 1,383. Those who are not drawn are inscribed in the National Guard. The troops are armed with Mannlicher rifles and Krupp cannon. The National Guard numbers 3,510 officers and 70,553 men, making with the war effective of the regular army the total of 6,540 officers and 82,883 men.

The naval force consists of a cruiser of 1,700 tons, two screw steamers, a training ship, and 6 river steamers.

Commerce.—The chief exports are sugar, silver and silver ore, cotton, and wool. The trade with different countries in 1895 was as follows, values being given in sols of the silver value of 93 cents :

COUNTRIES.	Imports.	Exports.
Great Britain	4,115,000	6,660,000
Germany	1,800,000	768,000
United States.....	802,000	1,014,000
France.....	1,029,000	373,000
Belgium.....	412,000	
Italy.....	298,000	34,000
Chili.....	1,480,000	3,583,000
Colombia.....		840,000
Brazil.....	485,000	369,000
Other countries.....	1,323,000	1,163,000
Total.....	11,744,000	14,759,000

The imports in 1896 amounted to 17,505,148 sols, and the exports to 25,473,662 sols.

Navigation.—There were 1,485 vessels, of 604,257 tons, entered, and 1,489, of 602,180 tons, cleared at the port of Callao in 1896.

The merchant marine in 1895 consisted of 4 steamships, of 1,808 tons, and 37 sailing vessels, of 17,122 tons.

Communications.—The railroads built by the state had in 1895 a total length of 804 miles and those built by companies a length of 124 miles.

The number of letters that passed through the post office in 1894 was 4,218,450 in the internal and 1,567,083 in the international service. The receipts were 973,068 francs, and expenses 1,033,657 francs.

The telegraph lines had in 1895 a total length of 1,472 miles, with 1,625 miles of wire.

Political Affairs.—An Indian revolt in the department of Ayacucho having been put down and tranquillity restored also in the Amazonian districts, Peru enjoyed peace and quiet in 1897. There was a continued revival of trade and production. The Taena and Arica question, still in abeyance, caused some anxiety. Bolivia, not content with urging her claim to coveted territory, made inroads into districts claimed by Peru. This difficulty was settled early in May by an agreement to refer it to the arbitration of Spain. An envoy was sent to the United States to negotiate a settlement of the claim against the Peruvian Government of Victor H. McCord, a railroad superintendent, who was twice imprisoned and once condemned by court-martial to be shot because a railroad train full of troops was delivered by the engineer into the hands of the revolutionists in 1885, and who claimed an indemnity of \$200,000 for the outrage.

Capt. H. M. Jones, the British minister, was recalled on complaint of the Peruvian Government, in consequence of the strong terms he had used in

discussing certain British claims. Congress was opened on Aug. 12. The Government proposed to collect customs duties in English sovereigns, reckoning 10 sols to the pound sterling. The Peruvian Corporation, which administers the railroads and mines for the bondholders, was in constant strife with the Government, and until these vexatious relations were arranged there was no prospect of attracting foreign capital. The Chamber appointed a commission to inquire into the failure of this company to fulfill its obligations. The Peruvian Corporation, organized in 1890, assumed the whole of Peru's national debt, capitalized at over £40,000,000, in return for the control of the railroads and mines and the guano deposits that had not passed into the hands of Chili. Owing to decreased railroad receipts and the practical failure of the guano deposits, the corporation was unable in 1896 to pay the interest agreed upon, and made a compromise with its own bondholders. The Peruvian Government undertook to pay to the corporation an annual subsidy of £80,000 from the customs receipts with the understanding that the corporation should complete the railroads, constructing a certain mileage every year. As this obligation remained unfulfilled, the Government stopped the annuity. In October the Congress sanctioned a measure authorizing a settlement of the differences arising from the fact that Peru had not paid the promised annuity and that the corporation had not built the projected 160 kilometres of railroad. The bill to adopt the gold standard was passed on Oct. 7 by a majority of 1 vote after a long and animated debate. Soon after this the Cabinet terminated a crisis that began before the assembling of Congress by resigning in a body, in consequence of an effort made in the Chamber to pass a vote of censure. President Pierola asked them to reconsider their decision, but finally accepted their resignations on Nov. 2. A new Cabinet was constituted on Nov. 26 under the presidency of Señor Romana, in which E. de la Riva Agüero remained Minister of Foreign Affairs and I. Rey Minister of Finance, Col. J. R. de la Puente, who had succeeded Col. Ibarra as Minister of War, gave place to Señor Rosaglie, Señor Puente became Minister of Public Works, and Señor Lavalle Minister of Justice. A law dealing with the registration of civil marriages, the outcome of oft-repeated complaints of foreigners, was passed on Nov. 12 by the Chamber of Deputies, and a month later by the Senate. Missionaries and others had interested the British and United States governments in efforts to remove the hardships of Protestants in Peru and some other South American countries, where only marriages that are celebrated according to the rites of the Catholic Church are recognized as legal. Congress had before passed a similar bill and President Pierola had vetoed it. He considered that civil marriage should apply only to non-Catholic foreigners, but he promulgated this act after some hesitation. The President of the Cabinet resigned in consequence.

PHILIPPINE ISLANDS, a colony of Spain in the East Indies. The islands have an area of 114,326 square miles, with a population in 1897 of 5,985,124, consisting of 3,029,423 males and 2,955,701 females, not including about 1,000,000 natives living under their own government. The Chinese number about 100,000. Manila, the capital, has 154,062 inhabitants. The budget for 1895 showed a total revenue of £2,715,980 sterling, of which £1,331,890 came from direct taxes, £913,000 from indirect taxes, £222,570 from monopolies, £174,600 from the lottery, £39,100 from national property, and £34,820 from various sources. The total expenditures were fixed at £2,656,026, of which £272,100 were for general expenses, £337,422 for justice, £1,299,047 for

war and marine, £444,024 for finance, £13,030 for foreign relations, and £125,750 for public works. The total value of imports in 1894 was \$28,529,777; of exports, \$33,149,984. The protective tariff that has been in operation since 1891 has diverted much of the trade formerly done by English and other foreign merchants to Spanish houses. Manchester cotton goods have been supplanted by those made in Barcelona. The iron goods and hardware are now furnished by German and Swiss houses. An increased scale of export duties put in force in 1896 injured the trade in hemp, sugar, and tobacco. The principal exports were manilla hemp for \$14,517,000, sugar for \$10,975,000, tobacco for \$3,159,000, coconuts for \$356,000, and coal for \$356,000. The value of the sugar exported in 1896 was \$8,000,000; of the hemp, \$7,500,000; of the tobacco and cigars, \$3,250,000. On Aug. 21, 1897, a decree went into effect imposing an extraordinary customs duty of 6 per cent. *ad valorem* on all merchandise imported into the Philippine Islands without regard to the country of origin. The arrivals at the ports were 330 vessels, of 397,335 tons, and the departures 271, of 358,233 tons. There is a railroad, 119 miles long, from Manila to Dagupan, partly built. The post office in 1894 carried 4,684,606 letters and postal cards in the internal and 2,544,581 in the external service. The telegraphs, with 1,592 miles of line and 1,806 of wire, transmitted 157,573 dispatches in 1894. Education in the Philippines is compulsory. An extraordinary number pursue the higher branches of learning. The students in the high schools learn Latin, French, English, and Greek, while they are as averse to the study of Spanish as the common people, a large proportion of whom are unable to speak the official language. The study of the law is followed by a great many young men as a training in political philosophy with no view to professional practice.

The troops regularly maintained in the Philippines in 1897 consisted of 7 regiments of infantry, 1 regiment of fortress artillery, 1 regiment of mountain artillery, 1 regiment of engineers, 1 company of artificers, 3 tercios of civic guards, 1 veterinary section, 1 company of carabineers, 1 brigade of train, and 1 sanitary brigade, numbering in all 672 officers and 19,560 men, with 419 horses. The troops sent from Spain between Sept. 4, 1896, and April 29, 1897, for the suppression of the insurrection consisted of 15 battalions of rifles, 3 battalions of marine infantry, 1 squadron of cavalry, and 1 battery of horse artillery, having a total strength of 9 generals, 116 staff officers, 881 regimental officers, and 27,768 men. The naval force consists of 5 cruisers, 2 large gunboats, 15 smaller ones, 5 sloop gunboats, and 3 transports.

The Insurrection.—The revolution that broke out in August, 1896, was the outcome of a conspiracy that had been seven years in preparation in the Catipunan, the inner circle which the natives had created for their political purposes in the lodges of Masonry into which the Spaniards had initiated them. A revolutionary manifesto that was surreptitiously printed by native compositors employed in the office of the chief Ultramontane newspaper of Manila was shown to a parish priest, Padre Gil, and by him to the authorities, who made a sudden raid on the revolutionists, and found among them the most respected and intelligent of the mestizo caste and of the native population, including many friends of Gov.-Gen. Blanco. There was said to have been a plot to massacre all the Spaniards, officials and priests, merchants and planters. All the leaders of the revolution, including the two Roxas, millionaire planters, the physician Rizal, and the artist Luna, were caught before the date fixed for the consummation of the plot. Among the prison-

ers were 7 native priests. The mestizos and natives rose in insurrection, but the Spaniards were now prepared, while they were leaderless, disorganized, and without a definite plan of campaign. They were united, however, in the universal desire to rid their country of the tyrannical and extortionate Spanish rule. The conspirators were able to keep their secrets and mature their plans during a series of years by the aid of the mystic ceremonies of the Catipunan, which appealed to the imagination and superstitious nature of the Malays, easily captivated by the mysterious and occult. These imposing rites were invented by Dr. Rizal, a Chinese half-breed, like most of the leaders, and a man of remarkable intelligence and energy and the idol of the natives. He was a doctor of laws as well as of medicine, had won distinction in German, French, and Spanish universities and was an author of note, whose books on political and social subjects made his reputation in Spain, but in the Philippine Islands led to his internment in a distant island, from which, nevertheless, he managed to keep in constant communication with the other revolutionary leaders. It was he who revived the savage practice of blood brotherhood to bind the members of the Catipunan together. The mark of the Catipunan was made on the left forearm with a curious knife engraved with some of the numerous symbols of the society, many of which were borrowed from Freemasonry. Of the prisoners in the fortress of Manila some were shot almost daily to strike terror into the hearts of the insurgents, on some mornings only two or three, on others a dozen at a time. Before Gen. Blanco left the death sentence was passed on 59 prisoners. The rebel tactics were restricted at first to stealthily attacking outposts and retiring when the Spanish fire became too hot into the swampy and wooded hill country, whither the Spanish troops dared not follow, knowing nothing of the topography of the island, while the Tagalocs were acquainted with every path through the mangrove swamps, the dense sugar plantations, or the almost impenetrable forests, and could make their way everywhere without impediment, finding food at their hand in the rich banana and coconut groves or in the cane or rice fields. Already in October, 1896, the insurgents in the field numbered 50,000. When the Spaniards assumed a vigorous offensive after the arrival of Gen. Polivieja in December, 1896, the insurgents gave way at first, as they were not well provided with arms and ammunition. In every engagement, however, they inflicted severe losses on the Spaniards, being cool and expert marksmen who made every shot tell. The Spaniards lost heavily also through the desertion of native troops, who went over to the enemy with their arms. Before the new year the revolutionists received a large supply of firearms and cartridges, probably from China, where merchants had stocks on hand that were sent out during the war between Japan and China in the hope that the Chinese Government would purchase them. Before the arrival of these arms the natives had endeavored to manufacture crude weapons for themselves from church bells stolen from convents and from iron irrigation pipes, which were wound with telegraph wire to serve as cannons, the smaller piping, cut into short lengths and mounted on rough stocks, doing as substitutes for muskets. The Spaniards expected to crush the rebellion speedily when the natives had no arms but these and their arrows and spears and whatever old Remingtons were carried over to their side by deserting native soldiers. The insurgents had little ammunition at first, and proceeded to make coarse gunpowder for themselves out of ingredients found in abundance in Mindanao, and cartridges out of the tin cans in which kerosene is imported. They were formidable fighters at close

quarters with the national cutting weapon called the *bolo*, which is heavier than the machete, and the Spaniards found that they could not always keep them away even with repeating rifles. The sudden accession of a large quantity of modern arms and ammunition suddenly altered the situation. The rebellion now reached alarming proportions, scarcely inferior in its extent and in the earnestness and military prowess of its adherents to the Cuban war. As the whole population of the islands was hostile to Spain the rebel leaders had an unlimited supply of men who in marksmanship and mobility were superior to the Spaniards. When the Spanish troops met the rebels now in any numbers they suffered a far higher proportion of casualties from bullet wounds and a still greater percentage of deaths. On Jan. 1, 1897, an important engagement, which had for its object the routing and destruction of the rebel force in that province, was fought at Cacaron, a village situated in the center of Bulacan. On Jan. 11 an order was issued by the Governor General authorizing the formation of volunteer corps among the loyal inhabitants who were anxious to shed their blood for their country and assist by their personal service in the restoration of order. Another proclamation of the same date offered a free pardon to those of the insurgent party who had not taken part in overt hostilities and a remission of the death penalty to insurgents who surrendered with their arms or gave information as to stores of arms, etc. This offer remained in force till Jan. 23, and a large number of persons availed themselves of it.

The Spaniards failed in their plan of surrounding the rebels, who numbered 4,000, led by the former schoolmaster Ensebro, who had taken the title of Gen. Dimaluga, but Gen. Rios won the battle, killing 1,100, and captured the strong intrenchments with a loss of 25 killed and 69 wounded. The main body of the rebels, their organized, drilled, and seasoned army, which had inflicted a terrible blow on the royal troops at Noveleta in November, 1896, was stationed in the province of Cavite in well-fortified posts. The rebels made desperate efforts to establish communications between Cavite and the northern provinces, especially Bulacan, through the province of Manila; Capt.-Gen. Polivieja, on the other hand, took extraordinary measures to prevent the separate bodies from joining forces, and therefore concentrated the main strength of the Spanish army in Bulacan and the northern part of Manila. Emilio Aguinaldo, the generalissimo of the rebel forces, advanced into Manila with about 8,000 with the object of carrying the rebellion into sections that had not yet risen and of effecting a junction with Gen. Dimaluga, if possible. A force of 4,000 insurgents was surprised and routed at Agony and Almansas. Before the middle of January the Spaniards had cleared Manila province of the bands that threatened the capital itself when the troops were withdrawn to the north. Gen. Aguinaldo retired into Cavite again, and when a body of 6,000 rebels tried to cross the isthmus of Noveleta it was repulsed with heavy loss. Gen. Polivieja made preparations for an attack on the rebel positions in Cavite. Gen. Polivieja's plan was to advance on the towns held by the insurgents, both from the north and from the south, in such manner that the two forces would join in the main attack and cut off retreat in either direction, while the fleet operated along the northern coast. When the Spanish troops advanced from the north into Cavite they encountered a stout resistance. The losses ran into the hundreds and the engagements were on a scale that was in marked contrast to the guerrilla skirmishing in Cuba. The first intrenchments were taken after heavy fighting in which 400 insurgents were killed and the troops lost 26 killed and 60 wounded. Gen.

Lachambre in February occupied Santo Domingo, and advanced on Silang with four Krupp batteries. The rebels intrenched on the banks of the river Zapote were driven out with severe losses with the aid of gunboats. Gen. Barraquer attacked the important fortified position of Pamplona, held by 3,000 rebels, who defended themselves with great courage, wavering under flank attacks at the end of three hours, but rallying once more and fighting obstinately until they were finally driven out at the point of the bayonet, losing 400, while the Spanish losses were 20 killed and 47 wounded. Gen. Jamarillo, after taking the fortified posts of Bunyunyungan and Tranquero, continued his march toward the Sungay mountains, but was opposed at every stage by rebels behind intrenchments that it had taken many thousands of men months to build, some of which were defended until nearly every man was killed. On Feb. 25 Gen. Lachambre captured the town of Perez dos Marinas after eight hours of hard fighting, with a loss of 90 men, while the rebels suffered enormously. They numbered about 5,000, of whom only 1,500 had firearms, and could not possibly hold the town against the Spanish force of 9,000 men and artillery. A part of them barricaded themselves in the convent after the Spaniards entered the town, and continued the battle until the walls were battered down by artillery. The rebels left 400 dead, but carried away a great many killed and wounded; the Spanish loss was 140 men, including 11 officers. Gen. Lachambre's column then united with the forces directly commanded by Gen. Polivieja to attack the town of Imus, the headquarters of the insurgents. Transportation in this rugged country was so difficult that the troops were often short of rations.

The carabineers, who are all Indians, conspired with the bargemen employed in the river traffic and a large part of the population in the suburbs of Fondo, Binondo, Trozo, and Santa Cruz to rise in the night while the troops were absent fighting the rebels in Cavite and Bulacan, set fire to the city in all directions, kill as many Spaniards as they could, and, if possible, get inside the walls of Manila and capture the citadel. Before the plot was fully matured some of the carabineers, on Feb. 26, threatened to denounce the plot to the authorities, and their comrades, seeing that they were about to be betrayed, fired on their denouncers, and, joined by some of the bargemen, rushed upon the barracks, killed the Spanish officers, got possession of a large quantity of firearms and ammunition, and escaped into the suburb of Fondo, calling on their brother conspirators to join them. Only a few hundreds had the courage to respond to this premature summons and show themselves as rebels in broad daylight. The rebels, seeing themselves deserted by their party, made for the open country, firing on the few Europeans who were in the streets and killing two officers. The civic guards and volunteers pursued them, but they would have escaped without loss had not a detachment of troops encountered them on the road and attacked them vigorously, killing 216 and taking 98 prisoners, all of whom were shot by sentence of a court-martial. After this the rebels appeared frequently in the vicinity of Manila, and, though often defeated, they returned boldly to attack the Spanish. On March 4 the troops under Lieut.-Col. Jimenez in dispersing one band killed 200. There were large numbers of rebels hidden in the city, but a search of all the houses brought to light no incriminating documents or concealed stores of arms. Meanwhile the campaign in Cavite came to a standstill. The Spanish forces were not strong enough to protect the capital and guard lines of communication and at the same time carry on offensive operations.

Gen. Lachambre withdrew his troops that were operating against Salitran in order to protect a convoy that was attacked by a large force of rebels, who killed 300 Spaniards. The rebels attacked all convoys of ammunition and stores. Gen. Jaramillo was not yet able to advance into Cavite from the south. The rebels flooded the country in front of the Spanish columns, rendering it almost impossible to move artillery and difficult for infantry to advance. The troops in Cavite suffered severely from dysentery and fever. The rebels received additional supplies of firearms, and the rebellion became more formidable from day to day. Gen. Polivieja applied for 20 more battalions to be sent immediately before the rainy season. The Government thought that the troops could not be spared, and decided to recall the Captain General, whose health had become much impaired and who wanted to be relieved if he could not have the forces that he needed to crush the rebellion and occupy the principal points throughout the island, so as to prevent the rebels, when defeated at Cavite, from fortifying other towns. Gen. Primo de Rivera, the Captain General of Madrid, was appointed to succeed Gen. Polivieja, and meantime additional forces were sent out, with which Gen. Polivieja resumed the offensive, having now a total strength of 25,000 men. Gen. Olaguer captured by assault an intrenched position of the insurgents at Montalban, killing 300. The advance on Imus was continued, and the place was occupied after a battle in which the insurgents lost more than 1,600 killed and wounded, while the Spanish losses were only 37 killed and 24 wounded. A large number of insurgents surrendered to the Spanish, but these were principally noncombatants who could perform no services for the rebels in the field. Cavite Viejo, the other principal stronghold of the rebels, was previously surrounded, and the strongly intrenched towns of Noveleta, Lactau, and Rosario were stormed and taken. Bonducan was attacked, and Malabong was bombarded and set on fire. The Spanish losses in these engagements were very heavy, and they were not able to enter any of the towns until after the retreating rebels had set fire to them. The Spanish victories were won in the closing days of March. The whole Spanish fleet, comprising the cruisers "Reina Cristina," "Don Juan de Austria," "Isla de Luzon," "Isla de la Cuba," and "Maria de Molina," with a number of gunboats and steamers of light draught capable of manœuvring in the adjacent swamps, assembled to bombard Cavite Vieja. As a result of the shelling of this place, which was totally burned, 1,630 rebels surrendered. The rebels, after being driven out of these positions, erected fortifications in other favorable places and took possession of other districts. They burned several churches and killed monks in the province of Nueva Ecija. Those who had surrendered were the citizens of the burned towns and rebels who desired to return to their homes and who could be replaced by more efficient men. Aguinaldo, Bonifacio, Llanera, and other leaders were still at the head of large forces. Although weakened they were still able to take the offensive. Gen. Lochambre had to repel a spirited attack on Noveleta. At the beginning of May the Spaniards assaulted Naic, suffering a loss of 20 killed and 80 wounded. Ternate was captured with a Spanish loss of 25 killed and 226 wounded, the insurgents losing 57 killed. The rebels remained intrenched in the hills surrounding Imus and harassed the Spanish troops by picking off sentinels and making constant night attacks. The plan of extending the occupation resulted in failure. In Pampanaga the towns revolted against the severity of Col. Zeralde, who was made governor of the central district.

To carry on the war the Government issued a forced paper currency, which was not willingly accepted by the merchants or the people. In June a loan of £8,000,000 was contracted in Europe at 6 per cent. to meet the expenses of the campaign, the Philippine customs receipts being pledged for the service of the debt. All large operations ceased during the rainy season. Nevertheless the Government announced in the beginning of July that the islands were entirely pacified, and Marshal Rivera revoked the order for the confiscation of the property of rebels. When hostilities were reopened in August Aguinaldo had a force of about 4,000 men, Llanero 3,000, Ponciano Rigal 3,000, and other chiefs had smaller bands. The rebels were trained and directed by about 500 Spanish deserters, who introduced military discipline into their ranks. They were greatly encouraged by the winning of several battles and by desertions from the Spanish army. At Balakanan, on Aug. 21, a Spanish force defending a church was routed, leaving its arms and ammunition behind. In this battle a whole battalion went over to the rebels, who attracted the soldiers by feeding them well and treating them more humanely than the Spanish officers. Marmerto Natividad, who collected a large force of natives and deserters after his father had been shot without trial as a suspect, won a series of victories in the vicinity of San Rafael. In the first battle he ambushed a Spanish regiment in a forest and put it to flight, killing and wounding 400 men. Instead of being confined to the southern district of Cavite, the rebellion spread to all parts of the island. Rebel bands overran at will the whole of this province and also the provinces of Bataan, Zambales, Manila, Bulacan, Nueva Ecija, Pampanga, La Laguna, Batangas, and Tarlac. The rebels had not only partly regained their strength, but had improved their methods of fighting. Gen. Aguinaldo advised his followers in a proclamation not to accept battle, however strongly intrenched they might believe themselves to be, but always to flee before the soldiers in order to tire them out and subject them to exposure that would result in their filling the Spanish hospitals. In this way the war could be prolonged until the resources of the Spanish Government became exhausted. Disease had already reduced the Spanish army to a fraction of its nominal strength, and unlucky battles at Puray, Aliaga, and other places had depressed the spirits of the troops. The rebels meanwhile had received a fresh supply of arms and ammunition from outside, but they were no longer able to meet the Spaniards in large bodies. The terrible losses that they sustained in fighting against the troops trained and armed in the European fashion and aided by field guns and mitrailleuses disheartened them so that they were unwilling to meet the troops in open battle when they were sure to lose and to be shot down without quarter after the fight was lost. The Government at Madrid, alarmed at the growing strength of the rebellion, directed Gen. Primo de Rivera to take energetic measures for its suppression at once. The Governor General thereupon tendered his resignation, but it was not accepted. Premier Sagasta announced that there would be no compromise with the rebels; that they must either surrender at discretion or be exterminated. Re-enforcements were sent out to carry out this vigorous policy. The unexpected energy displayed by the Spanish Government discomfited the rebel leaders, who hoped that Spain would not be disposed to make fresh sacrifices while the Cuban revolution was still taxing her military resources. Toward the end of November Aguinaldo entered into negotiations with the Spanish commander. With other leaders he went to Manila to

learn the terms on which their surrender would be accepted. The first conference led to no final result. Operations were, however, suspended, and in the middle of December, after an order had been published fixing Dec. 28 as the final date before which all the insurgents must make their submission, 58 emissaries of the rebel leaders presented themselves before Gen. Primo Rivera and solicited pardon for their principals and for the men who had taken part in the rebellion, who were prepared to surrender on condition that their lives should be spared. The Governor General announced as his conditions that the rebels should submit to the Spanish Government, surrender all arms and ammunition, sign a formal document acknowledging Spain's complete right of sovereignty, admit the rebels' inability to resist further in the face of the superiority of the Spanish arms, and promise solemnly not to revolt again. The envoys stipulated that Aguinaldo and Llanera should be conveyed safely to Hong-Kong before the surrender of the arms. This condition having been accepted, Aguinaldo ordered his people to assemble on Dec. 25 and lay down their arms.

PHYSICS, PROGRESS OF, IN 1897. Constitution of Matter, etc. *Matter and Ether.*—Lodge (London Royal Society, March 4) gives an account of a long series of experiments conducted by himself and Davies in continuation of those reported in a previous paper (see "Annual Cyclopaedia," 1893, page 616) to detect a possible drag exerted by moving matter on the ether. In addition to the methods therein described he employed one in which the rotating mass of iron was strongly magnetized and another in which the steel disks were separated by an insulated disk and electrified; but in neither of these ways could he sensibly affect the velocity of light. He accordingly concludes that there is no observable viscous connection between the ether and matter—that is, that whatever motion moving matter may confer on ether must be irrotational. Michelson ("American Journal of Science," June) concludes, from experiments in which a beam of light was caused to travel around a rectangle in an east-and-west plane, that either the ether is absolutely at rest everywhere, or that the earth drags it along up to many thousand miles from the surface, or that the length of all bodies is altered by motion through the ether.

Gravitation.—Richarz and Krigar-Menzel ("Sitzungsberichte" of the Berlin Academy, November, 1896) report on the second series of their experiments for the determination of the constant of gravitation and the earth's mean density, which has been carried on since the termination of the first series in 1893. The double balance was used, as in that series, but instead of weighing two equal metal spheres a single cube of lead weighing 100,000 kilogrammes, was supported under the upper and above the lower scale pans. The value finally deduced for the constant of gravitation was $G = (6.685 \pm 0.011)10^{-8} \frac{\text{cm.}^3}{\text{gr. sec.}^2}$. Using this value, the mean density of the earth was found to be $\Delta = (5.505 \pm 0.009) \frac{\text{gr.}}{\text{cm.}^3}$. This value falls between that of Poynting (5.4934) and that of Boys (5.5270).

Boltzmann (Wiedemann's "Annalen," February) asserts that the conception of the atom can not be finally superseded by the differential equation applied to a continuum, since this is in itself ultimately based on the conception of discrete structure. The atom, he thinks, has also the advantage of greater immediate clearness and picturesqueness over the equation, whether it really exists or not.

Acoustics. *Audibility.*—Barus ("American Journal of Science," March), by experiments with a Michelson refractometer and a mirror attached to a telephone diaphragm, proves that the excursions of the diaphragm corresponding to sounds of faint but distinct audibility are small compared with the wave length of sodium light, probably less than 10^{-6} centimetres.

Intensity and Pitch.—Broca (Paris Academy of Sciences, June 28) finds that if the intensity of a sound decreases the pitch of the note goes up, even when the period of vibration remains the same. The effects do not exceed one fifth of a tone.

Mechanics. *Action at a Distance.*—Drude (Wiedemann's "Annalen," September) defines action at a distance as a relation between two bodies, such that the energy of the system depends not only on their velocities but on their mutual position. He regards such dependence as perfectly logical.

The Boomerang.—The flight of the boomerang has been studied by Walker (London Royal Society, April 8), who regards it as a case of steady motion, of which the circumstances gradually vary. In the more complicated as well as the simpler paths, everything depends on the changes in direction and inclination of the plane of the boomerang. The author explains these changes theoretically, working out five cases, in which the various "rounding" and "twisting" effects agree with experimental facts.

The Pendulum.—Lippmann (Paris Academy of Sciences, Jan. 18) compares the times of oscillation of two pendulums of nearly equal period by photographing them twice with sparks from a jar discharge at a known time interval and then making micrometrical measurements on the negative. The accuracy of the method is claimed to be much higher than that of coincidences.

Liquids. *Hydrodynamics.*—Natanson ("Bulletin of the Cracow Academy of Sciences") has worked out a kinetic theory of the equations of vortex motion of fluids, taking account of the molecular property to which the name "constraint of perturbations" has been applied. Natanson's theory shows how the equations of Helmholtz and Nanson can be verified by supposing the so-called "forces of constraint" to satisfy the equations of angular momentum.

Capillarity.—Vincent (London Physical Society, Feb. 26) has photographed ripples on mercury by sudden electric illumination. Such ripples are invisible to the naked eye because of their high frequency. The photographs show well the phenomena of interference and diffraction, and the method promises to be of service in demonstrating the laws of acoustics and optics.

Appleyard (London Physical Society, May 14) has succeeded in forming mercury films by sending an electric current through two masses of mercury separated by a permeable partition. The film forms on the side next the positive pole and remains on the diaphragm after its removal from the apparatus. The author suggests that the effect is a secondary one due to electrolysis aided by electric osmosis.

Osmotic Pressure.—Larmor (Cambridge Philosophical Society, Jan. 25) has summed up the positions now maintained by various authorities on this subject. The theory of osmotic pressure can, he thinks, be placed on a basis independent of the law of solubility of gases in the general manner already laid down by Prof. J. Willard Gibbs. According to this each molecule of the dissolved substance forms for itself a *nidus* in the solvent—that is, it sensibly influences the molecules around it up to a certain minute distance. Provided the solution is so dilute that each such complex is most of the time out of range of the influence of the other com-

plexes, then thermodynamic principles necessitate the osmotic laws.

Solution.—Van der Waals (Amsterdam Royal Academy of Sciences, Jan. 30) concludes, from a theoretical inquiry into the extent to which the complexity of the molecules of a solvent may influence the magnitude of the decrease of vapor tension by dissolved salts, that such decrease is determined solely by the magnitude of the solvent's molecules when it is in the state of vapor. Tait (Edinburgh Royal Society, Feb. 15) has attempted, on the hypothesis that the compressibility of an aqueous salt solution is inversely proportional to its internal pressure, to find the effective volume of the dissolved salts as compared with its volume in the solid form. The same experimental data have been used to find the nature of the changes in the ratio $(D - 1) : S$, D being the density of the solution and S the mass of salt in unit mass of water. This ratio diminishes slowly with increase of S in all cases examined except with common salt, where it increases slowly. Its value ranges widely, being 1 for magnesium sulphate and only 0.5 for ammonium sulphate.

Supersaturation.—Nieol (Edinburgh Royal Society, May 3) maintains that there is really no such thing as a supersaturated solution, such solutions being saturated or nonsaturated solutions of the anhydrous salt—that is, the salt in which there is no distinction between the water of crystallization and the solvent water. Whenever, in his view, two allotropic forms of the dissolved or fused substances can exist under the conditions of experiment, then supersaturation, or superfusion, is also possible. Allotropy is thus the cause of supersaturation, the word "allotropy" being used in a wider signification, in which it includes different crystalline or amorphous forms brought about by the presence or absence of foreign molecules.

Crystallization.—Tammann ("Zeitschrift für physikalische Chemie") finds that the rate of propagation of crystallization increases with the super-cooling until this amounts to about 20° , when it remains constant till the super-cooling is so great that the heat evolved by the solidification is insufficient to melt the solid that is formed. The rate of crystallization diminishes rapidly from this point downward. Miers ("Science Progress," January) describes a class of substances capable of assuming forms called by Dr. Lehmann, the discoverer, "liquid crystals." Azoxyphenol and azoxyanisole are typical of the class. When crystals of the former are warmed on a microscope slide they liquefy at 134° , while retaining the outline of the crystal and other properties of it, such as double refraction and polarization. At 165° it passes into a third modification that is liquid but not doubly refractive. This may contain small floating spherical drops of the birefringent liquid.

Vapor Pressure.—Smits (Amsterdam Royal Academy of Sciences, Jan. 2) has made with the micro-manometer (a U-shaped tube widened in the upper part and containing two fluids, the position of whose plane of separation is read with a cathetometer) a determination of the difference between the vapor pressure of pure water at 0° C. and that of very dilute solutions. The instrument could detect differences of pressure as small as $\frac{1}{40000}$ millimetre of mercury. He finds the coefficient i in Van't Hoff's formula to be constant for sugar solutions, but in some other cases to diminish with decreasing concentration. Julius (*ibid.*), experimenting with water and a salt solution, believes that he has disproved the view of Wüllner and Grotthius that a vapor can be compressed above what is commonly called maximum tension, even though a certain quantity of the liquid be present.

Condensation.—Aitken (Edinburgh Royal Society, May 3), in experiments to test the theory that "ions," as well as dust, produce cloudy condensation, finds, by burning hydrogen in filtered air, that if both hydrogen and air are pure and dust free the ions produce no condensation. If certain impurities, however, be present—such as ammonia, peroxide of hydrogen, or nitric, nitrous, or sulphurous acids—clouds are formed in saturated dust-free air. (See also *Phosphorescence*, under "Light," below).

Gases. Kinetic Theory.—Bryan ("American Journal of Mathematics," XIX, page 3) concludes that even the theory of probability does not furnish a complete proof of the Boltzmann-Maxwell law of the distribution of molecular velocities in a gas, although the law represents accurately the state of a perfect gas and approximately that of an ordinary gas. S. J. Corrigan, in a book on "The Constitution and Functions of Gases, the Nature of Radiation, and the Law of Radiation" (St. Paul, 1895), attempts to formulate a dynamical theory of gases that differs radically from the one that is generally received. In this theory the molecule is supposed to be at rest, but made up of atoms revolving in orbits about its center. The pressure of a gas is assumed to be proportional to its mass and to the angular velocity of the atom, and a change of pressure alters the diameter of the atomic orbit. This theory accounts satisfactorily for many of the properties of gases, and leads to a law of radiation of the form of Dulong and Petit's law.

Solution.—Richard (Paris Academy of Sciences, Oct. 18) has devised an apparatus to ascertain whether the amount of gas dissolved in sea water is independent of pressure at great depths. The result of two satisfactory experiments at 1,000 and 2,700 metres is to confirm previous experience that it is independent.

Densities.—Leduc (Paris Academy of Sciences, Oct. 18) has redetermined the densities of some easily liquefiable gases, with the following results:

Carbon dioxide.....	1.5287	Chlorine.....	2.491
Nitrous oxide.....	1.5301	Ammonia.....	0.5971
Hydrogen sulphide...	1.1895		

Expansion.—Ramsay (British Association), from experiments on the refractivity of mixtures of gases, finds that an expansion takes place on mixing hydrogen and helium, and a contraction on mixing nitrogen and oxygen. Morley and Miller (American Association) have determined, by improved methods, the coefficients of expansion of four gases, as follow:

Carbon dioxide....	0.0037122	Air.....	0.0036719
Nitrogen.....	0.0036718	Oxygen.....	0.0036729

Liquefaction.—Hampson ("Nature," March 25) reports that he has been able to liquefy air by self-intensive refrigeration—that is, without auxiliary cooling of the compressed air by carbonic acid or other agents before or after it reached the apparatus—in less than half an hour. He uses a glass receiver protected by a Crookes vacuum and also by a glass attachment so fitted that the vacuum vessel can be readily removed and replaced without interfering with the action.

Heat. Thermometry.—Watson (London Physical Society, May 14) has devised an instrument for comparing thermometers with a standard, in which a large closed vessel, communicating with the instrument proper, diminishes errors from chance alteration of pressure. The joints are of India rubber, jacketed with glycerin. Kohlrausch (Wiedemann's "Annalen," March) describes a thermometer for very low temperatures in which petroleum ether is the liquid used. It is very viscous, but sufficiently liquid at the temperature of boil-

ing liquid air (-190°C.), and shows a contraction of volume by as much as 25 per cent. from the ordinary temperature to the lowest used. Murray (Edinburgh Royal Society, March 15) has devised a new form of constant-volume air thermometer, which shows total pressure directly and may be graduated in temperature degrees. The total pressure of the air in the bulb, and hence its temperature, is measured directly by the height of a column of mercury, the atmospheric pressure being eliminated by adjusting an auxiliary mercury reservoir. Holborn ("Zeitschrift des Vereines deutscher Ingenieure") shows that Le Chatelier's thermoelement may be applied to the continuous measurement of furnace temperatures, thus possessing advantages over common pyrometers.

Conductivity.—Straneo ("Atti dei Lincei," VI, page 9) has determined the thermal conductivity of ice by a new method, and finds that it varies according to the direction. In homogeneous, amorphous ice the values for the vertical and horizontal directions were practically equal (0.312 and 0.308), but homogeneous nonamorphous ice gave 0.328 and 0.301.

Cooling.—Stanton (London Royal Society, May 13) finds that the heat transmitted from the walls of a heated metal pipe to colder water flowing through it is independent of the pressure, proportional to range of temperature between pipe and water, approximately proportionately to the velocity of flow, and proportional to a function of the viscosity. Brush (American Association), in an investigation of the transmission of radiant heat by gases at varying pressures, finds that Dulong and Petit's "sixth law," that the cooling power of a fluid diminishes in geometrical progression when its tension diminishes in geometrical progression, is only approximately true with a large balloon, and at pressures from a few millimetres upward; that there is no suggestion of it where a small balloon is used; and at small pressures it does not obtain with either large or small balloons; he found that in a small balloon the cooling effect of the last millimetre of air is nearly ten times as great as that of all the rest, up to atmospheric pressure, combined.

Emission and Absorption.—Bowman (Amsterdam Royal Academy of Sciences, March 27), in measurements of the emission and absorption of glass and quartz at different temperatures, made with a modified radio-micrometer, finds for plates one millimetre thick that both the emission and absorption curves of glass reach a maximum at $4.6\ \mu$, shifting but little with temperature. The quotient of emission by absorption yields a curve whose maximum is further toward the lesser wave lengths. The emission and absorption of quartz correspond, both exhibiting the same downward bends.

Convection.—Dixon (Manchester Philosophical Society, Jan. 26) has devised a very sensitive motor that is driven by convection currents. It begins to work on exposure to ordinary daylight, or even to moonlight. Its speed is affected by barometric and hygroscopic conditions, and it is hence capable of indicating these. It can also be adapted to act as a calorimeter. The motor is worked by radiant heat that passes through a glass cover; the glass is not heated, but the metal surfaces of the instrument are, and air is consequently expanded on the motor surfaces and condensed on the glass. The resulting difference of temperature sets up convection currents that drive the motor.

Specific Heat.—Wadsworth ("American Journal of Science," October) notes that, in determining specific heat by the method of mixtures, the calorimeter should be small and the surface of the solid large, while the initial temperature of the latter should be high. He describes a new form of calo-

rimeter in which the body is conveyed in a small sheet-copper car along a track laid in an inclined tube that serves as a heating chamber. This prevents loss of heat and permits experimentation on small fragments. Callendar and Barnes (British Association) have devised a new method of obtaining the specific heat of a liquid. An electric current is passed through a fine tube through which the liquid is flowing until the temperature difference between the ends becomes steady. The specific heat is then deduced from this difference and from the liquid's rate of flow. Ewing and Dunkerley (*ibid.*) measure the specific heat of saturated steam by passing it through a porous plug and thus superheating it. Berthelot (Paris Academy of Sciences, Jan. 18) shows, in a *résumé* of results obtained for the specific heats of the elementary gases, that these fall into four groups, comprising respectively the monatomic gases (helium, argon, and mercury), diatomic gases other than halogens, the halogens, and tetraatomic gases, such as phosphorus and arsenic.

Radiant Heat.—Rubens and Nichols (Wiedemann's "Annalen," March) have obtained heat rays of hitherto unrecorded length by filtering out infrared rays by three successive reflections from fluor-spar or rock salt, the source being a heated layer of the same substance. The fluorite reflections gave waves of $24.5\ \mu$, which are 30 times as long as the lowest visible red rays. Reckoning by octaves, these rays are midway between the shortest ultraviolet waves and the shortest observed electric waves (6 millimetres). Reflections from rock salt gave waves of $50\ \mu$.

Light. Theory.—Korteweg (Amsterdam Royal Academy of Sciences, May 29) shows that under certain conditions some of the oscillations possible in a mechanism of several degrees of freedom are of abnormal magnitude, and he suggests that these may play an important part in the vibrations of light.

Absorption.—Agafonoff, of St. Petersburg ("Archives des Sciences Physiques et Naturelles," IV, page 2), has investigated the absorption of ultraviolet light by crystals, and finds that among 100 substances only 2—tourmaline and hemimellitic acid—exhibit differences of absorption according to direction of polarization of the light. The thickness of the section used seems to have little influence on the limit of wave length at which absorption begins. Organic substances absorb powerfully, in comparison with inorganic, and this suggests that ultra-violet light is more absorbed by complex than by simple molecules.

Reflection.—Lamb (Manchester Literary and Philosophical Society, Nov. 30) has examined mathematically the selective total reflection that takes place at the boundary of a medium having a periodic discontinuity of structure. He finds that relatively short waves may be transmitted freely, unless the wave length happens to fall within certain narrowly defined intervals. Edser and Stansfield ("Nature," Sept. 23) find by using a modified refractometer that the retardation in phase of light on reflection from thick silver is three quarters of a wave length.

Refraction.—Ramsay and Travers (London Royal Society, Dec. 9) have measured by Rayleigh's interference method the refractivities of various gases, taking that of air as unity, with the following results:

Hydrogen	0.4733	Argon	0.9596
Oxygen	0.9243	Carbon dioxide	1.5316
Nitrogen	1.0163		

The refractivity of air, calculated from those of its constituents, did not agree with experiment, and the same result was obtained with other gaseous

mixtures. The authors conclude that gases are not indifferent to one another's presence, but modify one another's properties in the same manner as do liquids, though to a different extent. Auguste and Louis Lumière (Paris Academy of Sciences, June 21) have applied photography to the measurement of indices of refraction by coating the plate whose index is to be measured with a sensitive emulsion and then faintly illuminating it through a minute hole. The diameter of the halo resulting from reflection at the back of the plate determines the index.

Polarization.—Guye and Aston (Paris Academy of Sciences, Nov. 22) find that amyl alcohol undergoes a sudden increase in specific rotatory power near its boiling point. This appears due to the breaking up of complex into single molecules in vaporization. (For other discoveries in polarization see the section immediately following.)

Magneto-optics.—Zeeman (Berlin Physical Society) has shown that the period of the light emitted by a flame is altered when the flame is in a magnetic field. When an asbestos filament soaked in salt is introduced into an oxyhydrogen flame between the poles of an electro-magnet, the D lines, as examined with a Rowland grating, widen whenever the circuit is closed. The widening in this case might be attributed to the effect of the magnetic field on the density of the sodium vapor in the flame, but a variation in the experiment in which the heated vapor was inclosed in a rotating tube made it probable that there was an actual alteration of the period of the light. Dr. Zeeman explains this result on the theory of Prof. Lorentz that in all bodies there are small electrically charged molecular elements, and that all electrical processes are due to the equilibrium or motion of these. The forces acting directly on the elements in the magnetic field suffice, according to Zeeman, to account for the phenomenon. If this application of Lorentz's theory be correct, the light from the edges of the widened lines should appear circularly polarized when the eye looks along the lines of force and plane polarized if one looks at right angles to those lines. This he has found experimentally to be the case. The theory also allows the ratio of the charge of an element to its mass to be deduced from the

magnitude of the effect. This ratio, $\frac{e}{m}$, is of the

order of magnitude 10^7 , according to a rough measurement— e being expressed in electro-magnetic units. Egoroff and Géorgiewsky (Paris Academy of Sciences, April 5 and May 2) have carried Zeeman's experiment still further by proving without a spectroscope the partial rectilinear polarization of rays from certain flames and sparks. They also find that the relative quantity of equatorial radiations emitted by a sodium flame and polarized rectilinearly varies with the intensity of the magnetic field according to a particular curve, and (with a field of given intensity) with the temperature of the flame. Lorentz (Amsterdam Royal Academy of Sciences, Sept. 25) explains this partial polarization by taking into account the absorption of the rays of one part of the flame by the adjacent part, which absorption is modified when the periods of vibration are changed by the Zeeman effect.

Dunstan, Rice, and Kraus ("American Journal of Science," June) find that Zeeman's phenomenon may easily be observed with Michelson's interferometer, the most intense field being in the ratio of 1 to 1.7. Lodge, Michelson, and Runge, in a discussion (British Association) on the dark space between the two lines into which the original single band is sometimes split in the Zeeman effect, agreed that this space is a true part of the phenomenon

and not due merely to absorption. The effect thus may be a true doubling as well as a widening. Cornu (Paris Academy of Sciences, Oct. 18) has shown experimentally that this formation of doublets and triplets in a spectrum by the action of magnetic force is subject to the laws of Fresnel and Ampère. It differs essentially from the Faraday effect, in that the latter is produced in luminous waves that have attained a steady state, causing alteration in the velocity of propagation, while in Zeeman's effect the magnetic action is directly on the source of the waves and affects their vibration period. All the effects above described have been successfully photographed by Preston ("Nature," Dec. 23).

Electro-optics.—Righi (Bologna Academy) finds, from measurements of the orientation of a disk of selenite in a uniform electric field, that Maxwell was correct in his theory that the three optical axes coincide with the directions of the three principal dielectric constants.

Spectroscopy (see also *Magneto-optics* above, and *Spark*, under "Electricity," below).—Berthelot (Paris Academy of Sciences, March 15) describes a new apparatus for the application of spectrum analysis to the recognition of gases. The gas is contained at ordinary atmospheric pressure over mercury in a short glass tube carrying one of the platinum electrodes, the other being fused into a smaller glass tube capable of vertical adjustment. Humphreys (British Association) has caused the lines in the arc spectra of metals to shift toward the red by increased pressure. The result is of the same order as the change of specific inductive capacity in the air, produced by the pressure.

Fluorescence.—Burke (London Royal Society, June 17) finds that certain substances, notably uranium glass, absorb such rays as they themselves give out while fluorescing, differently, according as they are or are not in the state of fluorescence.

Phosphorescence.—Newall (Cambridge Philosophical Society, April 26) has investigated the luminosity that attends the compression of various gases. In the case of oxygen he concludes that the phosphorescence is due to energy evolved by conversion of ozone to oxygen. It seems certain, however, that the presence of impurities is important, if not essential, but the part that they play is not clear. Wilson (Cambridge [England] Philosophical Society, Oct. 25) finds that radiation from uranium salts introduces condensation nuclei in moist, dust-free air in the same way as Röntgen rays.

Infra-Red Rays (see also *Radiant Heat*, under "Heat," above).—Nichols (Wiedemann's "Annalen," March) has investigated the behavior of quartz toward infra-red rays, using a modified Crookes radiometer in which one vane is screened and the other exposed to the rays reflected or transmitted by quartz. He finds that only 29 per cent. of light of wave length 7.4μ is reflected by quartz, but for light of 8.45μ quartz reflects like burnished silver—75 per cent. The transmission curve is very irregular, and beyond 8.1μ no light is transmitted. Becquerel ("Journal de Physique," October) finds that the phenomena attributed by Gustav Le Bon to so-called "dark light" (see "Annual Cyclopædia," 1896, page 641) may be due to the action of ordinary and infra-red rays. Ebonite is transparent to these rays and they can extinguish the phosphorescence of zinc sulphide and act on a slightly fogged photographic film exactly in the manner observed by Le Bon. When red glass replaces the ebonite the same phenomena are observed.

Electricity. *The Medium.*—Tait (Edinburgh Royal Society, Jan. 18), in a paper on the physical properties of the electro-magnetic medium, develops the consequences of the hypothesis that the

connection between the electric and magnetic vectors in Maxwell's equations may be due to the fact that they are not directly disturbances in the ether, but concomitants or results of the disturbance, just as the condensations and rarefactions of the air that affect the ear drum are concomitants of the displacements of the air.

Sources.—Trowbridge ("American Journal of Science," September), by examining the characteristic flame of the discharge of a large number of Planté cells, finds that it is oscillatory, and he concludes that a cell may be regarded as a leaky condenser, and that its discharge is always essentially oscillatory. Liebenow and Strasser ("Zeitschrift für Elektrochemie," Feb. 20) have investigated the Jacques carbon cell ("Annual Cyclopædia," 1896, page 643) and find that a cell of carbon and iron dipping into fused caustic potash has at first a very small negative electro-motive force, which rises suddenly, when the iron assumes a passive condition, to about one volt. The current is very inconstant and the iron is rapidly polarized, although this can be remedied to some extent by passing a current of air through the fused electrolyte.

Conduction.—Müller (Wiedemann's "Annalen," January) has made a new measurement of the conductivity of air, taking into account the residual mercury vapor and the specific heat of the glass employed and investigating all sources of error. His result is 0.000056 in C. G. S. units. Price (London Physical Society) has investigated the properties of a proposed form of submarine cable made of two concentric conductors interrupted alternately at different points throughout its length. He finds theoretically that the speed of such a cable can not exceed that of the ordinary type, but it appears from experiment that the definition of signals is better, and that the clearness of definition increases within certain limits, the greater the number of subdivisions. Baly (London Physical Society, Jan. 22) criticises the theory that conduction in gases is electrolytic, bringing up against it the following facts: (1) The sign of the change on the supposed gaseous ion is variable; (2) a gas has initial resistance; (3) Ohm's law does not hold; (4) the supposed gaseous electrolyte is permanent; (5) every mixture of gases must also be an electrolyte; and (6) the potential gradient in a vacuum tube, when the current passes, is uneven. Criticism of the author's views was distinctly unfavorable (see "Nature," Jan. 28).

Resistance (see also above).—Trowbridge ("Proceedings of the American Academy," April) finds that Ohm's law does not hold good for electrical discharges in air and rarefied gases. A 6-inch discharge encounters no more resistance than one only 2 inches long, and probably the resistance met by a flash of lightning a mile long is no greater. The author believes that electrical oscillations are of the nature of voltaic arcs and that the discharges in Crookes tubes are arcs, and he is "forced to the conclusion that under high electrical stress the ether breaks down and becomes a good conductor."

Diekson ("Philosophical Magazine," December) examines the relation between the electric resistance of a metallic wire and its temperature, with a view to regulating the platinum thermometer, and deduces the formula $(R + a)^2 = p(t + b)$, where a , p , and b are constants. This he considers more representative of fact than previous formulas and as simple as any. Swyngedauw (Paris Academy of Sciences, March 15) regards spark resistance as depending on length, section, and temperature, and on the nature of the luminous conductor that constitutes the spark. The consequences of this view differ from those of Thomson, who regards the resistance as constant, and lead to the result that a

condenser discharge that is oscillatory when the capacity is large becomes continuous when the capacity is small enough. Bossi ("Nuovo Cimento," Vol. IV) finds that in salt solutions where the effect of electrolysis is to produce greater concentration at the positive pole, the resistance increases when the liquid moves opposite to the current and decreases when it moves with the current, the increase in the first case being greater than the decrease in the second. Where the concentration is greater at the negative pole the effect is reversed, and when there is no difference of concentration the resistance is unaffected by the motion of the liquid. Erskine (Wiedemann's "Annalen," November) finds that the electric resistance of an electrolyte for rapid oscillations is directly proportional to the thickness required to produce a given amount of damping.

Dissipation.—Oberbeck (Wiedemann's "Annalen," February) finds that a thin wire, electrically charged, loses its charge more readily in air when hot than cold. The difference between a positive and a negative charge is also more marked at high temperatures, the latter being more rapidly dissipated. Wesendonek (Wiedemann's "Annalen," February) finds that the quantity of negative electricity discharged from a point into hydrogen is greater than the quantity of positive electricity discharged at the same potential; but the initial discharge potentials are not necessarily different.

The Spark (see also under *Resistance* above).—Schuster (British Association) has measured the velocity with which metallic particles are projected from the electrodes in a spark discharge, as determined by the spectroscope. He photographed the spark spectrum on a film fixed to the rim of a rapidly revolving wheel and moving with a linear speed of 80 metres a second at right angles to the spectroscope slit. The metallic lines appear inclined on account of the finite velocity of the luminous molecules, while the air lines remain straight. With two zinc poles the velocity was found gradually to diminish from 2,000 metres per second to 400 as the distance from the pole increased. With one zinc and one bismuth pole the bismuth in some cases had a smaller speed. Warburg (Wiedemann's "Annalen," November) has studied what he calls the "retardation"—the period elapsing between the establishment of the necessary difference of potential and the corresponding discharge. It varies from a few minutes to a fraction of a second and is due to a nonluminous partial discharge.

Electric Waves and Oscillation.—Bose (British Association) has succeeded in obtaining electric waves six millimetres in length. In a lecture at the Royal Institution he has shown that numerous crystals polarize the waves. Drude (Wiedemann's "Annalen," January) finds that electric waves are not totally reflected by a bridge laid across a wire system, but undergo a displacement of phase and a diminution of amplitude, depending on the ratio of the length of the bridge to that of the wave. By noting the number of nodes along the wire the absorptive power for electric waves may be measured. Mazzotto ("Atti dei Lincei," VI, page 4) finds that the principal indices of refraction of electric waves in woods are proportional to the square root of the dielectric constant in the same directions as Maxwell's theory requires. Pocklington (Cambridge Philosophical Society, Oct. 25) finds by mathematical treatment that with accurate tuning the magnitude of an induced current is independent of the thickness of the wire, and that the thinner the wire the more sensitive it is to accuracy of tuning. In the case of a helical wire, when the reciprocal of its radius can be neglected, there are two possible velocities of propagation, one measured along

the wire equal to that of light; the other a greater velocity.

"*Wireless Telegraphy.*" — Marconi ("Nature," June 17) has experimented on a new plan of electric signaling through space, utilizing Hertzian waves of very high frequency, and hence employing conductors of very moderate length. He employs as a transmitter Prof. Righi's form of Hertz's radiator, and as a receiver a modification of Lodge's "coherer." With his apparatus signals have been sent nine miles. Weather has no influence and hills do not act as obstructions.

Cathode Rays.—J. J. Thomson (Cambridge [England] Philosophical Society, Feb. 8) has experimented on the electric charges carried by these rays and on their deflection in a uniform magnetic field. The result seems to show conclusively that there is a flow of negative electricity along the rays, but that there must be something else besides a stream of negatively electrified particles. He found that the magnetic deflection of the rays in various gases is the same, provided that the mean potential difference between the cathode and the anode is the same. Certain of the rays are not deflected by a magnet; these have little if any power of producing phosphorescence. The path of the rays for the first part of their course is approximately circular. Thompson (London Royal Society, June 17) finds that the size of the cathodic shadow depends on the electric state of the object that casts it, and that objects protected by a nonconducting layer of glass do not, at moderately low exhaustions, when made cathodic, repel or deflect cathode rays. He finds also that the rays can not be concentrated by reflection; that when they strike on an internal metal target, the latter emits other rays that resemble them in certain respects, but that can not generate Röntgen rays; and that metal screens sift out the rays, those most readily stopped being the ones most easily deflected by a magnet. Thomson and Skinner (Cambridge [England] Philosophical Society, Nov. 22) find that aluminum is rapidly evaporated from the cathode by an electric discharge in a highly exhausted vacuum tube in which mercury vapor replaces air. The metal is deposited on the glass in a bright layer which when dissolved off by acid leaves a gelatinous residue of silica. Other similar chemical effects are recorded by the same observers. Deslandres (Paris Academy of Sciences, June 8) finds that an electrified body interposed in the path of a cathode ray causes an enlargement of the shadow, the cathode bundle being divided up into several distinct and unequally deviated bundles. These, which he calls "simple cathode rays," correspond with simple electric oscillations. Bernstein (Wiedemann's "Annalen," November) asserts that the apparent repulsion between two parallel cathode beams arises from some action of the metallic cathode on the origin of the other beam and not to mutual action of projected particles. The paths remain straight when others proceed parallel from opposite ends of the tube. S. P. Thompson (British Association) distinguishes four kinds of cathode rays: (1) The ordinary kind; (2) those produced when the former fall on a surface and by producing X rays lose their power to excite X rays; (3) those that arise when ordinary cathode rays pass through a negatively charged metallic spiral or sieve (nondeflectable by a magnet); and (4) those that appear at the opening of a Holtz's funnel tube. These last produce no fluorescence and are magnetically nondeflectable. Tollenaar (Amsterdam Royal Academy of Sciences, Sept. 25) asserts that all the phenomena of two cathodes can be explained simply by supposing the rays to consist of negatively charged particles emitted with great velocity. Previously (*ibid.*, Jan. 2) he had

found that by using as cathodes two square aluminum plates whose distance can be varied, the phosphorescence figures on the wall of the globular screen consisted of a zone of very intense green, bordered on either side by two rings. By changing the intensity of the current toward one cathode one ring obeyed the rules of deflection figures given by Goldstein, but the other behaved quite differently. With a triangular or square plate and a metal globe remarkable shadows were obtained. McClelland (London Royal Society, April 8) concludes that Lenard rays are simply a secondary propagation of cathode rays, produced by the rapid pulsations of negatively charged particles up to the aluminum screen, and that, like the cathode rays, they are streams of charged particles. Röntgen ("Atti dei Lincei," VI, page 5) has conducted experiments to ascertain whether Röntgen rays exist in the cathodic pencil that produces them, and concludes that in deflectable cathode rays either are non-existent or not transformable into Röntgen rays. His experiments also indicate that metals of greatest atomic weight emit the most intense rays.

Röntgen Rays. Their Nature. — (See article on RÖNTGEN RAYS in "Annual Cyclopædia," 1896, and *Cathode Rays*, just above.) Thompson, in his inaugural presidential address before the newly formed Röntgen Society (Nov. 5), gave a review of recent progress with respect to Röntgen radiation ("Nature," Nov. 11). He said that the nonhomogeneousness of the rays was now generally admitted. Precht, of Heidelberg, in a recent thesis, reported in "Nature," March 4, confirms the view that cathode rays and Röntgen rays are highly complex. He considers that part of such radiation is not a wave motion, but may be electric in nature. From interference phenomena the wave lengths of Röntgen rays were found to range from 370×10^{-6} to 830×10^{-6} millimetres. Some waves were four times as great as those obtained by Violle by diffraction through a slit. Vosmaer and Ortt, of the Hague ("Nature," Aug. 5), regard Röntgen rays as discharged cathode rays. The strongest proof for this theory, they say, is Lafay's experiment in which Röntgen rays that have passed through a negatively charged leaf of silver can again be deflected by a magnet in the same direction as the cathode rays in the tube, and, when the leaf is positively charged, in the opposite direction. Imbert and Bertin-Sans find that after prolonged use a Crookes tube emits rays that appear to differ from ordinary X rays in being able to traverse, without appreciable absorption, bodies relatively opaque to the latter.

Their Production.—Trowbridge, in a paper on "The Energy Conditions necessary to produce the Röntgen Rays" ("Proceedings of the American Academy," April), says that the discharge in a Crookes tube when on the point of emitting the rays most intensely is oscillatory, and that each discharge encounters a resistance of less than five ohms. Swinton ("Nature," Jan. 7) notes that Röntgen-ray tubes should be excited during exhaustion with a coil of the same dimensions as the one that they are ultimately destined to be worked with. Voller and Walter (Wiedemann's "Annalen," May) find that as exhaustion is increased less heat is developed in a discharge tube, the production of heat giving way before that of Röntgen rays.

Properties.—Battelli ("Nuovo Cimento," Vol. IV) and Villard ("Bulletin de la Société Française de Physique," 1895) have investigated the reflection of cathode and Röntgen rays. Both find that cathode rays are not regularly reflected, but that when they impinge on a thin metallic lamina rays having all their properties emerge from the opposite face, generally normally to it. Wind (*ibid.*) concludes that

X-shadow figures obtained by Fomin and others are not ordinary diffraction images, but secondary ones. Analogous phenomena can be shown with ordinary light, and this fact, the author believes, goes far toward proving the X rays to be undulatory. Haaga (Amsterdam Royal Academy of Sciences, April 21) describes a new method of determining the wave length of Röntgen rays, the result of experiments by Tiddens, of Gröningen, founded on the fact that a perfectly identical deflection image is produced by rays of very different wave lengths, by varying the distance between source, diffracting slit, and screen in a definite manner. Benoist ("Bulletin de la Société Française de Physique," 1891) finds that for ordinary rays the specific absorbing power for the rays (defined as the absorption of a layer of unit surface density) increases with the density, but that results vary with the quality of the rays. He assumes that at the limit, as rays of higher and higher frequency are produced, the specific absorbing powers of all substances are equal. Swinton (London Royal Society) has investigated some properties of Röntgen rays by means of the luminescence they produce on a carbon surface. He has thus demonstrated the holowness of the convergent and divergent cones of rays in a focus tube, has shown that the rays cross at the focus with no rotation, and has proved that the cathode rays, to produce Röntgen rays, must fall on solid matter. Hemptinne (Paris Academy of Sciences, Sept. 6) finds that while electric vibrations cause gases to become luminous at a low pressure, the Röntgen rays, used at the same time, raise the pressure at which luminosity occurs.

Effects.—Perrin (Paris Academy of Sciences, March 1) finds that the effect produced on a charged conductor by the Röntgen rays consists of two parts, one depending on the nature of the gas and the other on the metal. Villari ("Atti dei Lincei," VI, page 1) has investigated the relation between the dissociation produced in gases by Röntgen rays, in virtue of which such gases discharge electrified bodies, and the molecular association in which oxygen is transformed into ozone by the electric spark. He finds that an ozonator through which passes a current of air first traversed by Röntgen rays deprives that air of its power of discharging an electroscope. Hemptinne ("Zeitschrift für physikalische Chemie," December, 1896) has attempted to detect some action of Röntgen rays on chemical processes. He could detect no effect at all on the conductivity of aqueous solutions of electrolytes, the hydrolysis of ethereal salts by acids, and the combination of chlorine with hydrogen and carbon monoxide, and only minute traces of change on solutions, such as that of silver nitrate in alcohol, that are decomposed by light. Perrin (Société Française de Physique, Dec. 4, 1896), in investigations on the dissociation of neutral electricity in gases by Röntgen rays, finds that at constant pressure the quantity of dissociated electricity per unit volume is proportional to the pressure, and hence to the density. At constant pressure it is independent of the temperature. The quantity dissociated per unit mass varies as the absolute temperature. Child (American Association) finds that electricity can be continuously discharged by X rays even when the charged body is covered with a solid insulator, as paraffin. Villari ("Nature," May 27) finds that the discharge of a conductor in air, provoked by Röntgen rays, seems to take place by convection, as if by an electric dance of the particles in air, roused by radiation. This discharge lessens when the exposed surface is diminished, as by covering it with paraffin. The paraffin, under the action of the rays, does not gain in conductivity. India rubber and insulating liquids behave almost

as paraffin. The conductive power of gases under the influence of the rays increases with their density. Guggenheimer (Paris Academy of Sciences, Feb. 15) shows that the Röntgen rays influence the explosive distance of the electric spark, the increase of this distance depending on the intensity of the rays that fall on the spark gap when the sparking distance and potential difference are constant. If the potential and the intensity of the rays are kept constant, the increase of explosive distance depends on the distance of the spark gap from the emissive wall of the tube.

Radiography by Impact.—De Heen ("Bulletin of the Belgian Academy") has obtained a photographic impression of lycopodium powder that is allowed to fall on a sensitive plate, by means of the electricity developed by the impact of the powder with the plate. With an uncovered plate a feeble but distinct impression was obtained after an hour and a half, but with a covered plate the impression was more powerful. Where the covering was broken, dark ramifications extend into the covered portion, apparently following the directions in which electricity was propagated along the surface of the plate. Anson ("Nature," Jan. 21) has secured very perfect images of the invisible electric discharge. He says: "This discharge, or possibly, more strictly speaking, the electrified streams of air driven off by it, appears to act upon the plate exactly as light does. It is thus possible to secure impressions of such discharges by simple electrification and subsequent development."

Discharge Rays.—Hoffmann (Wiedemann's "Annalen," February) describes a kind of rays called by him "discharge rays," which are contained in the spark discharge in air, hydrogen, and nitrogen, at ordinary or low pressures. They have no photographic action, but impart luminescence to solid solutions of magnesium sulphate in gypsum when heated to a temperature below incandescence. They are intercepted by mica, quartz, fluorspar, and other solids (unless produced at low pressures), proceed in straight lines, are not deflected in a magnetic field, and are not reflected by solids. They differ from ultra-violet light in their power of penetrating air and not fluorspar.

Radiant Properties of Uranium.—Becquerel (Paris Academy of Sciences, March 1), in researches on his "uranic rays" ("Annual Cyclopædia," 1896, page 641), finds that uranium has the property of discharging electrified bodies at a distance, the time of discharge being the same for positive and negative charges. For potentials below 15 volts the velocity of discharge is proportional to the potential. For potentials between 1,500 and 2,000 this velocity is constant. Lord Kelvin and others (Edinburgh Royal Society, March 1 and 9) obtain similar results. They find that two polished metallic surfaces connected to the sheath and the insulated electrode of an electrometer give a deflection from the metallic zero of about the same amount when the air between them is influenced by the uranium rays, as when the metals are connected by a drop of water. Kelvin, Beattie, and De Smolau (*ibid.*, April 4) find that the electric leakage induced by metallic uranium is not proportional to the electromotive force, and is not perceptibly increased when the uranium is heated or when sunlight falls on it. The rate of leakage is greater in oxygen than in air, and less in hydrogen. In carbonic acid it is less for low and greater for higher pressures. In air at pressures from 760 to 23 millimetres the leakage is very nearly proportional to the atmospheric pressure. Lead 2 millimetres thick is not transparent to the influence of the uranium, but glass 3 millimetres thick does not stop it entirely. Mica is quite transparent, and copper and zinc partially

so. Kelvin (*ibid.*, June 7) also finds that the effective conductivity induced in air by uranium being greatest in its immediate neighborhood, electricity of the same kind as that of the uranium will be deposited in the air near it, and the opposite kind near the inclosing metal surface. Hence, if dimensions and shapes are such that for small voltage the electricity near the uranium preponderates, the excess must come to a maximum and then diminish with greater and greater potential difference, while with still higher potential difference the outer charge may exceed, and so the electricity drawn off may be of opposite sign to that found at first. These results correspond with those found experimentally by Dr. J. C. Beattie (*ibid.*). Becquerel (Paris Academy of Sciences, April 12) finds that the loss of electricity due to uranium appears to be effected solely by the gas in contact with the metal. Le Bon (*ibid.*, April 26) claims to have established that the action of uranium is only a particular case of a general law that all substances under the action of light emit rays that discharge electrified bodies.

Other Effects in Gases.—Villari (Paris Academy of Sciences, March 15) finds that gases that have acquired the property of discharging electrified bodies, either by having been sparked or traversed by Röntgen rays, lose this power when subjected to the silent discharge of an ozone apparatus. This power of neutralization persists in the ozonizer for a time after it has been disconnected from the coil, owing to accumulated charges on the glass. The same experimenter (Naples Royal Academy) has studied the property of cooling heated bodies, acquired by gases after being traversed by electric sparks, by observing the action of different gases on a red-hot platinum spiral. In some cases the apparent cooling produced a fall of resistance of 10 per cent. in the wire. The effect increases with the energy of the sparks, and at first with the temperature of the spiral, but after this exceeds a certain limit the refrigerating power decreases. Townsend (Cambridge [England] Philosophical Society, Feb. 8) finds that gases given off during certain chemical reactions have sometimes a large electrostatic charge, which they retain in a striking manner, even when bubbling through a liquid or shaken up with sulphuric acid. These gases condense a cloud when they get into a moist atmosphere, the weight of the cloud being proportional to the electric charge, but heavier when the charge is negative.

Thermoelectricity.—Burnie (London Physical Society, Feb. 26) finds that when a V-tube containing solid metal in one branch, and the same metal, molten, in the other, is connected to a galvanometer by copper wires, the slope of the curves that co-ordinate temperature and electro-motive force depends on the rate of cooling or heating of the metal, particularly with bismuth. The effect is attributed to variation of crystalline structure, and is particularly marked just at the melting point.

Photo-electricity.—Schmidt (Wiedemann's "Annalen," November) finds that fluorspar, though it acquires a positive charge in some parts under the influence of light and a negative charge in other parts, dissipates only negative charges under the action of light. Even selenium shows no signs of dissipating a positive charge. Elster and Geitel (*ibid.*), in experiments on the relation between the photo-voltaic current and the cathodic absorption of light when the angle of incidence and direction of polarization of the incident light are varied, find that the current, so far as it depends on these factors, is determined by the amount of light absorbed at the cathode. Their results confirm the accepted theory of metallic reflection.

Dielectrics.—Abegg (*ibid.*, January) finds that as the specific inductive capacities of all substances increase with fall of temperature, the high dielectric constant of water may be approached by cooling other dielectrics to low temperatures. Hopkinson and Wilson (London Royal Society, Jan. 21) find that for long periods residual charge diminishes with rise of temperature in the case of glass, but for short times it increases, both for glass and for ice. The capacity of glass for ordinary durations of time ($\frac{1}{1000}$ to $\frac{1}{10}$ second) increases much with rise of

temperature, but for very short times ($\frac{1}{10^6}$ second

it does not increase sensibly. This is due to residual charge. Conductivity has been observed in glass at fairly high temperatures and after brief electrification; after $\frac{1}{100000}$ -second electrification it is much greater than after electrification for $\frac{1}{10000}$ second, but for longer times it is sensibly constant. Thus continuity has been established between conduction in dielectrics that exhibit residual charge and that in ordinary electrolytes.

Condenser.—Pollak (Paris Academy of Sciences, June) constructs a condenser of very high capacity by passing first an alternating current and then a direct current between aluminum poles in an alkaline solution. The plates become coated with a thin deposit of nonconducting oxide, which acts as the dielectric.

The Arc.—Wilson and Fitzgerald ("Astrophysical Journal," February), in an investigation of the change of temperature of the arc as dependent on pressure, conclude, although some observations showed that the temperature was lowered with pressure, and although none showed an appreciable increase, that they can not affirm, on present evidence, that pressure either raises or lowers temperature. Blondel (Paris Academy of Sciences, July 19), by experiments in which the passage of a current between carbon poles was broken for only $\frac{1}{1000}$ second, during which the back electro-motive force of the poles was opposed to a single cell, eliminated the effect of the cooling of the carbons, and concludes that the arc behaves like an ordinary resistance, presenting no counter electro-motive force comparable to the potential difference of the carbons. Foley (American Association) finds that the electric arc has concentric layers of different color, the outer one being strongest in yellow. The upper carbon, whether positive or negative, is covered deeply with the yellow flame. Inside is a blue area, stronger at the positive carbon, and here, within the blue, a violet region is found.

Coherence.—Appleyard (London Physical Society, March 26) has devised some new experiments on coherence in liquid conductors. When mercury and paraffin oil are shaken together until the mercury divides into small spheroids, coherence of the latter can be visibly effected by a current, a spark, or a Hertz oscillator, the resistance falling from several megohms to a fraction of an ohm. When an emulsion of water and paraffin oil is formed the suspended globules of water are similarly precipitated by electrification, producing an artificial thundershower.

Nature of a Current.—Lord Armstrong, in a work entitled "Electric Movement in Air and Water" (London, 1897), concludes that an electric current consists of two streams, a negative one in the form of a core flowing in one direction, surmounted by positive electricity flowing in the opposite direction, and he suggests instead of "negative" and "positive" the terms "inward" and "outward" as more appropriate.

Hall Effect.—Van Everdingen (Amsterdam Royal Academy of Sciences, April 21) finds that the ratio of the resistances of bismuth in different directions

is modified in the magnetic field, the modification being sufficient to account for the dyssymmetry of the Hall effect.

Various Phenomena of Electrification.—Searle (London Physical Society, June 25), in a paper on the steady motion of an electrified ellipsoid, deduces that when a charged sphere or ellipsoid moves with the velocity of light the charge on any surface is in equilibrium. It would seem impossible to make a charged body move at a greater speed than this, the energy becoming infinite at this velocity. Nichols and Clark ("Physical Review," March-April) find from measurements of the change of surface tension in liquids, due to electrification, that as the potential increases the surface tension falls off slowly at first, and then more and more rapidly, till at about 10,000 volts it is reduced one half. No difference was detected between the action of positive and negative charges. Kelvin and McLean (Edinburgh Royal Society, April 5) have investigated the electrical properties of fumes from flames and burning charcoal, and find that with a flame the fumes are negative, while those from glowing coals are positive. Kelvin and McLean (*ibid.*, July 5), in experiments on leakage from electrified metal plates placed above and below uninsulated flames, find that the amount of discharge under a flame is greater when the body ends in a flame than when it ends in a point. Swan (London Royal Society, June 17) finds that by electrification stress is produced in a viscid mixture of resin and oil, so that on passing a spark near it a star-shaped figure forms on the surface. This is affected by the sign of the electrification, the form and size of the terminals and their distance from the dielectric, the character of the spark, and the density of the atmosphere. As the density diminishes the figures become more diffuse, and they almost disappear at 85 millimetres.

Devices for Electrical Measurement.—Moler and Bedell (American Association) have devised two forms of apparatus to determine the frequency of an alternating current. The first consists of a small synchronous motor brought to speed by a geared crank and containing an electric speed-counter; the other is a monochord of adjustable pitch mounted between the poles of a permanent magnet and traversed by the current, whose frequency is determined by its vibration. Pérot and Fabry (Paris Academy of Sciences) have designed an absolute electrometer for measuring electro-motive forces of about one volt, consisting of an attracted disk electrometer in which the necessary sensitiveness is obtained by greatly reducing the distance between the plates, this distance being measured by an interferential method. Rowland ("American Journal of Science," December) describes 24 methods of measuring inductance, capacity, and resistance by means of alternating currents. Some of these depend on a new principle, two currents being adjusted to a phase difference of 90° by passing one through the fixed coil of an electro-dynamometer and the other through the suspended coil. Inductances can be compared to within $\frac{1}{100}$ of 1 per cent., thus solving the problem of standard inductances.

Magnetism. *Magnetization.*—Fromme (Wiedemann's "Annalen," May) finds that concussion exerts upon magnetization a well-defined effect, independent of that produced by deformation and of the magnetic history. It probably produces groupings of the molecular magnets, reducing the magnetic movement and lowering the susceptibility. Holborn (Berlin "Sitzungsberichte"), in experiments on the coefficient of magnetization of different kinds of iron and steel, finds that in a feeble field of force this coefficient is a linear function of the temperature. Wilde (London Royal Society, May

13), by a new method of determining limits of magnetization, finds that this limit in iron is beyond 422 pounds to the square inch. Folgheraiter has attempted to determine from the present magnetization of ancient Etruscan vases the magnetic constants at the time of their manufacture. In a recent paper ("Atti dei Lincei") he argues that no modification in their magnetization can have taken place in the centuries that have elapsed since they were baked, since the fragments of vases long broken are found to be as regularly magnetized when fitted together as if the vase had been preserved entire. The only element wanting to exact determination of the magnetic elements in the ancient Etruscan period is knowledge of the orientation of the vases in the kiln, and this Dr. Folgheraiter hopes to obtain by the discovery of potteries of that epoch with vases *in situ*. The same observer ("Nature," April 15) finds from observations on the magnetism of buildings on the Roman Campagna that these structures frequently exhibit singular points and zones similar to those observed in rocks. The zones, since they include numerous adjacent stones and the mortar between them, must have been formed since the erection of the buildings, and Dr. Folgheraiter regards them as due to lightning discharges.

Change of Volume.—Klingenberg, in an inaugural dissertation at Rostock University, has made an attempt to co-ordinate the magnetic phenomena of iron, nickel, and cobalt in terms of the shape and orientation of the molecular magnets, whose rotation he believes to be the most essential feature in these phenomena. Knott (Edinburgh Royal Society, June 7) finds that iron and steel tubes dilate longitudinally in a longitudinal magnetic field, positively in moderate fields, negatively in higher ones. Nickel behaves more simply, the cubical dilatation being always positive and increasing steadily with the field. Later (July 19) he reports that in a nickel tube magnetization produces a small diminution of volume and a comparatively large apparent diminution of volume, as indicated by its outer dimensions when plugged at both ends.

PHYSIOLOGY. In its review of the advance of physiology during the reign of Queen Victoria, the "Lancet" mentions the importance of the cell as the physiological unit as having been fully established, though the estimated value of its component parts—cell wall, protoplasm, and nucleus—has of late years undergone modification, while each has been shown to possess a structure far more complex than was believed to exist by the originators of the cell theory, or even by Virchow. Much service has been derived from improvements in the microscope, whereby observers have been enabled to comprehend the structure of the different organs of the body, and thus to gain some insight into the mechanism by which the various functions of secretion, sensation, and motion are effected. The inquiry has only been begun, and we are still very far from comprehending the mode in which this mechanism acts; but the little knowledge that has been gained has swept away much that was inaccurate and even absurd in the opinions and practice of our predecessors, and has helped to establish better, because more rational, methods of treatment of disease. Experimental physiology has been pursued with great energy during the last few decades, and with very instructive and satisfactory results. Immense advances have been made in many branches by the combined labors of numerous painstaking and accurate observers in different countries. In respect to the blood, our knowledge has been rendered far more exact of late years in regard to the form, size, and number of the corpuscles; to the relative proportion of the colored and uncolored bodies, to the

spontaneous movements of the latter, and to their ability to traverse the walls of the vessels; to the origin of the colored corpuscles and the effects of reagents upon them, to their chemical composition, and to the nature, quality, and exchange of gases during their passage through the capillaries of the lungs and of the tissues; while our knowledge of such points as the crystallization of the hemoglobin and the phenomena of spectrum analysis is altogether of recent date. Likewise striking are the accessions to our former knowledge of the phenomena that can be demonstrated in the nervo-muscular apparatus. The form and speed of the nerve of contraction in muscle, the rapidity with which the impulse causing sensation and motion are propagated in nerve, the functions of the several columns of the spinal cord, the long-denied reaction of the brain cortex to stimulation, have been rendered probable or actually demonstrated by the converging and mutually supporting lines of careful dissection, microscopical examination, experimental and pathological inquiry, and embryological research, while pathological anatomy has now and again afforded additional evidence when proof from other sources was wanting. Of late years the physiological chemist has been persistently engaged in the investigation of the changes undergone by the proximate principles of food—as starch, sugar, fat, and proteids—both in the alimentary canal and in their passage through the economy. Great progress has been made in the discovery of the primary changes that occur, but many of the more recondite changes in the blood and in the tissues still await explanation. In several Continental universities departments or laboratories have been instituted where physiological chemistry can be taught and pursued, and where problems hitherto regarded as insoluble are persistently attacked.

Respiration.—Studies of the muscles of respiration have hitherto borne chiefly upon the intercostal muscles. In the observations recorded by Dr. Rudolph Fick, all the costal muscles were left intact. The author first examined the auxiliary muscles of respiration in the neck, and proved that they were inactive in normal quiet respiration, and came into action only in isolated extraordinary, deep, sighing respirations, the result of their action being to elevate the thorax. Next the auxiliary muscles of respiration and the diaphragm were paralyzed by severing their nerves in the neck, and the action of the abdominal muscles was eliminated by dividing them. It was then found that the respirations continued in normal rhythmic manner, the difference between inspiration and expiration (apparently active) measured through a tracheal cannula being 66 millimetres of water. These experiments, taken in connection with certain geometrical deductions from the results of observations of the intercostal muscles, proved that normal quiet inspiration is the effect of the contraction of the internal intercostal and intercartilaginous muscles, and that expiration is effected by the internal intercostal muscles. The same results have been reached by Bergerdal and Bergmann in Sweden.

It is shown by the researches of MM. A. Chauveau and J. Tissot that when the weight sustained by a muscle and the amount by which it shortens increase together, the respiratory exchanges that represent the energy spent—that is, the oxygen absorbed and the carbon-dioxide exhaled—increase as the product of the shortening by the weight.

The physiological effects of high altitudes have been studied by Prof. Piero Giacosa more especially with reference to their influence on the exchange of material, and particularly on the elimination of

nitrogen. The author considers that as the altitude of 6,000 metres (19,500 feet) is approached an increasing risk accrues of reaching the limit beyond which the physiological functions can not be completed, but below that altitude the diminished pressure is never a direct and sufficient cause of the disorders that are observed, and its only effect is to aggravate those due to fatigue, impaired digestion, and other causes.

Dr. Alexander Wilson in 1893 suggested that certain cases he had observed of death from chloroform in which the prominent symptom was vigorous respiration persisting after the pulse had become imperceptible suggested that the fatal results were due to anæmia of the respiratory center produced by "failure of the circulation," from either vasomotor paralysis or cardiac syncope, and not by primary paralysis of the respiratory center. The evidence of later cases, together with the light thrown on the subject by a comparison of the symptoms with those of death from other well-recognized causes and the effect of treatment, now lead him to conclude that the death is due to vasomotor paralysis or that the fatal changes are initiated by the fall in blood pressure. The symptoms preceding death vary according to the degree of narcosis that has been reached at the time when the vital centers begin to be affected by the depletion of blood consequent upon the vasomotor paralysis. Conclusions reached by Dr. Leonard Hill on this subject from experimental evidence agree substantially with those of the author.

Previous experiments by G. T. Kemp had shown that when enough air or oxygen is mixed with nitrous oxide to keep an animal alive anæsthesia can be maintained for a considerable length of time without risk of life to the subject. When nitrous oxide is replaced by oxygen the anæsthesia passes off. This shows that nitrous oxide possesses specific anæsthetizing properties not possessed by nitrogen. A more thorough knowledge of the condition of the system during nitrous-oxide anæsthesia has been obtained by drawing blood for analysis while the animal was connected with a kymograph and breathing N_2O + air or N_2O + pure oxygen. The analysis of the blood gases shows that even when the animal was so deeply anæsthetized as to endure stimulation of a sensory nerve without pain the blood contained enough oxygen to support life. The carbonic acid in the blood was greatly diminished. The average amount of nitrous oxide in the blood during anæsthesia was 28 volumes per cent. A study of the respiratory exchange indicates that the metabolism was lowered and that the system adapted itself to the small amount of oxygen present in the inspired air.

Circulation.—In experiments on the dog W. T. Porter has found that any part of the ventricle will contract rhythmically when cut away from the ventricle and fed with warmed, defibrinated blood. Hence, he infers, the cause of the rhythmic contraction of the ventricle lies within the ventricle itself, and is not seated in a single isolated co-ordination center; but the co-ordination mechanism, whatever it may be, is present in all parts of the ventricle. The integrity of the whole ventricle is not essential to the co-ordinated contraction of the whole of it. Assuming the correctness of the general belief in the absence of nerve cells from the apical half of the ventricle, the rhythmic co-ordinated contraction of the ventricle is not dependent on nerve cells. A thin piece of the beating ventricle in the living animal may be partly severed from the apical portion in such a way that the isolated piece remains attached to the remainder of the ventricle only by its nutrient vessels, all muscular connections being cut. The heart and the isolated pieces

continue to contract. On slowing the heart by vagus excitation the rhythmical contractions of the isolated piece may be watched without difficulty. The rhythm, then, differs from that of the remainder of the heart. It follows that the rhythmic contractions of the isolated mammalian apex are not due to changes in the blood during its defibrination.

In other experiments Mr. Porter found that recovery of the dog's heart, or any part of it, from strong fibrillation, is secured by feeding the part with defibrinated dog's blood through the coronary artery. When an isolated part of a dog's or cat's ventricle, this author observed, is fed through the coronary artery, the flow from the veins appeared greater during systole than during diastole. In an extirpated heart supplied with blood at a constant pressure through the coronary arteries a pulse synchronous with the systole was observed in the superficial auricular veins before and after their connection with the coronary sinus was severed. A similar but much less marked pulse could be demonstrated in the coronary arteries. When a vein on the surface of a ventricle *in situ* in the living animal was incised and the heart slowed by vagus excitation the flow from the cut vein was much increased during ventricular systole. These observations are interpreted as showing that the contraction of the cardiac muscle compresses the veins, and to a less extent the arteries, in the substance of the heart. The systole must therefore facilitate the circulation through the heart muscle. The minimum manometer failed to show a negative pressure in the coronary arteries. The ventricle acts on the coronary circulation as a force pump, and not to any noticeable extent as a suction pump.

In an experiment by F. H. Pratt in which the auricles of the cat's heart were tied off from the ventricles, both coronary arteries were ligated, and the ventricle was fed, the ventricle began to contract rhythmically, slowly at first, but gradually attaining the normal rate. The blood within the ventricle and in the veins became venous, and if contractions were to be sustained had to be periodically renewed. If a vein was opened a small but steady outflow of blood occurred. Increasing the load beyond that furnished by a blood column of 4 or 5 inches lowered the force of contraction. Contractile activity could be kept up by this method for some time. These experiments were interpreted as indicating plainly a nutritive phenomenon: the blood becomes reduced, and must be removed in order to sustain contraction. Proof is adduced that the contractions are not due to mere mechanical stimulus. A genuine circulation is shown to exist between the ventricular cavity and the coronary veins through the vessels of Thebesius. It is added that the possibility of a nutrition from the ventricles direct may serve to explain some cases in which thrombosis or other stoppage of the coronary arteries has failed to destroy the normal activity of the heart.

The changes of the pulse at different hours of the day and the influence of muscular and of mental work upon the capillary circulation have been studied by A. Binet and J. Courtier. Experiments concerning the first problem are described as having been made upon three subjects. They gave more marked indications in summer than in winter, even when the temperature was the same. The effects of a meal appeared to be represented in the capillary pulse by an increase of the pulsation or an accentuation of the diastole. For the individual, the diagram of the pulse may be influenced for the moment or for a period of time by the state of health, physical exercise, mental labor, the emotions, or overwork; but through all these accidental

variations, taking the pulse hour by hour after the meal, the direction, the order of changes in the form of the pulsation, persists. An experiment is cited to show that the form of the pulse (tracing) indicates a general state of the organism rather than the local condition of the hand.

Local, fatiguing muscular exercise produces a weakening of the diastole, a blunting of the diastole, a tendency to a displacement of the diastole toward the point of it. A general, moderate muscular exercise, walking, for instance, depresses and accentuates the diastole, and intensifies the pulsation. General, excessively fatiguing muscular exercise provokes a weakening of the diastole, without displacement toward the point of the pulsation. An energetic, brief mental effort is found to produce excitation of the functions. Vasoconstriction, acceleration of the heart, and respiration are followed by a very slight slowing of these functions; and in some subjects, weakening of the diastole. Mental labor lasting several hours while the body is relatively still produces slowing of the heart and a diminution of the peripheric capillary circulation. Asking if any relation can be established between the effects of mental and those of physical labor on the capillary circulation, the authors remark that mental labor may be regarded as an excitation of the nervous system, in which point it resembles physical labor, and produces acceleration of respiration and of the heart, as muscular labor does. It is therefore possible, in view of the physical effects, to compare a mental calculation to the act of grasping a dynamometer. Further, the capillary circulation is often modified in the same way by physical exercise and mental work. A passing effect similar to that of walking in lessening the pulse and accentuating the diastole occurs at the beginning of a mental work. Further, a fatiguing physical effort weakens the diastole; and so a mental work with some subjects may bring on a weakening of the capillary pulsation. On the other hand, the differences between physical and mental work are numerous. The excitation of the heart is much more considerable and the acceleration of respiration is much greater under the influence of physical effort. The amplitude of respiration is augmented during muscular exercise, while it becomes more superficial during mental work. We should, moreover, recollect that prolonged mental work brings on an attenuation of the peripheric capillary circulation. Physical and mental effort constitute excitations of the nervous system; but the excitation of mental work is much inferior in degree to that of physical work, and it seems to be of another quality, as is shown by two effects which are special to mental work: the contraction of the thoracic cage and the attenuation of the peripheric capillary circulation.

From experiments upon the influence of emotion on the heart's respiration and capillary circulation, Messrs. A. Binet and J. Courtier find that with the majority of persons every emotion produces a vasoconstriction, an acceleration of the heart and respiration, and an increase in the amplitude of the thoracic cage—effects which are more marked as the emotion is more intense. In some very rare cases a painful sensation and a sad emotion have produced a very slight slowing of the heart. The possibility is suggested by the observation of one subject that the form of the capillary pulse (tracing) changes with the quality of the emotions. From this it may be possible some time to make a classification of the emotions according to their effect on the form of the pulse.

From a series of investigations of that subject, Prof. H. Kronecker and Dr. A. Marti conclude, with respect to the relation of cutaneous excitation and the formation of red blood corpuscles, that feeble

irritations of the skin promote the formation of red blood corpuscles, but modify the formation of hæmoglobin in different ways; that strong irritations determine a diminution of the number of red corpuscles, and, in a minor degree, of the hæmoglobin contained in the blood; that darkness diminishes the number of blood cells. After about a fortnight a minimum is reached, which is followed by a limited increase; and that continual exposure to intense light (even at night with electric light) induces the formation of red blood corpuscles, and also, in a lesser degree, of hæmoglobin.

Experiments made by MM. A. Binet and N. Vasehidi with Mosso's sphygmomanometer upon the influence of physical and mental work and the emotions on the pressure of the blood yield results indicating that strong fatiguing or enervating sensorial excitations produce on the average an augmentation of from 10 to 15 millimetres in the pressure; very intense mental work, a little higher augmentation, of 20 millimetres; an animated conversation raises the pressure by 20; a strong spontaneous emotion, whether pleasant or unpleasant, by 30; and a considerable expenditure of muscular force, without suspension of respiration, also raises the pressure by 30 millimetres; showing that all trials we can conceive—mental and physical effort, and emotional experience—however differently they may be felt in the consciousness, are expressed physiologically under an equivalent form.

Of new morphological elements observed in the blood, Dr. H. F. Müller describes minute spherical or rod-shaped bodies which present lively molecular movement. He has also observed exceeding fine dustlike particles which are not soluble in acetic acid or ether, and are not blackened by osmic acid. Pigment particles and colorless flakes have been described by Dr. Litschenberger. The reducing substance in the blood has been isolated by Dr. Von Henriques, and found to be jecorin sugar.

Mr. W. F. Lloyd, in a paper quoted by "Nature" from the "British Medical Journal," describes experiments made to determine the specific heat of human blood, which he found to be 0.710. Having determined this value, the amount of heat required to raise the temperature of a certain quantity of blood can be easily calculated. Suppose that the temperature of a patient whose weight is 65 kilogrammes is 37° C., and twelve hours after this the temperature has gone up 3° C. The weight of the patient's blood would be $\frac{1}{3}$ of 65, or 5 kilogrammes, and the amount of heat required to raise the temperature of 5 kilogrammes 3° C. will be $5,000 \times 0.710 \times 3 = 10,650$ heat units, the mechanical equivalent of which is 4,515,600 gramme metres. This amount of work represents the chemical energy that must be required to raise the temperature of the blood of the patient 3° C. in twelve hours, so that in every second the chemical changes going on are represented by the amount of energy required to lift 104.5 grammes a metre high against the force of gravity. From this it will be seen that the amount of energy going on in the tissues of a patient whose temperature is rising must be very considerable, and about 13 times greater than these figures, which apply only to the blood. The author suggests that the difficult problem with regard to the number of atoms in the molecule of protoplasm may be accurately solved by an accurate determination of the specific heat of living protoplasm.

Dr. Nathan Raw records a considerable number of cases, in addition to several reported upon in 1895, in which transfusion of normal saline solution has been employed at the Dundee Royal Infirmary, in some with wonderful effect and in others with well-marked temporary improvement; and he believes that there can be no doubt that we have in

this process one of the most simple yet efficacious remedies in all cases of shock from hæmorrhage. In several cases a rigor set in a half hour or hour after the operation, and lasted about five minutes, with a high temperature, but it had no serious effect. Dr. Raw suggests its employment in acute specific diseases due to micro-organisms.

In all of a series of experiments by MM. A. Binet and N. Vasehidi upon the influence of the different psychic processes on the blood pressure in man the blood pressure was increased. This effect was produced by pain, a strong mental effort, conversation, and a fatiguing muscular effort.

Experiments reported by M. Essipov, a Russian physiologist, indicate that bloodletting has important effects on the chemical composition and the properties of the blood. After drawing large quantities of blood—amounting to one fortieth the weight of the body—from rabbits, Guinea pigs, and pigeons, the author found that the fluid acquired a marked bactericidal power, especially as against the microbe of cholera. The effect takes place gradually, reaching its full force in twenty-four hours, after which it declines. Not only does the blood fail to propagate the microbe, but it becomes at the same time refractory against inoculation.

Digestion.—Dr. A. S. Gillespie has found that the contents of the alimentary canal in the dog and the calf are acid throughout, and that this condition is due to acids formed in part by micro-organisms acting on the constituents of the food, in part to hydrochloric acid in combination with proteids and proteid derivatives, and in part to acid salts. The experiments indicate the existence of two classes of bacteria—those which occasion an acid reaction and are usually unable to liquefy gelatin, and those which lead to an acid reaction and are capable of liquefying gelatin. These two classes are antagonistic. If the acid forms predominate the putrefactive changes are few; if the alkaline forms, the disposition to putrefaction is greater.

Investigations are recorded by Dr. Vaughan Harley of the question whether, after the removal of the pancreas, fat continues to be broken up in the alimentary canal. For this purpose animals were fed on milk, and seven hours later the contents of the stomach, small intestines, and large intestines were separately analyzed with regard to the quantity of neutral fat, free fat acids, and fat acids as soaps. So far as the stomach is concerned, the quantity of fat acids was increased in the animals in which the pancreas had been removed. The increase seemed to be due to the longer retention of the fat in the stomach rather than to its splitting up, for after the pancreas was removed, the motility of the stomach was much diminished. Soaps were formed in both the normal and the pathological dogs, so that in both cases the stomach is capable of splitting up neutral fat with free fatty acids and glycerin, and these substances are capable of finding an alkaline matter with which they can form soaps even in the acid stomach contents. The power of the free fatty acids for forming soaps is, however, extremely limited in the stomach. In normal dogs the principal fat-splitting action really begins not in the stomach, but after the fat has left the pylorus. The normal dogs contained 72.22 per cent. of the total fat as free fat acids, while when the pancreas had been entirely removed 61.62 per cent. of the total fat was thus present. It appears, therefore, that even where no pancreatic secretion has reached the intestines, a very considerable quantity of neutral fat is split up into free fat acids in the small intestine, although the quantity then formed is not so great as when the pancreatic secretion has been able to share in the work. The formation of soap is also carried on as in the normal dogs. In the

contents of the large intestine the normal dogs and those in which the pancreas had been previously removed showed, for all practical purposes, an equal breaking up of the neutral fat.

In a Croonian lecture in 1896 Dr. P. W. Latham, of Cambridge, assumed that the action of the liver on the amide bodies, glycocol, taurine, leucine, tyrosine, etc., is one of dehydration similar to that by which glycogen is produced by the dehydration of glucose. Again, in accordance with Pflüger's view, ammonium cyanate is the type of living and urea of dead nitrogen, the conversion of the former into the latter being an image of the essential change which takes place when a living proteid dies. Further, in many of the cyanogen compounds condensation of three molecules takes place, forming compounds much more stable than those consisting of one molecule only, such as is exemplified in cyanuric acid, which results from the condensation of three molecules of cyanic acid. Dead albumin may be built up on the evidence furnished on the lines here suggested. The change from the dead to living albumin may be similarly supposed to take place as from urea into ammonium cyanate. The author adduces evidence explanatory of the change which takes place as the living proteid dies. His latest conclusions are that the living proteid consists of a series of cyan-alcohols with one thio-alcohol united to a benzene nucleus; that when a proteid dies it gives off carbonic and lactic acids, the thio-alcohol by oxidation being converted into a sulphonate which combines with ammonia, and by the conversion of CNOH into $\text{NH}=\text{CO}$ the cyano-alcohols are changed into a series of amide bodies; that by condensation of the lower cyan-alcohol and the separation of CONH the higher cyan-alcohols are formed; and that urea is formed by the separation of carbonic anhydride ($\text{CO}=\text{NH}$), which either combines with ammonia to form urea or is hydrated to form carbonic acid and ammonia.

The function of glycogen in the formation of tissue is dealt with by Dr. Charles Creighton in a work recording his microscopic researches on the subject. The author finds that glycogen is present and may be abundant in the liver of animals in hibernation, which is against the rule of starving animals; and that it is present in some peculiar way in the muscular and pulmonary tissues, and is found in granules in fat cells. "Any attempted interpretation of these facts can not but be hazardous, while so many other relevant facts remain to be determined exactly; but it seems probable, as Vort has conjectured for the hepatic glycogen, that the store of fat is utilized by being converted into glycogen. As to the hibernating gland, its function appears in some way correlated to the wasting of the fat store during the winter, the gland substance becoming physiologically most active in correspondence with the wasting of the animal's fat in general."

The digestive actions of pepsin and pancreatin upon fibrin in the presence of oroline yellow, saffolin, magenta, and methyl orange were separately studied by H. A. Weber. Of the coloring substances, only oroline yellow retarded the action of the pepsin; but saffolin, magenta, and methyl orange interfered very seriously with the fermenting action of pancreatin. The use of such colors in articles of food and drink is therefore objectionable.

The action of the common coloring matters, flavoring extracts, and preservatives on the digestive ferments has been studied by Frank D. Symons. Among his most interesting results are the determinations that peptic digestion is greatly retarded by picric acid, tropæolin OOO, and metanil yellow, less so by salicylic acid and oil of wintergreen, and

that pancreatic digestion is retarded by Bismarck brown, cinnanon, and formal. The action of essence of peppermint on both the peptic and pancreatic ferments was practically nil; and the three coloring matters—chrysoidine, safranin, and methylene blue had no apparent effect.

Secretion.—The internal secretions, products of what are called the ductless or vascular glands, were the subjects of papers read by R. H. Chittenden and W. H. Howell before the fourth triennial meeting of the Congress of American Physicians. It has long been recognized that these glands possess no excretory ducts, and that therefore whatever secretion they may produce probably enters the blood directly or through the lymph. These secretions exist in several glands, and their functions have been the subject of much study, upon which satisfactory information has only recently been gained, and their functional activity is now recognized as a necessary element for the welfare of the body. Their removal or the impairment of their function may produce even more disturbance of physiological equilibrium than a corresponding disarrangement of glands formerly considered of greater physiological value. Whatever power they possess appears to be the elaboration of definite products which are distributed through the body by the blood and lymph. In the case of the thyroid gland and tissue it is found that its complete removal is followed by serious disturbances of nutrition that are immediately or ultimately fatal. Moreover, in these cases the reintroduction of thyroid material into the body results in an amelioration or even entire removal of the symptoms of malnutrition. Among the effects of the administration of thyroid gland and thyroid extracts to normal individuals and to those in whom the thyroid glands are diseased Prof. Chittenden mentions a very noticeable effect upon the metabolism of the body, leading to a marked loss of body weight, an increased excretion of water, nitrogen, carbonic acid, and sodium chloride. The fact of quantitative changes in the proteid metabolism renders it probable that there are also qualitative changes, and that the presence or absence of the thyroid gland or its equivalent from the body may modify the *line* of metabolism. But upon this point we know very little. The experiments show that the thyroid is concerned in hæmaturia and that there is apparently a connection between the thyroid gland and phosphoric-acid metabolism. Evidence is also afforded that it plays some important part in the katabolic processes of the body. Some uncertainty still prevails respecting the chemical and physiological character of the protective products manufactured by thyroidal tissue. The epithelial cells of the gland appear to manufacture a colloid secretion which finds its way to the blood through the lymph, presumably carrying with it the active principles. This matter gives the general proteid reactions, is very soluble in dilute alkaline fluids, is readily dissolved by gastric digestion, and is regarded by Prof. Chittenden as the active constituent of the gland. It has the remarkable property of holding a certain amount of iodine in combination, and yields on decomposition a peculiar nonproteid substance, carrying with it most of the iodine and endowed with marked physiological action. This substance—thyroidin or iodothylin—is especially characterized chemically by its great resistance to ordinary decomposing agents. It is fairly well established that iodothylin possesses all the peculiarities associated with thyroid therapy. The physiological activity of the thyroid gland was ascribed by Fränkel to another substance which he called thyreo-antitoxin, a crystalline body of neutral reaction obtained from the proteid-free extracts; but Prof. Chittenden finds

that it possesses with certainty more of the properties of the gland. The amount of iodine in thyroids is very variable, and the law of its relations does not appear to be as yet accurately determined.

While Prof. Chittenden's paper is confined mostly to the thyroid secretions Mr. Howell treats also of the secretions of the suprarenal bodies, the studies upon which have been as interesting, although not so complete, as those upon the thyroid and the hypophysis cerebri. Extracts of the medulla of the suprarenal bodies injected into the veins of a living animal cause a pronounced slowing of the heart beat and a large rise of blood pressure. These effects, as a rule, usually pass off in a very short time, indicating that the active substance is either quickly destroyed in the tissues or is neutralized in some unknown way. The substance producing these reactions having been found under normal conditions in venous blood flowing from the gland, it is concluded that it is a normal product of the metabolism of its medullary cells, and is discharged or secreted directly into the blood. Further experiments are relied upon to furnish more definite information as to the extent to which the muscular and the nervous tissues are affected by this substance. The hypothesis that these glands secrete a stimulating substance that augments the tone of the muscular system is not, however, the only one that has been offered to explain their physiology. Another one supposes that, like the thyroids, they produce an antitoxic secretion capable of neutralizing or destroying certain poisonous products of body metabolism. The hypophysis cerebri is commonly described as consisting of two parts, the anterior and the posterior lobe, the histology and embryology of which indicate that they are entirely different in origin and structure. The anterior lobe is a glandular structure, not strictly ductless, according to Haller, because it possesses an imperfectly developed system of ducts that opens between the dura mater and the pia mater, but evidently a secreting structure; and the fact that its secretion is discharged between the meningeal membranes suggests some special connection with the physiology of the brain. It exhibits pathological changes in many of the cases of acromegalia, and extracts of it have therefore been used therapeutically in cases of that disease, and apparently favorable results have been claimed therefrom, but not yet satisfactorily demonstrated. The experiments made upon this lobe by physiologists have likewise been meager and inconclusive. The posterior or infundibular lobe is very small in all animals, and has the appearance of being a rudimentary organ; but observations presented by Mr. Howell indicate that it affects the heart rate and blood pressure, and may have some important physiological activity, different from that of the glandular lobe, and possibly independent of it.

The observations of S. Vincent on the comparative physiology of the suprarenal bodies indicate that suprarenals of some sort are possibly present in most if not all vertebrate animals. Experiments of the intravenous injection of the medullary substance of the adrenals of fish give evidence of contractions of the arterioles throughout the body. The author believes that the effect of the active principle upon the arterioles is due to a direct action upon the muscular tissue of the blood vessels, and is not connected with its action on the central nervous system.

The effects of the injection of human sweat are found by M. S. Arloing to be to produce hypoglobulin in the blood, to reduce the force and frequency of the action of the heart, to render the respiration feeble, shallow, and hurried, to cause vomiting, intestinal pain, and diarrhœa, and to ex-

ercise a very distinct depressing influence on nervous action.

In his studies of the secretory activity of the skin, Mr. Barratt has found that the proportion of carbonic-acid gas eliminated as compared with watery vapor is as 1 to 200 for the upper limb, but that it varies to some extent with the temperature and the degree of fullness of the part.

Besides observing the withdrawal of iodine from the circulation and the formation of iodothyron by the thyroid gland, M. E. Cyon remarks that the thyroid is an organ which, being situated on the carotid arteries just before their entry into the skull, protects the brain from the sudden afflux of blood, acting like a secondary current.

A summary of the results realized from treatment with thyroid extract up to that time is given in the "American Journal of Medical Sciences" for July, 1897, by Dr. Francis P. Kinnicutt, who represents that the myxœdematous symptoms in cretinism are readily removed by it; that bodily growth and bodily development held in abeyance are resumed in a degree inversely proportioned to the age, and if the treatment is begun early in the disease the child will probably grow into a healthy adult. In a type of idiot somewhat a cretin some improvement, physical and mental, has been observed. Some benefit follows the treatment in goitre—especially in the periplastic form. Large collections of colloid and cysts are not affected. But complete disappearance of the goitre has rarely been observed. In exophthalmic goitre an aggravation of the symptoms usually results. In obesity a loss of weight at the rate of from two to eleven pounds a week is produced in some cases. After a time a limit is reached, beyond which further loss does not occur. As a rule, discontinuance of treatment is followed by relapse. In diseases of the skin the expectations entertained have not been fulfilled.

Studies of the suprarenal bodies by Dr. Arthur Biedl were directed particularly to the vasomotor nerves and the secretory nerves of those organs. Reasons are given in his paper for supposing that certain vasodilator fibers run in the splanchnic nerves to the adrenals. The author has observed that in dogs the splanchnics, after traversing the diaphragm, give off on each side, before they enter into the formation of the solar plexus, a single large branch to the adrenals, and these nerves, he believes, contain the chief vasodilator fibers, since, if divided, the stimulation of the splanchnics in the thorax is without influence, while stimulation of the distal extremities of the divided nerves is followed by active hyperæmia. From a critical review of the researches of previous investigators he considers the facts established in regard to the vasodilator nerves distributed to the abdominal viscera to be that these nerves leave the spinal cord chiefly by the anterior roots of the lower dorsal nerves and, running in the rami communicantes, enter the sympathetic in the dorsal region, and are distributed with the branches of the splanchnic nerves to the large and small intestines, the liver, kidneys, pancreas, and adrenals. He has satisfied himself that there are ganglia on the vessels distributed to the adrenals, and that although their presence has not been anatomically demonstrated, vasoconstrictor nerves exist. The two sets of nerves, vasodilators and vasoconstrictors, run in the same trunks, their relative proportion varying to a considerable extent. The secretory nerves of the adrenals, to which Dr. Biedl devoted much time and attention, belong to the class of organs which have an internal secretion, discharging the materials they elaborate into the blood. Some investigators have been led to the belief that the granules known to exist in the blood of mammals proceed

from the adrenals; others have shown that the venous blood of these organs resembles arterial blood in color; and another observer has demonstrated that the peculiar extract of the adrenals is not a post-mortem product, but is contained in the venous blood returning from these organs during life. Dr. Biedl found that after stimulation of the suprarenal branch or of the splanchnic nerve in the thorax, the number of bright granules or little masses of protoplasm was diminished, while the number of the leucocytes of the blood was reduced. In regard to the active extract, the author believes that besides containing vasodilators, the splanchnic nerves are associated with the secretory nerves of the adrenals, which run in the same trunks, and that stimulation of these nerves leads to some, though not material, increase in the quantity of the active extract produced.

Muscular System.—The observations of Dr. Bottazzi on the oscillations of *tonus* in various forms of muscle indicate that in muscular organs in which the tissue has not undergone a high degree of degeneration the sarcoplasm must be regarded as the really irritable and contractile substance conferring upon it the automatic and rhythmic properties. In the skeletal muscles the sarcoplasm is represented by the singly refracting substance which alone possesses the power of transmitting excitation, while the double refracting and more highly differentiated substance, though it can contract swiftly and vigorously on the application of a stimulus, is yet destitute of automaticity and rhythmic power.

The alterations of shape and volume occurring after muscular exertion in the hearts of persons who are suffering from nervous affections have been studied by Mdle. Pokrychne and M. Capitan, who find that in normal subjects moderate exercise does not cause any perceptible change in the shape, volume, or position of the heart; but in subjects whose nervous systems have undergone deterioration in consequence of hysteria, neurasthenia, or any reflex trouble having its point of departure in a particular part of the organism, the heart grows hyper-excitable and changes in shape or position the moment it is called upon to do a little extra work. This alteration may present itself in three typical ways: The whole cardiac area may be uniformly enlarged, or the increase may be partial and irregular; the heart may become retracted and diminished in volume; or, finally, the organ may be dislocated laterally, with or without changes of shape and volume, the displacement being directed toward the mesial line or, more frequently, toward the axilla.

Because the respiratory movements are liable to constant modification in the physiological acts of talking, etc., and in all emotional expression and in sneezing and coughing and the like, Dr. Harry Campbell pronounces these acts more far-reaching in their effects than would appear, and hence worthy of careful study; and they further affect the body by involving the expenditure of a considerable amount of muscular energy, and by inducing definite psychic phenomena which themselves have their physical accompaniments. Seeing how far-reaching these acts are, and remembering how large a part they play in normal life, we may safely conclude that they influence the functions of the body beneficially, and that an undue interference with them is injurious. The instincts to shout and sing, laugh and cry, are especially noticeable in the savage and in the child; and if they are unduly repressed in the child he is sure to suffer. Crying should certainly be restrained within limits, but there can be no doubt that it is primarily physiological, favoring the proper expansion of the lungs,

accelerating the circulation, deadening the effects of pain, and relieving nerve tension. Rosbach thinks it not improbable that many evils that manifest themselves in later life may originate in the practice of mothers stopping their infants from screaming by soothing them or otherwise. The shouting of young people at play is manifestly physiological. The amount of talking done by barristers and others enables them to dispense largely with exercise as ordinarily understood. Singing is a most important exercise from a medical point of view, and the good average health enjoyed by professional singers is in a large measure attributable to the mere exercise of their calling. Both talking and singing are good in heart disease, and singing in defective chest development. Laughing is especially beneficial as a physical exercise, although it may be disadvantageous in heart disease. In crying the flow of tears lessens blood pressure within the cranium, the discharge of nerve energy relieves nerve tension, and the sobbing movements of respiration and the contraction of the muscle system are beneficial. The importance of the dynamic effects of unrestrained crying is shown by the exhaustion it entails. Sighing and yawning are accompanied by deep inspirations, and come as a relief to shallow breathing and muscular stagnation, accelerating the aëration of the blood and the flow of lymph.

Nervous System.—The results of a number of studies of the physiology of the occipital lobe—in which the center of vision is located—are summarized by J. Souris. The lesion of an occipital lobe gives rise to the symptom called homonymous lateral hemianopsia—that is to say, abolishes the functions of the right halves of both retinas, so that the patient in consequence of the confusion of the light rays in the eye can no longer perceive what is on the left of the visual field. Complete cortical blindness results from a total destruction of both occipital lobes, a condition which has been found realized in patients, and may be produced artificially in animals. With this blindness goes loss of orientation and of recollection of places. A patient observed by Sachs had become incapable of orienting himself in the bedroom where he had lived a long time, and could not find the table three steps from his bed. Persons who become blind through lesions of the retina and the optic nerve have, on the other hand, a remarkable faculty of orienting themselves in places familiar to them. Some pathologists have considered themselves authorized to locate the sense of orientation in the occipital lobe. M. Souris doubts whether a sense of orientation exists in man and animals, but thinks that the phenomenon proceeds from the co-ordination of many recollections, that visual recollections play an important part in the co-ordination, and that when they are abolished troubles which sufficiently explain the observed facts result in the ordinary work of orientation.

Seeking to account for the qualitative differences of the sensations, Bechteren admits that the structure of the cerebral cortex varies but little from one region to another. Such differences as there are in the form of the cells, and the number of the protoplasmic prolongations are not marked enough to permit us to explain the unlikeness between tactile, visual, auditive, and other sensations. The peripheral terminations of the different sensorial nerves, on the contrary, present very considerable differences, as may be well illustrated by comparing the structure of the retina with that of the organ of Corti and with the various corpuscles seated in the skin. These "organs of the senses" serve to transform the external excitation into a physiological excitation of the nerve. The author affirms

that this physiological excitation is different for each sensorial organ, and that this difference is competent to account for the qualitative differences of the sensations. A sensorial nerve "becomes accustomed" always to conduct a particular kind of physiological excitation, and when this nerve is excited by any cause whatever it always gives rise to the same excitation and provokes the same sensation. Authors disagree with respect to the structure of different parts of the cerebral cortex; some, like Flechsig, hold that each part has a different structure, so that an accomplished histologist to whom a section of the cortex is presented is able to tell at once to what region it belongs; while others, like Källiker, Bechteren, etc., affirm that the differences of structure are secondary and very slight.

Dr. Risien Russell, investigating the origin and destination of certain afferent and efferent tracts in the medulla oblongata, has become satisfied, using the degeneration method, that while paths derived from the spinal cord can be traced directly to the cerebellum, no direct path can be traced from the cerebellum to the spinal cord. There is, however, an indirect path which was formerly regarded as a sensory tract passing from the medulla oblongata to the cerebellum, but which is in reality a path from the cerebellum to the special group of nerve cells in the medulla called Deiter's nucleus; from this another tract of fibers originates which can be traced throughout the whole length of the spinal cord, and which becomes connected with the anterior cornu of the same side, and to a less extent with that of the opposite side.

Researches have been prosecuted by Signor L. M. Patrizi for the verification in the vascular domain of the general law of reflexes; for the less vague determination than those usually made of the latent period of the vascular reactions in the three regions of the arm, leg, and brain while awake and during sleep; and for the measure of the influence of the quality of the excitation on the duration and intensity of the vascular movement. The results of more than a thousand experiments are given in the author's paper. The duration (latent period) is estimated from the number of pulsations interposed between the beginning of the excitation and the beginning of the rise or descent of the curve as related to the abscissa. It is almost impossible always to determine at what phase of a pulsation the volumetric change occurs; but with the technical resources provided by the author the beginning of the excitation could be fixed on the course of a sphygmograph. The seat of the excitation appeared to remain not without influence on the velocity of reflexion. The latent time of the local reflex was for the arm 2'45"; and the figures of the irradiate reflexes (symmetrical or crossed) are more than half a second superior to this. All the irradiate vascular reflexes are slower than the localized reflex; but there was no good ground for assuming different durations for the different irradiate reflexes. A constantly and notably shorter duration was established in the reflexes of the arm than of the leg. There are few data on the latent excitation of the vascular reflexes of the brain in a waking state, because of the innumerable influences which in this state complicate the investigation. Some observations nevertheless permit the author to conclude that the vascular reaction of the brain (when it is active, of course) is no more prompt than that of the arm, and this notwithstanding the distal location is shorter in the cephalic region. Pertinently to this, the author remarks upon the slowness of the contraction of the vessels proper of the brain, in view of the importance this fact may acquire in the discussion of the new doc-

trine of the emotions. Certain observations have been made expressly to demonstrate the inhibition imposed by psychic activity upon the vascular reflexes, and the conclusion is reached that these reflexes behave just like the reflexes of the striated muscles. The results of the studies of the cerebral movements during sleep are, according to the author, very favorable to the hypothesis of the active character of many of these movements. The duration of the vasomotor reflexes of the brain in sleep is very long, and that of the arm is twice the duration in the waking condition; but that of the leg continues nearly invariable. Signor Patrizi concludes that the depth of sleep diminishes progressively from the brain to the extremity of the nervous axis. He, however, suggests, without adopting them, other hypotheses. Reflexes to excitation of the special senses are of longer duration than those provoked by mere sensitive excitation. Gustatory and visual reflexes are more rapid than those of other sensorial excitations. From this fact the author believes that different types of vasomotors—visual and gustatory vasomotors, for instance—might be established.

The influence of reagents on the electrical excitability of isolated nerve has been studied by A. D. Waller, who, severing the nerve from its connections with the muscle, put one end of it in connection with the galvanometer and exposed the other end to the electric current. At each electric excitation of the nerve a change was produced which was marked by a deviation of the needle of the galvanometer, equal excitations producing equal deviations. Various gases were introduced into the humid chamber containing the section of nerve, in order to ascertain whether they exerted any influence on its electrical excitability, particularly alcohol, ether, chloroform, and carbonic acid. These substances, when introduced in suitable proportions, exhibited two phases in their action. They were at first excitant, increasing the deviations of the galvanometer at each electrical excitation, and afterward exhibited a depressing effect, diminishing or even preventing for a longer or shorter period the movements of the needle. The nerve, when this took place, ceased to respond to the electrical excitation and seemed dead; but on aerating the humid chamber the nerve gradually resumed its excitability. Chloroform produced a very brief exultant effect and a considerable depression; with ether the depression was less marked and was less toxic, in the sense that the nerve was able to recover its properties, which was not always the case when it was exposed to the vapors of chloroform, from which the author draws an argument in favor of the use of ether rather than of chloroform in surgical anaesthesia. In his opinion the fatal accidents produced by chloroform are not owing to its impurity, but to its toxic properties. When it was suggested to the author, as an objection to his conclusions, that the nerve experimented upon might have been so modified by the reagents so as no longer to react as living matter, he replied that he supposed the functional alteration probably depended upon some visible or invisible physicochemical alteration.

A research on the influence of the cerebral cortex on the larynx has been described by Dr. Risien Russell, the object of which was to show to what extent and in what degrees the various laryngeal movements are represented in the cerebral cortex. The result, broadly stated, has been to differentiate centers, stimulation of which causes abduction of the vocal cords.

From his investigation into the segmental representations of movements in the lumbar region of the mammalian spinal cord Dr. Page May draws

the conclusions that any reflex center derives its chief afferent impulse from a nerve root entering the cord, as a rule, about two segments higher; that the fibers of the postero-external column are arranged in a definite order from within outward, the innermost representing the most distal part of the tail; and that stimulation of anterior roots in the dog produces extension, of the posterior roots flexion of the limb as a resultant movement.

The application of bile or of a solution of biliary salts by M. C. Delezenne to the brain of certain animals (cat, dog, rabbit, rat, and guinea pig) caused cerebral phenomena which varied with the animals, but were generally characterized by convulsions and loss of consciousness, accompanied by salivation.

For the investigation of the composition of the cerebro-spinal fluid, Dr. E. Nawratski, of Dalldorf, used the fluid drawn from the subarachnoid space of a calf. It was limpid, of slightly saline taste, feebly alkaline, became opalescent on boiling, and contained no flocculi or coagula; but under the microscope isolated red and white corpuscles were frequently visible. The result of the author's tests was, contrary to the results obtained by Hoppe Seyler and Ransom, the determination of a substance present in health, which in all its properties agrees with grape sugar. The percentage amount is smaller than that in blood, and varies in different classes of the animal kingdom from one tenth part to two tenth parts per cent. Pyrocatechin is entirely absent.

Special Senses.—In a study of the perception of the direction and distance of sound, Dr. Albert A. Gray, of Glasgow, considered how far the difference of phase with which a sound affects the two ears simultaneously may aid in judging its direction in the light of his own experiments and of the discoveries of Prof. Sylvanus P. Thompson. The author's experiments upon the tympanic membrane showed that pressure of the chain of ossicles of one ear inward caused the opposite ear to hear a sound more loudly. This peculiar fact was shown to be due, in all probability, to a reflex starting from the labyrinth of the first ear, and passing to the *tensor tympani* or *stapedius* or (more probably) both these muscles of the opposite ear near which the sound was produced. Thus the muscular systems of the two ears are in connection with one another. As a positive phase of the sound wave will relax the *tensor tympani* and render the *stapedius* tense, and the negative phase will produce the reverse effect, it is evident that by means of the muscular sense we may be able to estimate the phase of a sound wave in each ear, and by comparing them both be able to localize roughly the direction of a sound.

The conclusions drawn by Dr. James Kerr Love from his studies of the transmission of deafness are that congenital deafness is hereditary in the direct line, or it may be the expression of a tendency which has been seen only in the collateral branches of a family. The anatomical lesions on which deafness depends are not one, but many. The intermarriage of the deaf, therefore, only perpetuates, without accentuating, the tendency. In Great Britain the tendency to have deaf progeny is about the same whether one or both parents were congenitally deaf. Adventitious or acquired deafness, ending in mutism, is usually not hereditary. The hearing brothers and sisters of a congenitally deaf-mute are as liable when they marry to have deaf progeny as the deaf themselves. Consanguinity of the parents emphasizes family defects in the children, and many cases of congenital deafness arise in this way.

Describing in the Royal Society his investigation of the sensitiveness of the retina to light and color,

Capt. W de W. Abney treated first of the extinction of the sensation of light in the retina. With an apparatus which he described he found that the smaller the spot of illuminated surface the less reduction in intensity of the light is required, and that the amount of reduction of the light falling on the spot which produces just no sensation of light is connected with the size of the spot by a simple formula, $I = X^m$, where I is the intensity and X the diameter of the spot. Further, he found that it is the smallest diameter that governs the necessary reduction in intensity, and not the area of the illuminated surface. The extinction of light at other parts of the retina obeys the same law. Since a large and small area having the same actual illumination appear to be of different brightness, an investigation was made of the relative luminosities of the two, and it was found that they were connected by a very simple law. The reduction of the intensity of a colored ray to extinguish all color was next measured with areas of different dimensions, and it was shown that again the intensity of the reduced light was connected with the size of the spot by a simple expression similar to that of the extinction of all light; but the exponential coefficient differed, indicating that light and color are not connected in the manner which might be expected. The author found that all color fields are of the same form, the extent depending solely upon the illumination and the areas of the surface image that falls on the retina; and that there is a connection between the intensity of the color and the extent of the field which can be expressed by a formula, as can also the connection between the size of the spot of illuminated surface and the extent of field. Curves of illumination were found for equal color fields, and curves of extent of field for every color in the prismatic spectrum. Examining into the relative sensitiveness to light of different points in the retina, the author found that there are "iso-lumes," or fields of equal sensitiveness, which appear to be of the same form as the color fields. The author admitted that there are difficulties in reconciling these results with either the Young or the Helmholtz theory of color vision, and suggested a modification in the accepted theory of light and color which may explain the connection between the two.

A. Charpentier has undertaken to show that the optic nerve may be the seat of vibrations—a phenomenon which should be distinguished from the phenomena studied by Young, Shedford, and Bidwell, in which a luminous sensation, once produced, reappears once or twice after an interval of about one fifth of a second. This is simply a case of recurrent images, while the retinal oscillations now in question are rhythmical and have an average frequency of 36 per second. These oscillations are propagated both radially and in a circular direction simultaneously. Experiments proving and illustrating the phenomena are cited in the author's paper.

Miscellaneous.—The best method of giving instruction in anatomy was discussed at the annual meeting of the British Medical Association in Montreal, when it was generally agreed that dissection is of the highest practical importance, and that familiarity with topographical anatomy could hardly be pushed too far; but that the advantages to be derived from lectures and various accessory means of instruction ought not to be neglected. It was pointed out that a well-thought-out scheme of lectures should supply the learner with facts derived from comparative anatomy and from histology which should enable him to gain a clearer conception than can be obtained from text-books of the structure, use, and fitness of the several parts and

organs of the body, and, so far as is known, the reasons for the existing conditions. A good course of instruction should also include the exhibition of accurate diagrams and lantern slides, carefully made models, dissected and frozen sections, and the mapping out upon the skin of the disposition of the parts in different regions by means of colored pencils.

In an elaborate study of the function of lecithin in plants, M. Jules Stoklasa finds that phosphorus performs its principal physiological work in vegetation under the form of that substance. All the lecithin in the seed appears to be localized in the embryo, while the albumen (endosperm) contains only a very small quantity. The lecithin contained in the embryo is of service at the very beginning of life, in the formation of chlorophyll under the influence of solar radiation. During the growth of the plant the phosphoric acid assimilated by the root passes into an organic form, chiefly lecithin and nuclein. The production of lecithin in the organism takes place in the leaves, which contain about 40 per cent. of phosphoric acid under the form of this substance. The author has further discovered that chlorophyll is lecithin in which the fatty acids are substituted for chlorophyllanic acid, and calls the compound chlorolecithin. It contains 3.37 per cent. of phosphorus. Lecithin, moreover, has an important place in the plant organism during fecundation. An interesting study was made of the flower, from which it resulted that this substance is removed as soon as the condition of florescence begins from the leaves to the flower. But lecithin continues to develop in the leaves till the seed is formed. It accumulates in the corolla and migrates into the stamens. We should therefore regard the corolla as a reservoir of lecithin for the stamens, in which it fulfills an important physiological function. In the stamens the anthers and pollen appear to be richest in lecithin, the pollen grains containing as much as 8 per cent. of it. This is a new proof of the chemical analogy between the vegetable and animal cells. After fecundation the lecithin is localized in the fruit, where a certain quantity is seated in the embryo, and another part assists in the formation of other substances containing phosphorus in an organic form. After the formation of the fruit the lecithin disappears with the chlorophyll, while xanthophyll takes their place, and is recognized in the yellow color of the leaves. In perennial plants the lecithin is largely localized in the root. Under the influence of solar radiation it assists in the formation of chlorophyll in the leaves. The extraordinary importance of phosphorus in the vital processes of the vegetable organism is made apparent by this study.

Seeds exposed by H. T. Brown and F. Escombe in liquid air for several hours at from -180° to -190° C., but protected by glass globes from direct contact, were found when thawed slowly to have preserved their vitality, and under appropriate conditions germinated easily and well, producing healthy plants. Experiments by Koch showed that the vitality of seeds might be preserved for a long time when they were kept in Geissler's vacuum tubes; and Giglioli has found that seeds were still active after exposure for sixteen years to pure nitrogen, chlorine, hydrogen, arseniuretted hydrogen, and nitrous-oxide gases, and after immersion for the same length of time in strong alcohol and in an alcoholic solution of bichloride of mercury. The question naturally arises, in view of such experiments, if life can be rendered latent for so long a time, where is the limit—or is there any?

In experiments on the action of light on various kinds of yeasts W. Lehmann found that exposure to the electric light (11,500-candle power) exerted

a distinctly retarding action on the multiplication of the cells. The sun's rays were, however, much more detrimental to their vitality, for after several hours' direct and uninterrupted insolation in the months of May and June, the rise in temperature being prevented by immersion in water of the agar dishes containing them, the yeast cells were destroyed. On the other hand, yeast cells kept in the dark during the same period of time, or only exposed intermittently to feeble sunshine, exhibited distinct multiplication. A microscopic examination also revealed a distinct morphological difference between the cells kept in the dark and those which had been insolated. Whereas the former presented a perfectly normal appearance, the latter looked shrunken and exhibited irregular contours, and the plasma was drawn together in heaps, chiefly in the direction of the poles of the cells.

Researches by numerous experimenters on vegetable and animal structures have demonstrated that direct communication is established between the protoplasm of neighboring cells by means of numerous threads, sometimes scattered and sometimes collected into groups. Thus, while each cell represents from some points of view an isolated microcosm having its own special organization and functions, every cell stands in direct continuity with others which it influences and by which it is influenced. Such communicating protoplasmic threads have not, however, been observed to exist in all cells.

M. Ollier has called attention in the French Academy of Sciences to the fact that osseous regeneration in man after surgical operations, for the study of which only the most limited facilities have been heretofore afforded, can now be observed by means of the Röntgen rays, by which the form and dimensions of the osseous masses in the new formation can be readily demonstrated. The exact knowledge afforded in this way of the position of diseased bone renders unnecessary the immediate amputation of the limb, since the whole of the diseased portions can be removed with precision.

From his studies of scurvy, Prof. A. E. Wright, of the British Army Medical School, Netley, has reached the conclusion that that disease is really a condition of acid intoxication. This view seems to be supported by the experiments of explorers and others who have had to contend with scurvy. Only three methods are definitely known to exert an influence in warding off and ameliorating the scorbutic condition. Each of them consists essentially in the administration of an alkaline food stuff (blood, fresh vegetables, and lime juice all come under this denomination). Each of these methods may therefore be regarded as one calculated to ward off and ameliorate a condition of acid intoxication. Fresh vegetables and lime juice are, however, very slow in their action, and Dr. Wright shows that much better remedial agents are found in alkaline salts.

The question has been raised whether life is possible without bacteria. In experiments by MM. Nuttall and Thierfelder at Berlin young Guinea pigs placed in a sterilized chamber supplied with sterilized air, and fed exclusively on sterilized milk, were in perfect health as long as they lived; and when they were killed no trace of bacteria could be found in their alimentary canals.

The results of observations by M. Loukinow on the effects of inanition on cells go to show that while the cells of various organs are diversely affected, the nutrition and multiplication of the nuclei remain comparatively unchanged, indicating that their autonomy is to a large extent retained.

The production of acid in culture media, which has long been regarded as a characteristic feature in the growth of diphtheria bacilli, has been inves-

tigated and quantitatively estimated by Dr. Max Neiser. During the first nine hours no increase was observed, but at the end of the first day a considerable number of bacilli was discovered, and a much larger number on the second day, after which no further rise was recorded. When grown in serum and then plate cultivated in agar dishes, 1,500,000 of diphtheria bacilli after six hours became 60,000,000; after nine hours, 500,000,000; and after twenty-four hours, 1,100,000,000. The growth in serum between the sixth and ninth hour after inoculation is therefore particularly prolific. The multiplication in both is much slower, only about 120,000,000 of the bacilli being found after twenty-four hours.

The experiments of Hesse, who found that cholera bacilli undergo deterioration in raw milk, and of Caro, who found that anthrax bacilli flourish in it, have been repeated and confirmed by Prof. Schottelius. He further extended his investigations to the behavior of diphtheria bacilli, which prove to find an exceptionally satisfactory material for growth and multiplication in fresh milk. Their growth, however, is not so abundant in sterilized milk, and is less strongly marked than in the ordinary broth used for cultivation purposes. The paper of Prof. Schottelius concludes with a warning against the danger attending the consumption of milk unsterilized.

From observations made in Australia on the temperature of reptiles, monotremes, and marsupials, M. A. Sutherland finds that the lowest vertebrata in heat-producing faculty resemble reptiles—to which they are analogous in several other points of organization. The temperature of platypus, for example, in cold air may fall to 24.8° C., and of the echidna to 22° C., while the temperature of echidna exposed to a hot sun rose to 36.6° C.—the temperature varying, like that of a reptile, with the temperature of the air. The temperature of marsupials is much more uniform, but may still vary several degrees with that of the external medium. In the higher vertebrata the temperature is nearly constant.

With an ergometer (a dynamometer made to write on a kymograph), exhibited by J. McKeen Cattell at the meeting of the American Physiological Society, the maximum pressure of the thumb and forefinger or the movement of a single finger could be registered and a series of movements showing fatigue could be recorded. The curves give the actual amount of work done, their height being proportional to the pressure. The instrument is proved to have advantages over Mosso's ergograph, and is used in the psychological laboratory of Columbia University to study fatigue and the effects of sensations and emotions on movements.

M. le Professeur Bouchard is impressed with the necessity, in researches on nutrition, of determining the superficial dimensions of the body, which exercise considerable influence on the chemical reactions of which the organism is the seat. The active parts are efficient in proportion to the surface. Thus, in the normal man 1 kilogramme of flesh contains 160 grammes of albumen, in the obese man 1 kilogramme of flesh contains only 70 grammes of albumen. Methods for measuring the surface of the human body are indicated in the author's notes.

Recent experiments indicate that the antitoxins are more versatile as to the toxins on which they are capable of acting than has been supposed. Antivenomous serum has been found by Dr. Calmette to be protective against the poison of scorpions, and Roux and Calmette have shown that rabbits vaccinated against rabies become capable of resisting the action of the venom of the cobra. Animals vaccinated against tetanus and anthrax,

besides these poisons, have been found in some cases capable of counteracting the effects of cobra venom. Calmette has also shown that antidiphtheria, antitetanus, anti-anthrax and anticholera serums are effective against the vegetable toxin of abrine. A distinct though slight corrective action has been found by Dr. Memmo to be possessed by antidiphtheria serum against tetanus. The experiments of Dr. Marriotti Bianchi on the action of normal serums from different sources on different bacterial toxins point in a similar direction. In his memoir Bianchi dwells especially on the evidence of the production of normal serums in some cases of protection against toxins.

PORTUGAL, a monarchy in southwestern Europe. The throne is hereditary in the family of Saxe-Coburg-Braganza. The legislative power is vested in the Cortes, consisting of a Chamber of Peers, containing 52 hereditary, 13 spiritual, and 90 life peers, and a Chamber of Deputies, containing 120 members, elected for three years by the direct vote of all citizens possessing an elementary education or an income of 500 milreis. The reigning King is Carlos I, born Sept. 28, 1863. The ministry at the beginning of 1897 consisted of the following members: President of the Council and Minister of Finance, E. R. Hintze-Ribeiro; Minister of Foreign Affairs, Luiz Pinto de Soveral; Minister of the Interior, J. F. Franco Pinto Castello Branco; Minister of Justice and Worship, A. d'Azevedo Castello Branco; Minister of War, Col. L. A. Pimentel Pinto; Minister of Marine and Colonies, Jacinto Candido da Silva; Minister of Public Works, Industry, and Commerce, Campos Henriques.

Area and Population.—Portugal has an area of 34,038 square miles. The population in 1890 was 4,660,095, consisting of 2,251,303 males and 2,408,792 females, on the continent and 389,634, consisting of 179,036 males and 210,598 females, on the islands. The number of marriages in 1896 was 30,580; of births, 143,908; of deaths, 110,332. The number of emigrants was 27,980.

Finances.—The revenue for 1895 was 43,905,093 milreis, and the expenditure 41,264,947 milreis. For 1898 the receipts are estimated at 55,105,878 milreis, of which 12,427,700 are derived from direct taxes on land, industry, houses, incomes, etc., 2,755,000 from registration, 2,231,500 from stamps, 300,000 from lotteries, 25,137,150 from indirect taxes, 1,086,000 from surtaxes, 4,813,418 from railroads, telegraphs, posts, etc., 2,830,000 from extraordinary sources, and 3,525,110 are *recettes d'ordre*. The expenditure is estimated at 55,034,844 milreis, of which 525,000 are for the civil list and appanages, 97,244 for the Cortes, 7,198,377 for interest and amortization of various debts, 1,646,780 for other expenses connected with the debt, 17,833,538 for the consolidated and terminable public debt, 500,000 for loss by exchange, 3,737,052 for the Ministry of Finance, 2,598,065 for the Ministry of the Interior, 1,034,258 for the Ministry of Justice and Worship, 5,854,320 for the Ministry of War, 4,027,331 for the Ministry of Marine and the Colonies, 379,912 for the Ministry of Foreign Affairs, 5,779,056 for the Ministry of Public Works, Commerce, and Industry, 58,920 for the savings bank, and 3,764,991 for extraordinary expenses. The capital of the consolidated 3-per-cent. debt on Oct. 30, 1895, was 527,072,362 milreis, and of the amortizable debt, bearing 4½ and 4 per cent. interest, 136,919,990 milreis, making a total of 663,992,352 milreis. The floating debt on May 31, 1897, was 36,826,421 milreis.

The Army and Navy.—Obligatory military service was introduced by the law of Sept. 27, 1895. It begins at the age of twenty and lasts three years

with the colors, five in the first reserve, and four in the second, to which are assigned also the conscripts not incorporated in the active army and those who are under size. The contingent for 1898 is 17,245 men, including 745 for the municipal guard, 1,000 for the fiscal guard, and 745 for the navy. The strength of the permanent army in 1894 was as follows: Staff, 219 officers; 72 battalions and 36 cadres, 1,256 officers and 16,798 men; 30 squadrons and 10 cadres, 283 officers and 3,952 men; 32 field batteries and 10 cadres and 16 companies of fortress artillery and 8 cadres, 285 officers and 1,860 and 1,599 men respectively; 8 companies of engineers, 4 cadres, and 1 torpedo company, 122 officers and 710 men; noncombatants, 368 officers and 739 men; total, 25,658 officers and men, with 3,985 horses. The municipal guard numbered 79 officers and 2,176 men; the fiscal guard, 116 officers and 4,791 men. The army on a war footing numbers about 4,000 officers and 150,000 men, of whom 120,000 have received military instruction. The infantry have the Kropatschek repeating rifle, the artillery 264 guns of different calibers, only a part breech-loaders.

The navy consists of an armored corvette, a cruiser of 1,893 tons, 5 corvettes, 15 gunboats, a torpedo destroyer, and 10 torpedo boats, including a submarine boat. The cruiser "Adamastor" was built in 1896, and the "Rainha Amelia," of 1,750 tons, is building. There is also the "Dom Carlos," of 4,100 tons, on the stocks, and 10 deck-protected cruisers are contemplated in the new naval programme, and 3 more armored vessels, of which one, a cruiser of 3,500 tons, has been begun.

Commerce.—The value of the imports of merchandise in 1896 was 39,530,262 milreis, and of the exports 26,142,683 milreis. The imports of precious metals were 1,284,931 milreis; exports, 3,737,192 milreis. The imports of cereals were 4,353,000 milreis; of animals, 2,472,000 milreis; of codfish, 2,270,000 milreis; of raw cotton, 2,105,000 milreis; of sugar, 1,917,000 milreis; of iron, 1,873,000 milreis; of cotton goods, 1,747,000 milreis; of coal, 1,743,000 milreis; of hides and skins, 1,154,000 milreis; of wool, 1,121,000 milreis; of rice, 791,000 milreis; of various textile fabrics, 720,000 milreis; of coffee, 684,000 milreis; of chemicals, 600,000 milreis; of oil seeds, 557,000 milreis; of machinery, 548,000 milreis; of petroleum, 515,000 milreis; of tobacco, 511,000 milreis; of barrel staves, 493,000 milreis; of timber, 479,000 milreis. The exports of wine were 10,983,000 milreis; of cork, 3,650,000 milreis; of animals, 2,519,000 milreis; of fish, 1,414,000 milreis; of copper, 1,092,000 milreis; of cotton goods, 1,085,000 milreis; of fruits, 887,000 milreis; of olive oil, 391,000 milreis.

Navigation.—There were 1,477 sailing vessels, of 305,000 tons, and 4,286 steamers, of 6,953,000 tons, entered from distant ports in 1896, and 1,428 sailing vessels, of 298,000 tons, and 4,275 steamers, of 6,974,000 tons, cleared. In the coasting trade 3,543 sailing vessels, of 205,000 tons, and 1,017 steamers, of 3,511,000 tons, were entered, and 3,511 sailing vessels, of 194,000 tons, and 1,023 steamers, of 1,070,000 tons, cleared.

The merchant navy in 1895 consisted of 51 steamers, of 41,161 tons, and 207 sailing vessels, of 47,724 tons.

Communications.—The post office in 1895 forwarded 20,492,000 internal, 7,043,000 foreign, and 549,000 transit letters, 6,357,000 internal, 305,000 foreign, and 12,000 transit postal cards, 25,500,000 internal, 4,052,000 foreign, and 312,000 transit newspapers and circulars, and 253,000 internal and 9,000 foreign money letters, of the value of 30,442,000 and 3,730,000 francs respectively.

The state telegraph lines have a length of 4,500

miles, with 9,377 miles of wire. The number of dispatches in 1894 was 1,326,414; receipts, 2,100,146 francs.

The length of railroads in 1896 was 1,524 miles. The Government owns 921 miles and grants subventions to the companies owning the rest.

Political Affairs.—The session of the Cortes in 1897 was opened on Jan. 3. An incident that had recently occurred at Laureço Marques, where the German consul, Count Pfeil, had been stoned by the populace because he and his Mohammedan servants had given offense by not uncovering their heads during a religious procession, was closed by an apology to Germany. The financial situation in Portugal was depicted in the royal speech as improving, although the high premium on gold had checked imports and so diminished the custom-house receipts. A revision of the tariff duties was projected. While professing to regard the financial and economic conditions as improving, the Cabinet of Senhor Hintze Ribeiro found itself unable to deal with the situation, and consequently resigned on Feb. 5. A new Cabinet was formed on Feb. 7 as follows: Premier and Minister of the Interior, José Luciano de Castro; Minister of Justice, Francisco da Veiga Beirao; Minister of Finance, Frederico Ressano Garcia; Minister of Marine, Henrique de Barros Gomes; Minister of Foreign Affairs, Mathias de Carvalho Vasconcellos; Minister of War, Francisco Maria da Cunha; Minister of Public Works, Augusto José da Cunha. The Cortes were immediately dissolved, and new elections were ordered to be held on April 25, so that the new Cortes could come together on June 10.

The revised budget for 1898 presented to the Cortes on June 30 showed a deficit of 2,698 contos of reis instead of the surplus of 111 contos given in the budget presented by the preceding minister six months before. The receipts were set down as 52,865, and the expenditures as 55,563 contos. The deficit was due to the premium on gold, which the late Minister of Finance had calculated at 30 per cent., but which was now reckoned at 50 per cent. The minister proposed to cover the deficit by four internal loans which would have the effect of converting it into a surplus of 132 contos. The holders of external debt were to receive the same additional interest in 1897 as in 1895. The minister had a plan for converting the external debt without appreciably increasing the actual burdens of the state. The withdrawal of the bonds of the present debt from foreign markets was deemed necessary in order to raise the credit of the country. In order to prevent the premium on gold from mounting still higher, the minister proposed to provide by a financial operation for necessary payments in gold abroad and for the liquidation of the debt due to the Bank of Portugal, thus enabling this establishment to reduce its paper circulation and to increase its metallic reserve. The Government did not intend to increase the existing duties or to impose any new ones. The proposals for putting the finances on a sounder basis, besides the conversion of the external debt and the reorganization of the Bank of Portugal, included the leasing of the state railroads and the establishment of a monopoly of the manufacture of beet-root sugar. A company was formed for the purpose of taking over the Minho and Douro and the Southern Railroads under a seventy-five years' lease. Measures were brought in granting Government support to companies for the cultivation of waste lands, for the extension of the wine exports by the selection of types of wines and the preservation of the standard, and for extending the cultivation of wheat so as to make Portugal independent of foreign supplies.

The Progressist ministry submitted a project for

the reform of the House of Peers. A drastic press bill, inflicting severe penalties for disrespectful language toward the Portuguese royal family or toward sovereigns or chiefs of foreign states, and empowering the ministers to prohibit the introduction of foreign newspapers into Portugal, failed to pass. Of twelve ministerial measures only three were adopted before the closure of the Cortes on Sept. 3. These dealt with the reform of the Bank of Portugal, pensions and retiring allowances, and contracts for public works. The House of Peers had not yet sanctioned a measure extending the privileges of the Tobacco Company. After the Cortes reassembled in November Senhor de Carvalho resigned, in consequence of which Senhor Barros Gomez became Minister of Foreign Affairs and Senhor Diaz Costa Minister of Marine.

In 1888, after recognizing Portugal's rights to the island of Macao at the entrance of the Gulf of Canton by a treaty signed in the previous year, the Chinese Government erected a guardhouse on the dependent island of Dom João and stationed a garrison there. In 1896 Portugal as a warning stationed a battalion there, and in April, 1897, a Portuguese plenipotentiary had a conference with the Viceroy of Canton, which resulted in an agreement to remove both garrisons and return to the *status quo* existing before 1888. A treaty of commerce between Portugal and Japan was signed at Lisbon on Aug. 30. Several other commercial treaties were under discussion.

PRESBYTERIANS. I. Presbyterian Church in the United States of America (Northern).—

The following is the summary of the statistics of this Church as reported to the General Assembly in May: Number of synods, 32; of presbyteries, 229; of ministers, 7,129; of candidates, 1,433; of local evangelists, 157; of licentiates, 477; of churches, 7,631; of communicants, 960,911; of members of Sabbath schools, 1,024,462; of elders, 27,874; of deacons, 9,551; of churches organized during the year, 162; of members added on examination, 57,011; of baptisms, 21,596 of adults and 32,956 of infants. Amount of contributions: For home missions, \$1,042,768; for foreign missions, \$631,459; for education, \$100,231; for Sabbath-school work, \$121,808; for church erection, \$124,873; for the Relief fund, \$85,429; for the freedmen, \$105,498; for synodical aid, \$71,515; for aid for colleges, \$109,272; for the Anniversary Reunion fund, \$57,391; for the General Assembly, etc., \$187,660; congregational, \$9,980,958; miscellaneous, \$729,151. The year's increase in communicants was 17,195.

The contributions for ministerial relief had been \$160,856, being \$11,000 less than in 1896. The debt of the board was \$20,911. The permanent fund amounted to \$1,551,783. Eight hundred and thirty-five families had been under the care of the board, being a larger number than in any previous year. Among the persons receiving aid were 95 honorably retired veterans, each more than seventy years of age, who had served the Presbyterian Church as pastor, stated supply, or missionary in the aggregate more than thirty years.

The Board of Education had received \$78,657, including \$2,225 from the Anniversary Reunion fund. Nine hundred and eleven candidates had been under its care. The board had tried to make effective, through recommendations to the several educational committees and to teachers in the institutions where candidates were pursuing their studies, the admonition given by the General Assembly of 1896 to presbyteries to exercise all due care and watchfulness in the recommending of candidates.

The Board of Aid for Colleges and Academies had received \$95,751. By reducing administrative

expenses nearly 22 per cent. and by means of generous gifts made near the close of the year, it had been able to pay all appropriations voted.

The income of the Board of Church Erection had been \$115,737. The appropriations and gifts had been distributed among 25 synods, 104 presbyteries, and 31 States or Territories. The largest sum had been assigned to Indian Territory and Iowa; then, successively, Minnesota, Indiana, Missouri, and Washington, etc.

The total receipts of the Board of Publication and Sabbath-School Work had been \$113,811. The falling off in contributions from churches, Sabbath schools, and individuals was \$1,429, or less than the amount anticipated, and the total reduction was \$5,356. The business department showed profits of \$26,367, two thirds of which, or \$17,578, had been passed over to the Sunday-school and missionary department. The missionary department had distributed 163 free libraries, containing 14,057 volumes. The missionaries had organized 938 new Sabbath schools, and 3,894 Sabbath schools had been visited and otherwise aided, most of them being such as had been organized by the missionaries.

The Board of Freedmen's Relief had expended \$182,292, an increase of not quite \$10,000 over the previous year. It returned 175 ministers, 5 less than in 1896; 321 churches and missions, an increase of 7; 1,800 members added on examination, or 174 less than the previous year; 18,068 communicants, a decrease of 693; 315 Sunday schools, with 79,021 pupils, a decrease of 603; and 67 day schools, with 204 teachers and 9,442 pupils.

The receipts of the Board of Home Missions had steadily fallen off since 1893, and were for the past year, exclusive of what was received from the Memorial fund, \$730,000. A reduction of 10 per cent. had been made during the year in expenditures. The board returned 1,416 missionaries, 308 missionary teachers, 87,035 members, 106,368 in congregations, 8,522 added on profession of faith, 4,010 baptisms of adults and 4,637 of infants, 271 Sunday schools organized, 2,180 Sunday schools in all, with more than 129,800 members, 53 churches organized and 16 churches become self-sustaining, 81 church edifices built during the year, and 1,617 church edifices in all, valued at \$3,176,917.

The receipts of the Woman's Executive Committee of Home Missions had been \$333,899. Of the 29 synods, 19 had made advance. The debt of \$105,000 with which the year opened had been reduced to \$9,649. The buildings and equipment of the committee were valued at \$742,000. The receipts for freedmen's work had been \$41,746, somewhat less than in 1896. The negro people had contributed \$70,017 for support of Presbyterian churches and schools.

The Board of Foreign Missions had received \$869,057, of which \$299,115 had been contributed through the woman's societies, \$28,369 through the Sabbath schools, and \$25,679 through the Young People's Societies. Its expenditures had been \$936,061.

General Assembly.—The General Assembly met at Winona Park, Ind., May 20. The Rev. Sheldon Jackson, D. D., was chosen moderator, and the Hon. John Wanamaker vice-moderator. The committee of eleven appointed by the previous General Assembly to examine into the subject of the "Presbyterian Building" erected in the city of New York by the Boards of Home and Foreign Missions for the accommodation of their business and for purposes of rental, reported concerning their proceedings and the conclusions they had reached. The report embodied a resolution of the General Assembly of 1894, from which it appeared that these

boards were already in possession of buildings for their offices which had been presented to the Church, and that the donors of those buildings felt aggrieved at the proposed removal from them; but the General Assembly had given its approval to the contemplated step without any complaint being made. The General Assembly of 1894 could see no adequate reason for reversing the approval of the previous Assembly and the practically unanimous judgment of the two boards concerned, and therefore approved the records of those boards relating to this subject. The matter had come up again in subsequent Assemblies, and the Assembly of 1896 (see "Annual Cyclopædia" for 1896) had appointed a committee of eleven persons to consider the subject in all its bearings. After relating the proceedings of its meetings and its examination of the buildings and the conditions, the committee gave their conclusions that "whether the property on Twentieth Street and Fifth Avenue (the 'Presbyterian Building'), as well as that at Fifth Avenue and Twelfth Street (the old building or Lenox Mansion), should be sold or not, are questions which under existing conditions may be properly and safely left to the determination of the two boards. The application of the money derived from the Stuart estate toward the erection of the new building was not an illegal use of such money. The committee advise urgent appeals to all the churches of our denomination to make not only the ordinary but increased contributions for home and foreign missionary operations, in the full confidence that under no circumstances will money given for current work be applied to the account of the new building, but that the debt thereon must be provided for by other contributions for that purpose." The Assembly resolved, on the recommendation of the committee, that the disposition of the two properties in question be left to the Boards of Home and Foreign Missions as agents of the churches; expressed its appreciation of the services and the liberality of the members of the boards and of others "in the conduct of these enterprises"; and approved the action of the committee. The Assembly further resolved that "when any board receives a legacy, the use of which is not indicated in the will of the testator, the funds shall either be used for current work or shall be invested in accordance with the laws provided for the care of trust funds in the State where the board is located; but if not so used, they shall be held until the General Assembly approves of some different use of the funds which the board may propose to make."

The special committee appointed by the previous General Assembly to confer with the Board of Home Missions respecting reductions in its expenses reported expressing the opinion that material reductions could and ought to be made in the department of administration; that division of responsibility between two or more secretaries was undesirable, and there should be but one, who should be held strictly accountable to the board, with such subordinates as might be necessary; and that increased responsibility should be put upon the treasurer by making him a member of the Executive Committee. The increase of the debt of the board was accounted for in the report as the result of financial stringency following upon large and liberal extensions of its work, to which was added the transfer of the Indian work from the Foreign to the Home Board, involving an additional outlay of \$20,000 annually, and the surrender of the appropriations of the United States Government to the Indian schools, whereby a loss of \$32,000 was annually incurred, which the Home Board was expected to supply. Upon the recommendation of the committee the Assembly resolved "that the Board of Home Mis-

sions be directed so to organize its methods of administration that the executive work shall be placed in charge of one secretary, with whatever assistants may be necessary, and that he be accountable to the board for its faithful and efficient management; that the board be directed to make at the beginning of each fiscal year an estimate of the probable income for the ensuing year, by taking the average amount received from legacies, church offerings, and other sources for a period of preceding years, and that the sum thus obtained shall be considered the available amount for the work of the board during the ensuing year; that the policy of the board shall be to avoid debt. When debt has been unavoidably incurred, then allowance shall be made for the payment of the debt, as far as possible, out of the estimated receipts; that the proposed consolidation of the treasuryships in the cities of New York and Philadelphia is inexpedient; and that this committee be enlarged by the addition of four new members, and continued, with instructions to consider the best methods of promoting harmony between the Board of Home Missions and presbyteries and synods desiring to support and control their own work, and to report upon the subject at the next General Assembly." The Committee on Theological Seminaries recommended the reaffirmation of the decision of the last Assembly concerning its control over them, and reported concerning the responses of the institutions to the Assembly's action, that the directors of Lane Seminary had replied that in the case of that institution the decision was impracticable; they had no legal or moral right to consent to the alteration of its charter. The trustees of Auburn Seminary replied that the control of the institution by the presbyteries, which had been effective for the past seventy-six years amply safeguarded its teaching and property. The reply of the Board of Directors of the McCormick Seminary reiterated its loyalty to the institutions of the Church. Its charter and constitution secured the object sought by the Assembly. Its property and teaching are fully safeguarded, and it might be hazardous both to the seminary and the Assembly to make the requested changes. The directors of the German Theological Seminary, Newark, N. J., declined to make the changes sought. The Assembly declared that it accepted as sincere the repeated, positive, and explicit declarations of these seminaries that they are loyal to the Church and that their teachings and properties are in their judgment fully safeguarded to the General Assembly; but, the resolution continued, "if at any time in the future these seminaries should find that the changes could be made in their respective charters as the General Assembly has desired, it would be gratifying to the whole Church to have such changes made." The Assembly affirmed as applicable to all schools the deliverance of the General Assembly of 1806 concerning students who receive aid from the presbyteries, viz., that the presbyteries inspect their education during the course of their theological studies, choosing for them such schools, seminaries, and teachers as they may judge most proper and advantageous, so as eventually to bring them into the ministry well furnished for their work. The several synods were recommended to consider, and if it be deemed advisable and practicable, "to prepare, adopt, and set forth for use in each respective State and Territory such form of charter of the Presbyterian Church, and such provisions to be inserted in wills and in deeds of lands to Presbyterian churches as will safeguard and secure the property of our churches to this denomination, and be in accordance with the form of government of the Presbyterian Church." The Assembly declared itself ready for a union

movement with the Southern Presbyterian Church "as soon as the Lord in his providence shall open the way." Satisfaction was expressed at the action of various press and editorial associations expressing sympathy with the woman's movement for promoting purity in literature and art, and pledging themselves to the exclusion of impure matter from their journals. A committee was appointed on synodical sustentation, to report to the next General Assembly. It was decided to celebrate the two hundred and fiftieth anniversary of the adoption of the Westminster Standards on the second Thursday of the next Assembly, and the synods were also urged to celebrate. A resolution was adopted appropriate to the birthday of Queen Victoria of England and the sixtieth anniversary of her reign, sending the Assembly's "most cordial Christian greetings to both the illustrious Queen and the subjects of her gentle, generous, and righteous rule of the destinies of the empire, on which the sun never sets." The Assembly reaffirmed its deep interest in all legislation by which the cause of temperance and morality are wisely furthered, and commended the efforts of Christian men in the State and Federal legislatures to safeguard social purity and prevent the maintenance of liquor saloons in any Government building. It also recognized the personal duty of total abstinence and the advocacy of temperance, advised the synods to take measures to promote those objects, and appointed the third Sunday in October of each year, or some other convenient day, to be observed in the churches as Temperance Day.

II. Presbyterian Church in the United States (Southern).—The summary of the statistics of this Church, as reported to the General Assembly in May, 1897, gives the following footings: Number of synods, 13; of presbyteries, 77; of ministers, 1,393; of candidates, 378; of licentiates, 90; of churches, 2,816; of communicants, 211,694; of baptized noncommunicants, 37,386; of ruling elders, 8,719; of deacons, 7,279; of teachers in Sunday schools, 19,397; of pupils in the same, 143,498; of churches organized during the year, 60; of members added on examination, 10,592; of baptisms, 4,246 of adults and 5,050 of infants. Amounts of contributions: For the Assembly's home missions, \$24,022; local evangelistic, \$99,249; for the Invalid fund, \$12,572; for foreign missions, \$122,024; for education, \$51,212; for publication, \$7,322; for colored evangelization, \$9,276; for the Bible cause, \$5,391; presbyterial, \$15,435; for pastors' salaries, \$797,475; congregational, \$564,108; miscellaneous, \$124,714.

The increase in the number of communicants (1,155) shown in the tables is very small as compared with the number of additions on examination. The editor of the "Christian Observer," apprehending error, has gone over some of the presbyterial reports in detail, and has found that mistakes in adding up the communicants in a few of them have made the total smaller than it should be by about 3,000.

The treasurer's report of the Executive Committee on Publication showed that the assets of the publishing house amounted to \$108,246. The receipts from churches during the year had been \$6,379, and the total receipts \$39,124. The year closed with a balance in the treasury of \$3,175. Eighteen new works had been published during the year, and large editions of other works issued. Series of topics of study for the use of the Westminster League of Young People's Societies and a supplemental course of study for Sunday schools had been published, the latter developing more fully the denominational doctrines and principles

of government; five colporteurs had visited 5,158 families and distributed books and tracts to the amount of \$3,291, the expense of their operations being \$2,371; and \$6,896 had been applied to benevolent work.

The Executive Committee of Home Missions returned the entire sum of which they had had control during the year as having been \$50,541, or \$917 less than the amount in the previous year. Of this sum, \$9,560 had been used for the expenses of administration, and \$42,046 paid out for the support of the several branches of the work, leaving a balance of \$3,035. Two ministers and 1 church building had been aided in New Mexico, 2 ministers supported and a Bible training school assisted among the Mexicans in Texas, 98 ministers and teachers had received appropriations in Arkansas, Florida, Texas, and the Indian Territory, and 8 church buildings had been aided. The work among the Mexicans in Texas had increased in five years from 1 church of 50 members to 6 churches with 300 members, more than 40 of whom had been received during the year, and with 3 young men in training for the ministry. The condition of the work among the Indians—especially of the school work—was regarded as encouraging. Thirty-seven infirm ministers had been aided out of the Invalid fund.

The Executive Committee of Foreign Missions reported that its receipts for the year from all sources had been \$143,742, or \$1,782 more than those of the previous year, and its disbursements \$154,406, or \$13,173 more than those of the previous year and \$10,664 more than the present year's receipts. A balance in the treasury of \$10,223 was returned on April 1, 1897. In ten years the missionary force had been increased from 54 to 150, and the annual receipts from \$84,000 to \$143,000. The average cost of the work per missionary for ten years had been about \$1,250 a year. This included traveling expenses, rents, medicines, books, tracts, and other appliances used in the work. For the past three years the limit of expense had been kept by various economies at about \$1,000. Eleven new missionaries had been sent out during the year—viz., 5 to China, 1 to Japan, 3 to northern Brazil, 2 to the Congo Free State—and 3 ladies had been added by marriage to the missionary force in China and Japan. Three missionaries had died and 3 had returned to the United States on account of ill health.

The missions were established at 36 stations, with 36 churches, and returned 150 missionaries from the United States, 58 of whom were ordained ministers, 36 native preachers, 98 other native helpers, and 3,156 communicant members—viz., 281 in China, 834 in southern Brazil, 550 in northern Brazil, 678 in Mexico, 720 in Japan, and 93 in the Congo, with no report of members from Korea but 10 additions during the year mentioned; 76 Sabbath schools, with 1,215 pupils; 25 day schools, with 726 pupils; 38,219 persons given medical aid; and native contributions amounting to \$4,760.

General Assembly.—The General Assembly met in Charlotte, N. C., May 20. The Rev. George T. Goethius, of Rome, Ga., was chosen moderator. An overture concerning women speaking in the churches was the subject of debate for the greater part of one of the earlier days of the session. It involved two questions—whether the pulpits of the Church might be occupied by women to lecture or make addresses to mixed audiences of men and women; and whether ministers might read from their pulpits notices of such lectures and addresses to be made in other churches. The Assembly replied, referring the presbytery sending up the overture "to the clear deliverance of former Assemblies which settle the principles involved in its overture,

and should govern our Church sessions in their proceedings, 'inserting the dates of the various deliverances referred to, and citing verbally the deliverance of 1832, viz.: meetings of "pious women by themselves for conversation and prayer, whenever they can conveniently be held, we entirely approve. But let not the inspired prohibition of the great apostle of the gentiles as found in his Epistles to the Corinthians and to Timothy be violated. To teach and exhort or to lead in prayer in public and promiscuous assemblies is clearly forbidden to women in the holy oracles." A letter was presented from representatives of the Prohibition party in North Carolina, asking the Assembly to make a declaration concerning the prohibition of the manufacture and sale of intoxicating liquors, to which the Assembly respectfully replied that "alike by uniform practice and constitution we are forbidden to intermeddle with political parties or questions, and that the constant and scriptural attitude of our beloved Church on temperance and intemperance is shown in past deliverances as recorded in Alexander's Digest, . . . and is too well known to require restatement." This action was afterward qualified by the adoption of a resolution explaining that the Assembly "is not to be considered as intending to commit the Church as to the political theory of prohibition, either *pro* or *con*." The report of the standing Committee on Colored Evangelization referred to embarrassments it had had to meet in the prosecution of its duties, notwithstanding which faithful and efficient work had been done with the means at command. Under its auspices colored people had "been wisely educated and sent out into the field as good teachers of the Word of God." On account of straitness of resources it had been necessary to close the academic department of Stillman Institute, but the committee suggested that the Assembly direct it to be opened so soon as the way should be clear. The report of the labors of the evangelist who had been sent out among the colored people showed good work done. A full correspondence with the colored ministers of the Church showed that 33 out of 55 of them were desirous of a separate church organization, 6 were opposed to it, 3 were doubtful, and 11 had not been heard from. It was understood to be the intention of the independent presbyteries to call a meeting at an early day for the purpose of organizing a colored Presbyterian church. The committee therefore recommended that should these presbyteries call a meeting for the organization of such a church, the Executive Committee of Colored Evangelization be directed to confer with them in fixing the time and place for it; and that the Assembly authorize any of its presbyteries, or ministers and churches on consent of their presbyteries, to withdraw on their own motion from its jurisdiction and join the new Church. These recommendations were adopted, and a committee was appointed to represent the Church fraternally on the consummation of the contemplated measure. The Assembly reiterated its settled principle not to assume the whole support of any student candidate for the ministry, but only to give such aid as would assist him in the prosecution of his studies and prevent his discontinuing them. Presbyteries recommending candidates and the Executive Committee of Education were advised to guide themselves in the light of this rule. The ladies' societies and Sabbath schools were invited to contribute to this cause. To two questions brought before it on overtures from presbyteries, the Assembly answered that one elder, when there is "only one in the church, constitutes its session and is competent to do the work of the session"; and "that a church without officers is entitled to be enrolled." Officers and

members were advised "to abstain from assisting in any way the desecration of the Sabbath day by offering news or reports for either Sunday or Monday papers." The Home and Training School at Fredericksburg, Va., reported that the expenditures on its behalf during the past year had exceeded its income, and it appeared that the institution was suffering on account of objections to its connection with Fredericksburg College. The Assembly directed that the connection between the two institutions be severed; that the college property be disposed of so as to relieve the Assembly from all responsibility for the ownership, conduct, and support of the institution; and that as soon as the Board of Trustees should ascertain the exact amount of indebtedness resting upon the Home and Training School or incurred in the conduct of it, they be authorized to make a direct appeal to the churches to liquidate this indebtedness; and a day was appointed for taking a collection for the school. The report of the Committee of Foreign Correspondence expressed the belief that organic union with the Reformed Church in America was devoutly to be desired, if it could be effected on terms agreed upon by both bodies, which would insure an efficiency greater than that now existing in the two churches apart. A committee was appointed to prepare a plan for the establishment, "at some convenient center, in a salubrious climate, and where living is cheap," of a summer school for Bible study. The "report on the narrative" represented that "there had been a marked growth in grace; a reverent fidelity on the part of the people in laboring in church, in Sabbath school, and in mission work"; and a deepening in the "spiritual life of the people as evidenced in their contributions. Almost every local narrative emphasized a decrease in intemperance and worldly amusements. Anxiety was expressed with regard to the attitude of the people toward Sabbath observance. "It is an unquestioned fact that some of our members do not observe the Sabbath as they ought; the day is being more and more secularized"; and the suggestion was offered that the time had come for special preaching on the subject.

The two hundred and fiftieth anniversary of the Westminster Assembly and the adoption of the catechism was celebrated by special services held in the Assembly from time to time during its meetings, at which addresses were delivered, on "The Social and Political Conditions of Great Britain at the Time of the Westminster Assembly," by the Rev. H. A. White, D. D.; "The Religious Situation of Britain at the Time," by the Rev. Robert Price, D. D.; "The Place of Meeting of the Assembly: Its Proceedings and its *Personnel*," by the Rev. T. D. Witherspoon, D. D.; "The Doctrine and Contents of the Confession: Its Fundamental and Regulative Principles, together with the Nature and Necessity of Religious Creeds," by the Rev. R. L. Dabney, D. D.; "The Nature, Value, and Utility of the Catechisms," by the Rev. G. B. Strickler, D. D.; "The Influence exerted by the Westminster Symbols upon the Individual, the Family, and Society," by the Rev. J. F. Cannon, D. D.; "Polity and Worship—emphasizing their Relation to Doctrine," by the Rev. Eugene Daniel, D. D.; "The Churches that hold the Westminster Symbols, and the Reformed Churches generally," by the Rev. J. D. Tadlock, D. D.; "The Westminster Symbols in their Relation to and Influence upon the Missionary Character and Activities of the Church," by the Rev. Moses D. Hoge, D. D.; "The Westminster Symbols considered in Relation to Current Popular Theology and the Needs of the Future," by the Rev. Samuel L. Smith, D. D.; and "The Influence of the Westminster System of Doctrine, Worship, and Polity on Civil

Liberty and Responsible Government," by the Hon. W. M. Cox.

Colored Presbyterian Church.—A convention for the organization of a colored Presbyterian church was held in Birmingham, Ala., in the latter days of November. Three independent presbyteries and two presbyteries still under the jurisdiction of the Southern General Assembly were represented by delegates. A fourth independent presbytery had appointed a delegate, but he was not present. The convention expressed its sense by resolution, "that a separate, self-supporting, self-governing Presbyterian church for the colored people should be organized at the earliest day consistent with stability and efficiency," and the conviction "that the desired day is at hand." All the colored presbyteries were invited to send commissioners to a meeting to be held in New Orleans on the third Tuesday of May, 1898, for the purpose of perfecting the organization. The convention gave as considerations moving it to this action that the General Assembly (Southern) had given its assurance that its financial help and hearty co-operation would be accorded to the movement, an assurance that was received in all good faith and thankfulness; and "that to place as far as possible the control of all business necessary to the life and growth of the organization in the hands of colored men will conduce largely to the growth of Presbyterianism among our race."

III. United Presbyterian Church in North America.—The following is the summary of the statistics of this Church as they were reported to the General Assembly in May: Number of synods, 12; of presbyteries, 65; of ministers, 892, or 17 more than in 1896; of licentiates, 89; of students in theology, 101; of ministers ordained, 31; of ruling elders, 3,763; of congregations, 950; of pastoral charges, 801; of congregations organized, 13; of mission stations, 311; of new mission stations during the year, 15; of houses of worship erected, 18, at a total cost of \$128,206, and an average cost of \$7,123; of parsonages, 311; of parsonages erected during the year, 14; of members in America, 111,618; of members in the whole Church, 123,541, showing an increase of 2,156 in America and of 2,688 in the whole Church; of members received on profession, 6,917 in America and 7,811 in the whole Church; of baptisms, 3,455 of infants and 1,483 of adults in America, and 4,242 of infants and 1,789 of adults in the whole Church; of Sabbath schools, 1,148, with 11,882 officers and teachers and 111,361 pupils; of Young Peoples' Societies, 990, with 40,528 members. Amount of contributions (in America): For salaries of ministers, \$588,525; for congregational purposes, \$422,242; for the boards, \$240,245; for general purposes, \$125,113; total for America, \$1,377,125; total for the whole Church, \$1,394,138; included in this amount are \$85,568 contributed through the Sabbath schools and \$40,528 through the Young People's Societies.

The total receipts for the Board of Home Missions for the year were \$77,227, and the expenditures (ordinary outlay for the work) \$74,616. While the receipts were larger than in any previous year except 1892, and the debt had been reduced to \$10,401, the debt still remained at so high a figure as to cause serious embarrassment, and nothing had been done to replace the exhausted reserve fund. Two hundred and six stations had been aided during the year, and returned 14,670 communicants and 18,482 pupils in Sabbath schools. Twenty-eight stations had been in the special care of the board. An agreement had been entered into with the Board of Home Missions of the Associate Reformed Synod of the South to join in the support of the mission of that Church in Louisville, Ky. A mission to the

Warm Springs Indians had been supported entirely by the Woman's Board.

The receipts of the Board of Ministerial Relief were \$28,327, and the payments \$23,758, of which \$11,195 were to beneficiaries and \$12,250 on account of investments. The endowment fund amounted to \$104,350. Seventy persons were aided. The total receipts from presbyteries had been only \$4,077.

The fourteenth annual meeting of the Women's General Missionary Society was held at Indianola, Iowa, May 11. The financial reports showed a decrease of \$166 in the contributions for the foreign department and of \$19 in those for ministerial relief, an increase of \$446 in those for the home department, of \$105 in those for the Church Extension and Parsonage fund, and of \$227 in those for the freedmen's department. The amount of contributions for the foreign department was \$23,491, of which more than \$5,000 were for the endowment of beds in the Good Samaritan Hospital, at Jhelum, India; the expenditures in the same department had been \$27,899. In the freedmen's department an agricultural experiment made a year before had yielded an income equivalent to 10 per cent. interest. The expenditure in the home department had been \$7,693. The Woman's Board of Missions has been given by the General Assembly the work of the entire support of unmarried woman missionaries in foreign fields, the support of woman medical missionaries and their work in Egypt and India, the work among the Warm Springs Indians, the support of woman industrial teachers and their work among the freedmen, the agricultural and industrial work in Alabama, the parsonage and part of the Church extension work; and it aids in erecting buildings for training schools and teachers' houses among the freedmen. Twenty-nine single women were supported in Egypt and India, 18 home-mission workers in various parts of the United States, and 17 teachers in the freedmen's missions.

General Assembly.—The thirty-fifth General Assembly met in Rock Island, Ill., May 20. The Rev. Thomas H. Hanna, D. D., was chosen moderator. The committees on union with the Holland Christian Reformed Church and with the Associate Reformed Synod of the South reported that no progress had been made in the negotiations during the year, but that it was expedient to continue the committees. The plan of co-operation with the Associate Reformed Synod adopted in 1896 had worked so well that it was judged to be better that the direct negotiations for union be held in abeyance. The Committee on Federation of the Churches reported that no meeting had been held during the year, and that, because of the failure of some of the churches to adopt the basis of confederation, the movement was practically ended. The Committee on a Union Metrical Version of the Psalms reported that a meeting of representatives of several churches had been held, and the principles on which the work shall be conducted had been agreed upon. In the matter of seminary control but little progress had been made in the efforts to complete the arrangement instituted in the previous year for the control of the foreign-mission seminaries by the Assembly. The report represented that some funds were held by the Foreign Mission Board for the seminary in Egypt, that in India title to property can be taken by a registering body, and that in Egypt title can now be taken by the Foreign Mission Board. The Assembly decided that all funds for these seminaries be held by the Foreign Mission Board and be invested in the United States; that title to property for the seminaries or other institutions be taken in the forms suggested in the report; and that the Foreign Mission Board complete the regu-

lations for the proper exercise of the Assembly's power over those seminaries, and report each year concerning them. The report on Young People's work showed that in the nine years since the organization of the committee the Young People had been established as a permanent agency in congregational and denominational activity, and that there had been no diminution in interest, but rather increase, as manifested in the local conventions. So far as reports had been received there were 624 Christian Union and Christian Endeavor Societies, with 27,808 members, a gain of 1,511, and their contributions amounted to \$33,206, \$7,371 of which were paid to the board. About one seventh of the members were tithe payers. Of the Juniors 240 societies were reported, with 8,769 members, a gain of 1,933, and \$3,846 of contributions; also 125 Junior Missionary Societies, with 3,736 members and \$2,617 of contributions. Complete co-operation with the young people of the Associate Reformed Synod of the South had been established, and invitations had been sent to the organizations of the two Reformed Presbyterian Churches to come into co-operation in an effort to bring all the psalm-singing Presbyterian churches into closer relations. The result of the conferences with representatives of the Young People's Society of Christian Endeavor concerning a closer affiliation of the Young People's Christian Union of this Church with it was the conclusion on the part of the committee having the subject in charge that the relations of the two bodies were as close as they could be without giving up the denominational society. The committee had therefore no proposition to make on the subject. The report on theological seminaries set forth that while the course of studies provided by the General Assembly of 1874 provided a broad and thorough outline of instruction, it did not answer the changed conditions of religious thought; and while the instructors had gone beyond the requirements of the course, and practically had kept up with the demands of advanced thought, the committee recommended that more emphasis be placed on sociology, systematic study of the Bible, and Christian missions. With this view it was advised that the faculties revise the course and present a joint report to the General Assembly. The report also embodied a recommendation that the presbyteries be urged to exercise careful scrutiny in receiving students of theology in respect to their literary attainments as well as to their personal character and the evidence of their having received a divine call. A committee was appointed to call the attention of the presbyteries to the action of the General Assembly on this subject, and to suggest suitable measures for adoption by them. The plan of co-operation among Presbyterian and Reformed churches in home-mission work, already described in the "Annual Cyclopædia," was adopted. The Board of Education was directed to report to the next General Assembly a comprehensive educational policy for the whole Church. The Assembly also ordered that aid be refused to students who marry in immediate prospect of the study of theology or while prosecuting their studies. The Board of Church Extension was instructed to enforce the rule that congregations receiving aid shall not solicit assistance outside of their own community without the consent of the board. A standing order was made for the issue of an annual thanksgiving proclamation supplementary to that of the President of the United States, in which the President's proclamation shall be referred to distinctly and deferentially, the Lord Jesus Christ shall be explicitly mentioned and recognized, and spiritual blessings received shall be detailed in appropriate terms. A

resolution was adopted declaring it advisable that corporations and individuals should avoid applying the title "United Presbyterian" to enterprises over which the Church has no control, and which are of a secular and business character. A series of resolutions on reform reiterated the tenor of former declarations of the Assembly on temperance and Sabbath observance. The third Sunday in September, 1897, was designated for preaching commemorative sermons and other exercises appropriate to the two hundred and fiftieth anniversary of the adoption of the Shorter Catechism and the Confession of Faith.

IV. Associate Reformed Synod of the South.

—The Associate Reformed Synod of the South met at Belfast, Tenn., Oct. 21. The Rev. J. L. Young was chosen moderator. The Committee on Union with the United Presbyterian Church reported that nothing had been done in the direction of organic union, but that co-operation was practiced in home missions and Young People's work. This co-operation was approved of. A purposed gift by Mr. Joseph Wylie of \$15,000 to Erskine College was announced. This is in addition to a previous gift of \$25,000 to the same institution. The synod decided not to establish an orphanage.

This synod has 9 presbyteries, with congregations in every Southern State except Louisiana, making 130 in all, which are served by 96 ordained ministers, 16 of whom "are not actively engaged in the work of preaching." These congregations return 10,824 members, or 447 more than in 1896. Two new congregations were organized and 8 new churches were built during the year, and a general tendency is noticed toward more complete and commodious buildings than heretofore. Contributions are made in most of the congregations for building churches for city missions. The theological seminary at Due West, S. C., had the most prosperous year in its history, with 14 young men taking the full course. A new boys' college home has been completed at Erskine College, Due West, S. C., and a gift of \$15,000 has been received for building a similar home for girls. The foreign mission in Mexico employs 3 American missionaries, 3 American women, 4 native missionaries, and 3 licentiates. Its last year was one of trying financial experiences. Twenty-nine churches receiving aid from the Board of Home Missions return 1,443 members, or one eighth of the whole membership of the Church. A scheme of co-operation in home-mission work with the United Presbyterian Church has been carried into successful and satisfactory operation.

V. Reformed Presbyterian Church Synod.

Fuller and more correct statistical reports were made at the annual meeting of this body than in any previous year. They show 13 presbyteries, including 1 in Syria; 116 congregations, an increase of 1; 115 ministers, with an increase of 2 in the number of pastors; 30 unsettled ministers, including some who were employed in Church work as professors, etc.; 17 licentiates, 5 of whom were in Syria; 16 students in theology; and 9,830 members, or 125 less than in 1895. The contributions for all purposes were \$165,280, or about \$17 per member. An excellent account was given of the success of the missionary work among the freedmen at Selma, Ala., and among the Indians near Fort Sill, Oklahoma.

The Synod met at Beaver Falls, Pa., May 26. The feature of the proceedings that excited most interest was the discussion of the case of the Rev. Dr. MacAllister, pastor of a church in Pittsburg and editor of the "Christian Statesman," a newspaper advocate of the principles of the National Reform Association, who was called to account for senti-

ments embodied in some articles he had published in favor of Church union. He had taken positions in these articles which his critics regarded as implying willingness to give up, for the sake of union, some of the distinctive principles of the Church. Upon his expression of a willingness, in compliance with a request of the Synod, to stop the publication of such views the case was dropped. Dr. MacAlister declared that he would discontinue the publication of the "Christian Statesman" as a weekly paper until the Synod rescinded its action.

VI. Cumberland Presbyterian Church.—The General Assembly met at Englewood, Chicago, Ill., May 20. The Rev. H. S. Williams, of Memphis, Tenn., was chosen moderator. The Educational Society reported that it had aided 140 of the 225 probationers in school. It had contributed \$1,200 to the support of the theological seminary, the attendance on which had been the largest in the history of the institution; and special contributions of \$437 had been made by individuals. A contribution by the Ladies' Educational Society of Nashville, Tenn., was acknowledged. A course of study recommended by the General Assembly of two years preceding had been approved by nearly all the presbyteries, and about 100 probationers were studying under it. Assistance to the Cumberland Presbyterian Church (Colored) in its educational work was favored so far as it could be afforded through the regular channels. The receipts of the Board of Missions had been \$81,419, as follows: For foreign missions, including certain special offerings and receipts of the Woman's Board, \$26,629; for home missions, including offerings for Denver, Pittsburg, etc., \$12,645; for church erection, \$3,224; and contributed to synodical missions, \$19,480. The attendance at the theological seminary had been the largest in its history; its endowment amounted to \$63,129. The Permanent Committee on Systematic Benevolence reported progress in organization and in the founding of tithes, and suggested the formation of a Cumberland Presbyterian tithe-payers' circle. The Committee on Sunday-School Work had aided synodical Sunday schools and missions in eight synods. Its receipts, \$2,878, had been larger than for many years. It recommended the adoption of a specified standard and grade of studies for the Sunday schools of the Church. The Board of Publication gave the valuation of the assets of the publishing house as \$212,616. The net profits of the business had been \$649. The Committee on Christian Endeavor Work reported concerning organization, development, and education in the Christian Endeavor Societies. The aggregate contributions of these societies were returned at \$2,345. The contributions to the Ministerial Relief fund amounted to \$10,726. One hundred and four families had received aid, and 18 new names had been added to the list of beneficiaries. The Endowment fund of the Thornton Home had risen to \$17,527. A committee was appointed to co-operate with colored Cumberland Presbyterians in the location of a school for colored people; and the Educational Society was authorized, under certain restrictions, to pay \$400 annually for the support of a teacher in it. The Assembly decided to abandon the "plan of co-operation" with other Presbyterian bodies. Objection was especially made in the discussion of this subject to the article providing that members of one Presbyterian Church should be allowed and encouraged to join other Presbyterian churches when out of reach of congregations of their own Church, and that Presbyterian churches should avoid competition in home-mission fields. A report was adopted emphasizing the authority of the presbyteries in the matter of contracts between ministers and their congregations, and

recommending that every presbytery appoint a permanent committee on pastorates and supplies; that the session of every vacant church consult such committee in filling the vacancy; and that no minister assume charge of any congregation without the knowledge and consent of such committee. The presbyteries were instructed to group all their congregations which are unable to employ a pastor the whole of his time, each group to be governed in employing pastors by the rules applying to congregations. Sunday schools were decided to be under the control of the Church sessions. Authorization was given for the removal, by the proper officers, of inefficient clerks of congregations, presbyteries, and synods. The importance of infant baptism was urged. The Assembly abandoned its intention of placing a Cumberland Presbyterian exhibit in the Tennessee Centennial Exhibition, because of the permission of the sale of intoxicating liquors on the exhibition grounds, and made provision for the transfer of the articles contributed for the exhibit, with the consent of the donors, to an historical society for the denomination.

VII. Presbyterian Alliance.—The Western Section of the Alliance of Reformed Churches holding the Presbyterian System met in Reading, Pa., Oct. 28. Representatives were present from most of the 16 Presbyterian and Reformed organizations included in the Alliance. Committees reported on home missions, Sabbath schools, *desiderata* of Presbyterian history, and work on the European Continent, and the reports were acted upon. Papers were read and discussions had on the subjects of "The Duty of the Alliance to the English-Speaking People of Europe" and "The Duty of the Alliance to the Evangelical Parties in the Reformed Churches on the Continent." At a public evening meeting addresses were delivered on "Religious Work in Canada" and "The Dutch Reformed Church and Aggressiveness." A plan for co-operation in home-mission work had failed to receive the approval of all the churches in the Alliance, the General Assembly of the United Presbyterian Church having disagreed to one of the sections, and the General Assembly of the Cumberland Presbyterian Church having rejected two. As a measure toward removing these objections, the Committee on Home Missions was instructed to prepare explanatory clauses.

VIII. Presbyterian Church in Canada.—The following is a summary of the statistics of this Church presented to the General Assembly in June: Number of churches or stations, 2,412; of sittings, 546,506; of families, 102,213; of single persons, 27,884; of communicants, 196,404; of additions during the year on profession, 12,075; of baptisms, 10,519 of infants and 1,318 of adults; of elders, 6,907; of other office bearers, 10,790; of officers and teachers in Sabbath schools and Bible classes, 18,078; of pupils in the same, 156,104; of Christian Endeavor Societies and Young People's organizations, 1,042, with 35,803 members.

The financial reports made to the General Assembly showed an increase of more than \$30,000 in the year for stipends, an increase in 8 of the 11 schemes of the Church, and a decrease of about \$4,000 in the other 3 funds, giving a total increase of about \$8,000. Since the union in 1873 the total sums raised by the Church amounted to more than \$3,500,000. The Dominion census of 1897, just published, showed 190,000 more Presbyterians than appeared in the Church reports.

Aid had been given under the Church and Manse Building fund for Manitoba and the Northwest Territories in the erection or extension of 14 churches and 12 manses, in the shape of \$3,800 in loans and \$440 in grants. Owing to the state of the fund

the Board of Management could not make grants except out of interest, and even these only under exceptional circumstances. Sums amounting to \$3,887 had been received for the purposes of the fund from friends in Great Britain.

The Board of French Evangelism employed during 1896, for the whole or part of the year, 26 pastors and ordained missionaries, 17 evangelists, colporteurs, and students, and 20 teachers. Thirty-seven mission fields and 93 mission stations were occupied, with a Sabbath attendance of 2,415; 928 families under care, 1,079 church members, and 990 pupils in Sabbath schools and Bible classes; and 153 members were added to the Church. Twenty-five mission schools returned 809 pupils. The amount contributed by converts for salaries and other expenses was \$5,918; amount paid as school fees, \$1,602; making a total of \$7,520. The schools at Point-aux-Trembles had since their foundation given a Christian education to about 5,000 pupils, a large proportion of whom had become true converts—some of them missionaries, pastors, and teachers, and others lawyers, doctors, artisans, and agriculturists.

The General Assembly met at Winnipeg June 14. The Rev. William Moore, D. D., of Ottawa, was chosen moderator. The business transacted chiefly concerned the condition and management of the "schemes" and institutions of the Church. Although a large majority of the presbyteries had voted in favor of a remit sent down proposing to change the ratio of representation to the Assembly from 1 in 4 to 1 in 6, the Assembly declined to make the change. A resolution was unanimously adopted, "that while fully recognizing the fact that the duty of imparting detailed and adequate instructions on the doctrines of the Christian religion devolves primarily and mainly on the parent and the Church, yet the Church regards it as of exceeding importance that all instructions given in our public schools should be in harmony with revealed truth, and that the Bible should have the place in our educational system which its incomparable excellencies and its divine authority claim for it. In order to assist in giving effect to its convictions on a matter so vital, the General Assembly appoints a committee on public education, whose duty it shall be to act in the name of the Church in any of the provinces of the Dominion in relation to the subject of religious instruction in the public schools, and also to co-operate with any synodical committee of our Church or any committee representing any other branch of the Church, whose views on this question may be in substantial accord with those of the General Assembly." Another resolution declared that "the General Assembly is painfully aware of the extent to which the Lord's Day is desecrated in nearly all Christian countries, and of the persistent efforts made in our own land to encroach upon the Sabbath in the interests of business and pleasure. Unless the Lord's people shall recognize the danger, and unite in defending the Lord's Day from the assaults made upon it in so many forms and from so many quarters, we may before long find that Canada has lost its place as a land distinguished for keeping the Sabbath and reverencing the sanctuary. The General Assembly therefore earnestly and affectionately exhorts all those whom it represents to use faithfully the Lord's Day for the holy ends of its appointment, to refrain from all encroachments on its rest except when 'necessity and mercy' justify, and by all proper action strenuously to bear their part in defending the priceless inheritance of the sacred weekly rest."

IX. Church of Scotland.—The statistical reports made to the General Assembly indicated a considerable increase in membership and income.

The whole number of communicants on the parish rolls at the end of 1896 was 633,408, showing an increase during the year of 6,637. The number of elders had increased from 6,494 in 1895 to 9,774. The voluntary contributions reached £397,702, or £44,239 more than those of the previous year. Adding seat rents, the total revenue was £466,138, having increased £45,215. A report was made showing that the total amount spent in building, repairing, and maintaining ecclesiastical structures from 1886 to 1895 was £516,035, of which £267,167 were raised by assessment on heritors and the rest was voluntarily contributed. The amount spent in church building was £233,246, of which £51,618 were raised by assessment and £181,628 by voluntary effort. The report of the Endowment fund, this being its jubilee year, represented that during the fifty years £1,465,000 had been gathered and 402 parishes had been created. Six thousand pounds had been subscribed toward a proposed jubilee thank offering of £14,000. The year's expenditure for home missions had been £10,431, and 80 mission churches had been sustained and 237 workers supported.

The report on foreign missions was characterized as the most favorable the committee had been able to make for many years. The income for the work had been £37,000, an increase of nearly £7,000. Twelve new missionaries and a number of mission buildings were needed in various parts of India, Africa, and China. A special committee appointed to investigate charges of ritualistic observances at the Blantyre mission, Africa, reported that they had found them much exaggerated. In the mission to the Highlands and islands new mission churches had been or were being built at five places. The revenue of the scheme, £2,584, showed an increase of £91.

The General Assembly met in Edinburgh, May 20. The Rev. William Mair, D. D., was chosen moderator. The report of the Committee on Church Reform recommended that the Assembly appoint a board to elaborate and carry out a scheme of institutes for pastoral training. The great increase of population in many parishes rendered it necessary to develop home-mission work. The Rev. Alexander Robinson, of Kilmun, who was suspended for a year by the General Assembly of 1896 for publishing unsound doctrinal views in his book "The Saviour in the Newer Light," appeared to answer the question whether he still held those views, or would disavow them, and read a paper explaining his theological opinions. He could not, he said, disown his book. He subscribed to the Confession of Faith as a general expression, and his book was in origin and purpose a devotional study, which included certain modern movements of thought as the legitimate development of the Confession. He acknowledged that it contained serious errors in expression and taste; but "find such fault as you may," he said, "with the execution of the work; to its ideals and its aims I must remain faithful." In answer to a direct question by the moderator, Mr. Robinson declined to repudiate the teaching of his book. The Assembly directed that the suspension of Mr. Robinson be continued till the next meeting of the Dunoon presbytery; that in the event of his tendering his resignation it be accepted, suspension following *sine die*; if not tendered, the presbytery should pronounce sentence of deposition.

X. Free Church of Scotland.—The total membership of this Church was returned to the General Assembly as being 287,689, showing an increase during the year of 4,158.

The statement of the general trustees to the General Assembly showed that the total sum invested was £978,790.

The Finance Committee reported to the General

Assembly that the income of the Church for the past year had been £673,883, an increase over the preceding year of £23,559, and the largest sum recorded in the history of the body. The addition of other revenues, of which the Finance Committee did not take cognizance in their accounts, would bring the total income for Church purposes up to £728,000. It was represented in presenting the report that the revenue for Church purposes of the three great Presbyterian bodies of Scotland during the past year had been upward of a million and a half pounds sterling, each Church recording a gradual increase.

The income of the Sustentation fund had been £172,441, a decrease of £188 as compared with the previous year. The fund was not regarded as growing proportionately with the growth of the Church.

The mission to the Jews returned about 800 Jewish children in the school.

The General College fund stood at £1,594, with a credit balance of \$130. One hundred and ninety-four regular and 61 honorary students were returned.

The year's receipts for the home-mission and Church-extension schemes had been £9,000. During fifteen years 319 out of 1,094 congregations had received grants. The membership of the Church had increased 14·3 per cent. during that period, and the population 11·6 per cent.

The collections of the year for foreign missions amounted to £137,014.

The General Assembly met in Edinburgh, May 20. The Rev. Hugh MacMillan, D. D., was chosen moderator, and made an address reviewing the progress of the past sixty years, in which were included some observations on the influence of the scientific method on morals, theological study, and religious belief and thought. It was regarded as having been, on the whole, of great and manifest advantage. The proposed joint hymn book, having been approved by the United Presbyterian Church and the Irish Presbyterian Church, was authorized to be published. The report on religion and morals described the moral standard among the people as high. A motion respecting Church union was adopted providing for the appointment of a joint committee of the Free and United Presbyterian Churches, whose functions should be to consider from time to time the existing arrangements for supplying ordinances throughout the country; to advise regarding the erection of new preaching stations, and to take advantage of opportunities for uniting weak charges in districts where one congregation would be sufficient; to confer regarding the practical questions bearing on incorporating union, reserving in any solution reached, liberty for members of the united Church to strive for the support of the protest of 1843.

The position of the Church as favoring disestablishment was reiterated in a resolution which was adopted by a large majority. The replies of the presbyteries to the questions sent out by the Committee on Temperance were interpreted as giving reason to believe that the cause was progressing. The custom of providing drink at funerals and baptisms was dying out, and grocers' licenses were vigorously condemned. A deliverance was adopted declining to agree to any option of public management as a method for controlling the liquor traffic. The report on Sabbath observance represented that the position of affairs was on the whole unchanged.

XI. United Presbyterian Church of Scotland.—The total membership of this Church was returned to the Synod in May as 194,463, showing an increase during the year of 2,582, with 143,610 young people under religious instruction. Every

branch of income from congregational sources was represented as showing a noteworthy increase during 1896, the total income being £358,236, and the whole amount of increase £14,396. The missionary and benevolent contributions—amounting to £83,029—exceeded those for 1895 by £2,393. The total income of the Church from all sources was £406,420.

The meeting of the Synod, in Edinburgh, May 3, was attended with unusual interest, on account of its marking the jubilee of the formation of the Church by the union of the secession and the relief churches, which took place in 1847. The retiring moderator referred to the fact in his opening address, and spoke of the prosperity which had attended all the agencies of the Church since that time. The Rev. John Hutchison, D. D., was chosen moderator. The report of the Committee on the Joint Hymnal, after relating the steps that had been taken by the Synod and by the General Assembly of the Free Church in 1896, mentioned "with deep regret" the withdrawal of the Established Church from co-operation in the matter. The alterations proposed by the Presbyterian Church in Ireland had been accepted by the joint committee. The report of the Committee on Union with the Free Church had little in the way of advance to record. Regret was expressed that the Free Church had not gone so far in the desired direction as had been hoped. The work of the joint committee of both churches had lain more in the way of consideration and the acquiring of information regarding the most efficient modes of co-operation in regard to the supply of ordinances and extension arrangements. Principal Rainy, the Convener of the Free Church Committee, had indicated the belief of his committee that their report to the forthcoming Assembly would be framed in such a manner as to lead to the reappointment of a joint committee of the two churches with power to enter into conference on all questions bearing on incorporating union. In response to overtures concerning marriage with a deceased wife's sister, the Synod decided to remit the matter to the presbyteries for their opinion. In the interim, till the next meeting of the Synod, sessions should have discretion to grant church membership to persons who have contracted such marriages. A resolution in favor of disestablishment and disendowment—on which subjects one of the speakers declared the Church was absolutely unanimous—was passed.

XII. Presbyterian Church in Ireland.—The reports presented to the General Assembly of this Church in June showed that it included 655 ministers and missionaries, 51 retired ministers, 42 assistants, 567 congregations, and 106,000 communicants. The total income of the Church amounted to £256,216, showing an increase of £9,000 over the previous year. Of this sum £41,000 were contributed for building and renovation. The income of the Sustentation fund, £37,342, exceeded that of the previous year by £812.

The General Assembly met in Belfast, June 7. The retiring moderator, the Rev. Dr. Williamson, delivered an address reviewing the evangelical work of the Church for the year. The Rev. Dr. Leitch was appointed moderator and delivered an address on university education in Ireland. He urged that the establishment of a Roman Catholic university for Ireland should be opposed by Presbyterians; if the Government granted it their next object should be a united Protestant university in Dublin; and if the Episcopalians should refuse to unite in this course, the establishment of a Presbyterian university should be demanded of the Government.

Besides Ulster, where this Church has its greatest

strength, the Presbyterians have considerable organizations in other parts of Ireland, including the presbytery of Dublin, with more than 25 congregations, and the presbyteries of Cork and Connaught, with 10 or 12 congregations each. Previous to the disestablishment of the Episcopal Church in Ireland each minister of the General Assembly received from the Government an annual sum amounting to about £30, called *Regium Donum*. This having been discontinued in connection with the disestablishment, the ministers are supported by their congregations, with the aid, in case the congregations are not able to afford a full support, of grants from the Sustentation fund. The contributions to this fund in 1895 were about £26,600.

XIII. Presbyterian Church in England.—

The statistics presented at the annual meeting of the Synod of this Church, in April, showed that the whole number of members in the 305 congregations was 70,639, an increase over the previous year of 1,007; of teachers in Sunday schools 5,216, and of pupils 51,058, besides 2,316 teachers and 28,975 children in the mission schools. During the past twenty years the number of sittings provided in the places of worship had been increased by 26,561, and the number of communicants by 19,626. The revenue of the Church during the past year had been nearly £30,000 in excess of that of the previous year, the increase being partly due to the special gifts to Church extension. The church property was valued at £1,781,032. It was hoped that the new college in course of erection at Cambridge, expected to cost about £30,000, would be completed in time to be occupied for the session of 1898-'99.

The prominent feature of the meeting of the Synod, which began April 26, was the celebration of the jubilee of the mission in China. In view of this fact the Synod met in Sunderland, where it had met fifty years before, and where William Burns had offered himself to be the pioneer missionary to China, and in the same church. The Rev. H. L. Mackenzie, the senior missionary of the Church, who had labored in China for thirty-seven years, was chosen moderator. The moderator in his opening address reviewed the history of the missionary work in China, saying that thousands of the people had been converted; four theological colleges, boarding schools for boys and girls at the chief centers, and elementary schools at the out stations were in operation; the medical missionaries had accomplished a benevolent, far-reaching work; and other missionaries had done much in translating the Bible into the vernacular languages of Amoy and Swatow, besides taking some share in its translation into the classical language. Progress was reported by the Board of Home Missions in the effort to raise a church-building fund of £50,000. Objection being made during the discussion of the report to a rule laid down by the board denying a grant to any church in which the plans provided for the pulpit being placed on one side, it was contended that side pulpits were a first step toward sacerdotalism, and a motion to cancel the restriction was lost by a large majority. A petition was presented asking for an inquiry into the orthodoxy of the Rev. John Watson, D. D., pastor of the Sefton Park Church, Liverpool, who is known to readers of his books as Ian Maclaren. The Business Committee reported concerning it that, after considering the petition, they had decided not to transmit it to the Synod. It was irregular in not having come through the presbytery, and instead of presenting specific allegations on the part of the petitioners, it asked the Church, in dealing with writings open to their examination, to proceed upon statements alleged to have been made in various

quarters outside. A motion rejecting the petition was carried by a very large majority. The synod afterward appointed Dr. Watson's church as the place for holding its meeting in 1898. The declaration of interest in the Council of Free Churches was reiterated; congregations were urged to associate themselves with the movement; and a committee to act in co-operation with the council in seeking from the railway companies ample facilities in traveling to religious assemblies was renewed. The issue was directed of a circular to the managers of the 25 denominational day schools, urging them to form a presbyterial association for the purposes of the voluntary schools act. In discussing the subject of the oversight of Presbyterian soldiers and sailors, complaint was made that Presbyterian chaplains were brought from Scotland to look after troops in England, simply because such chaplains belonged to the Established Church. The Synod decided to ask the War Office to appoint the Wesleyan chaplain at Hong-Kong to be the officiating minister to the Presbyterian soldiers and sailors at that station.

The mission in China recorded 5,000 communicants in the native church. It had 30 missionaries, 10 of them medical, and besides missionaries' wives 20 lady missionaries laboring among the women of the country. The native pastors and evangelists outnumbered the European staff by 2 to 1. Besides the theological college, there were 10 hospitals, in which 30,000 persons who sought bodily healing had been brought since the hospitals were established within reach of the Gospel. A native Church was being built up and was becoming self-governing, self-supporting, and self-propagating. Some of the church members were the third generation of Christians. Three of their native ministers were grandsons of the first convert of William Burns, the pioneer missionary of the Church.

XIV. Welsh Calvinistic Methodist Church.—

The statistical reports of this Church, made to the General Assembly in May, showed considerable increase in the more important items. The number of preaching stations was 1,536; of churches, 1,330; and of communicants, 150,442 (increase 3,145). Seventeen new Sunday schools had been established, and the number of members of Sunday schools had increased 4,466. The total amount of all the contributions was £228,416, showing an increase of £5,169.

The receipts for the foreign missions had been £10,796, an increase for the year of £2,883. The missions included 281 preaching stations, 2,926 communicants, 9,762 adherents, and 10,540 pupils in Sunday schools. One thousand and eighty persons had been received into the churches during the year. Three new missionaries are to be sent into the field.

The General Assembly met at Rhyl, May 25. The Rev. J. Morgan Jones was moderator. On the subject of the incorporation of the Assembly, it was found that the objects aimed at could be effected by so altering the constitutional deed as to arm the body with the powers of a quarterly association. The committee on the subject was authorized to formulate the proposal in order that it might be submitted to the consideration of the quarterly associations. Upon the presentation of a report upon the number of Welshmen living in other countries than Wales, and the need of provisional oversight for those residing in America, Patagonia, and South Africa, a deputation was appointed to visit the Welsh colonies in South Africa and arrange for the maintenance of a minister or ministers among them. Another committee was appointed to carry out the arrangements necessary for the establishment of a South African mission.

Resolutions were adopted protesting against certain provisions of the voluntary schools act, advising legal opposition to it till it was eliminated from the statute books, and recommending every effort to secure undenominational education.

PRINCE EDWARD ISLAND, in the Gulf of St. Lawrence, a province in the Dominion of Canada; area, 2,133 square miles; population in 1891, 109,088.

Government.—The only important event in this province in 1897 was a local election. The election took place in April, and the Liberal Government of the Hon. Frederiek Peters was sustained, but by a decreased majority. It was charged by the Opposition that in six years the provincial debt had been increased from \$52,000 to \$400,000, and the Conservatives, in a manifesto issued by their leader, the Hon. Daniel Gordon, promised reduction in expenditure, reform of the jury system, and legal administration and in the management of public works, together with equalization of taxation. Shortly after his return to office, Mr. Peters resigned in order to go to British Columbia. A new Government was organized Oct. 27, with the Hon. Alexander Bannerman Warburton as Premier, H. C. McDonald as Commissioner of Public Works, J. R. McLean as Commissioner of Crown Lands, Angus McMillan as Provincial Treasurer, and Messrs. J. W. Richards, Benjamin Rogers, Peter McNutt, and A. McLaughlin as ministers without portfolio or salary.

Finances.—The financial statement of the province for 1897 was as follows: Ordinary expenditure, \$270,477.23; expenditure on capital account, \$17,154.04; total, \$287,631.27. Receipts, \$273,495.92; deficit, \$14,135.35. Thus while there was a difference of a little more than \$3,000 in favor of the province between the receipts and what is termed ordinary expenditure, the charges on capital account made a difference the other way of \$14,000. The debt of the province was a little more than \$392,000, and the interest charge in 1896 exceeded \$15,000. While the estimates last year amounted to \$287,631.27, the estimates for this year amount to \$306,301. The island Legislature decided to lend its assistance to cold storage, and the following resolution was adopted:

“Resolved, That it is advisable that a bill be passed authorizing the Government to promote the introduction in the province of a first class cold-storage system by some private company, by granting aid thereto in the form of an annual grant or bonus, or guarantee of a certain rate of interest or profit, or in such other manner as may be deemed advisable; such assistance not to exceed \$800 in any one year, and not to be given for more than three years.”

It was also decided to issue debentures to cover the cost of a new building for the Prince of Wales College and Normal School.

Education.—The annual report of the Chief Superintendent of Education was a volume of about 170 pages. It shows the number of school districts to be 466 in 1897, against 463 in 1896. Three hundred and twenty-four male and 245 female teachers were employed, an increase of 22 males, and a decrease of 12 females. There were 22,138 pupils enrolled, a decrease of 112. The percentage of population attending school was given as 24. The total amount expended by the Government in 1896 was \$124,084.32, an increase over 1895 of \$2,303.15. The average paid by the Government for each pupil enrolled was \$5.60, and by the district \$1.57. The average salaries paid were as follow: First-class male teachers, \$440; female teachers, \$332. First-class teachers receiving second-class pass, male, \$254; female, \$221.50. Second-class male teachers,

\$249.82; female, \$198. Third-class male teachers, \$197.36; female, \$150. These averages only vary a few cents from those of 1895.

Fruit Culture.—The Fruit Growers' Association of Prince Edward Island met in April, and Lieut.-Gov. Howlan presided. A paper on fruit culture, by the Rev. A. E. Burke, of Alberton, was read. Another on the same subject was read by Henry Burke, of Southport. A discussion followed, after which these resolutions were carried unanimously:

“Resolved, That in the opinion of this association the encouragement of fruit culture by local government aid would be a wise stroke of policy, and that the establishment of an experimental fruit station in connection with the stock farm, under the supervision of a competent man, would prove a great factor in the development of the fruit-growing industry, and one which would meet with the universal approval of the people of this province.”

“Resolved, That this association desires to place itself on record as being strongly in favor of the cold-storage movement in this province, and that a continuous chain which will practically bring the tables of Great Britain and the fruit gardens of Prince Edward Island together would be a great boon to the horticulturist, and the application of a mighty lever to what is destined to become one of Prince Edward Island's greatest industries.”

PROTESTANT EPISCOPAL CHURCH IN THE UNITED STATES. The healthy activity and sound growth of the Church is shown by a summary of statistics for 1897, giving: The number of dioceses, 58; missionary jurisdictions in the United States, 21; missionary jurisdictions in foreign lands, 7; clergy (bishops 84, priests and deacons 4,692), 4,776; parishes and missions, 6,332; candidates for holy orders, 571; ordinations—deacons, 172; ordinations—priests, 195; baptisms, 65,093; confirmations, 46,099; communicants, 664,083; marriages, 17,541; burials, 33,234; Sunday-school teachers, 47,648; Sunday-school scholars, 433,600; total of contributions, \$12,696,813.06. The trust funds of the Domestic and Foreign Missionary Society amount to \$1,015,621.18, from which an income of \$42,470.42 is derived.

The gross receipts for missions for the fiscal year (including those for specials and miscellaneous purposes) amounted to \$770,813. The contributions were \$358,024.93; the amount received from legacies for designated uses was \$176,777.60; making the amount at the disposal of the board \$534,802.53, of which \$53,000 was invested to protect outstanding liabilities and \$13,133.86 was left for future appropriation. Legacies amounting to \$4,600 were permanently invested. The number of parishes and missions contributing was 3,447, or 258 fewer than during the last fiscal year. It was, however, larger than in any previous year excepting 1895 and 1896.

The expenditure for domestic-mission work (including \$46,509.16 for Indian missions and \$54,750.86 for colored missions) was \$249,524.32; specials amounted to \$50,426.64; legacy expenses (one half), \$162.29; contributions returned (one half), \$269.40; one half of cost of administration and collections, \$13,700.45; printing “Spirit of Missions,” reports, etc., \$10,476.69; legacies for investment, \$3,500; paid to an annuitant (one half), \$150; returned to Standing Committee on Trust Funds amount withdrawn from temporary investment for domestic missions, \$19,000; loan returned (one half), \$12,500; transfers, \$382.05; paid for episcopal endowment of diocese of Dallas, \$11,000; making the total expenditure for domestic missions \$371,091.84, and leaving for domestic missions and specials at the close of the fiscal year a

balance of \$36,854.52. The salary of the bishops and the stipends of the missionaries in 19 missionary jurisdictions were paid, and, in addition, assistance was given to 41 dioceses. The whole number of missionaries, clerical and lay, male and female, receiving salaries or stipends was 1,007, and the amount appropriated for the work was \$268,023.

The gross receipts for foreign missions (including a balance from 1896 of \$31,238.72) were \$313,249.65. The expenditures were: On account of mission work, \$184,305.45; specials, \$32,879.60; legacy expenses (one half), \$162.28; contributions returned (one half), \$269.40; one half of cost of administration and collection, \$13,700.44; printing "Spirit of Missions," reports, etc., \$10,476.69; legacies for investment, \$1,000; paid to an annuitant, \$150; returned to Standing Committee on Trust Funds, \$32,189.48; loan returned (one half), \$12,500; transfers, \$367.45; balance for foreign missions and specials at close of fiscal year, \$25,248.86.

The totals of statistics of the result of Church work among colored people vary but little from those reported last year. There are 116 stations ministered to by 65 colored clergymen. More than 60 white clergymen are engaged in the work. The church and school buildings number 146, the estimated value of which is about \$460,000. There are about 7,500 communicants. In the year 1,183 were baptized and 882 confirmed. There are 5,645 Sunday-school pupils and 4,381 parish pupils.

The mission to the Indians and Eskimos in Alaska reports about 100 communicants and about 1,400 enrolled baptized natives. Other Indian mission work has been carried on with gratifying results.

The condition of the Mexican Church is encouraging. It has 7 priests, 4 deacons, 5 candidates for orders, 3 other readers, 27 congregations, 10 day schools, 10 teachers, and about 300 scholars. Two priests of the American Church also are working for the Mexican Church. In the foreign field there has been steady progress.

Statistics of the West African mission for the year show that the clergy numbered 15, the mission stations 73, baptisms 210, confirmations 90, communicants 1,297, and total of contributions \$1,638.07. The ten-year rebellion of the Half-Cavalla tribe against the Government of Liberia was this year ended, and on the restoration of peace the principal Church station at Cavalla was reopened, the king and the chiefs of the tribes expressing their joy at having the work resumed among them. A grant of 500 acres of land for a girl's graded Church school was made by the Legislature of Liberia.

The conditions of the missionary work of the Church in China have been profoundly affected by the radical changes in the material prosperity of the country since the close of the China-Japan War. There is an increased demand for foreign education, and in the newly established Government college at Tientsin, over which an American presides, students are being secured from the Christian schools by order of Li-Hung-Chang, because "there he would find the best material." This attitude of the Government, recognizing the scholarship and intellectual power of men from Christian countries and placing them at the head of, or as teachers in their own Government schools and colleges, marks a wonderful change that is full of promise and responsibility.

A three-days conference of the English and American bishops in China and the Bishop of Korea was held in Shanghai in April.

The Church Training School for Women, organized in Shanghai in 1896, has passed out of the stage of experiment, and may be said to have solved

the question of the training of women for the China mission.

The *Wen-li* translation of the New Testament by Bishop Schereschewsky was this year put to press, to be followed soon by the Old Testament in *Wen-li*. A corrected version of his translation of the Old Testament in mandarin also will be issued, and provision has been made for printing a Shanghai, a mandarin, and a *Wen-li* version of the prayer book.

From the mission in Japan material progress is reported. Four churches were consecrated during the year, and proof of the increasing influence of Christianity in Japan is found in the fact that a comparatively large number of Christians are being gathered in from the upper classes. One minister, two deputy ministers, the chief judge of the Supreme Court of Justice, the president and many members of the House of Deputies are Christians, and many other men of social standing and influence are favorable to Christianity. There are signs everywhere throughout Japan of the decay of the great religions which for centuries have dominated the Japanese mind. Of the half dozen so-called great papers of Japan, two are avowedly under the guidance of Christian principles, viz., the "Nation" ("Kokumin Shinbun") and the "Daily News" ("Mainichi Shinbun"). Whatever religious influence these journals may exert they are stalwart champions of Christian ethics, and discuss all moral questions from that point of view.

The Bishop of Hayti reports encouraging growth in his jurisdiction, although he declares that at least four fifths of the population of the island, in spite of the Christian baptism which was administered to them in infancy, still openly keep up the superstitions and idolatrous practices of heathenism transferred from Africa by their enslaved ancestors.

The 10 missions or chaplaincies in Europe are in a flourishing condition.

The summary of the work accomplished in the year by the Woman's Auxiliary and its junior department in 59 dioceses and 17 missionary districts shows contributions: For domestic missions, \$86,004.64; for foreign missions, \$44,174.50; for diocesan missions, \$50,807.79; and boxes valued at \$184,898.27. Of this total of \$374,514.65, the junior department gave money and boxes to the amount of \$42,553.36.

The receipts of the American Church Missionary Society amounted to \$34,787.15; the disbursements to \$31,895.12. Reports from the 22 clergymen and 2 teachers aided by its stipends in domestic-mission work show 183 infant and 84 adult baptisms, 156 confirmations, and 198 communicants added to last year's number, which was 1,647. By the congregations in Brazil under the charge of this society contributions were made amounting to \$2,394 in gold, the largest contribution toward self-support made from any foreign-mission field in our Church. Owing to the war in Cuba all mission work, except at one chapel in Havana, has been suspended. The ever-increasing congregation of exiles at West Tampa is included in Southern Florida.

The Church Society for Promoting Christianity among the Jews this year expended \$10,367.32. Steady but slow advance is reported. Adults as well as children attend the Church school and receive instruction in the Christian religion, but "the fear of persecution, ostracism, and loss of employment, all of which await every convert to Christianity, undoubtedly deters these from taking further steps."

The American Church Building Fund Commission reports that during the year donations to the amount of \$3,847.83 were made to 23 churches, and loans amounting to \$34,700 to 23 churches. The

contributions to the Permanent Building fund were \$11,339.69; interest on loans and investments amounted to \$9,784.63, and the loans returned to \$24,094.95. The total paid out was \$43,801.47, and the balance on hand at the end of the year was \$17,671.43. The fund now amounts to \$298,617.02. The loans made since October, 1887, aggregate \$393,471.92, of which sum \$194,937.10 is still outstanding.

On Feb. 2 the Ven. James Dow Morrison, D. D., LL. D., was consecrated bishop, having previously been elected first bishop of the missionary jurisdiction of Duluth. Oct. 28 the Rev. Chauncey Bunce Brewster, D. D., who had been elected Bishop Coadjutor of the Diocese of Connecticut, was consecrated bishop; and Nov. 3, the Rev. Robert Atkinson Gibson, D. D., who had been elected Bishop

Coadjutor of the Diocese of Virginia, was consecrated bishop.

The Rev. David H. Greer, D. D., rector of St. Bartholomew's Church, New York, in June was elected Bishop Coadjutor of Rhode Island. The Rev. Dr. Greer declined the election, and in October the Rev. William Nielson McViekar, D. D., rector of Holy Trinity Church, Philadelphia, was elected to the office. In November the Rt. Rev. Ethelbert Talbot, D. D., LL. D., Missionary Bishop of Wyoming and Idaho, was elected Bishop of Central Pennsylvania, in succession to the Rt. Rev. Nelson Somerville Rulison, D. D., deceased.

The missionary district of Northern Texas became the independent diocese of Dallas, and the missionary district of Duluth made distinct progress toward the same action.

Q

QUEBEC, a province of the Dominion of Canada; area, 228,900 square miles; population in 1891, 1,488,535.

Government.—Political feeling in this province ran high in 1896-'97, owing to the Dominion elections, when Mr. Taillon resigned his office as Premier to accept office under Sir Charles Tupper, and was succeeded by Mr. J. F. Flynn, a member of his ministry, who appealed to the province in the following year and was defeated. But when the Legislature was opened in Quebec, Nov. 17, 1896, by Lieut.-Gov. J. A. Chapeau, Mr. Taillon was still at the head of affairs. The speech from the throne contained the following significant passages:

"My Government will submit to you a bill respecting the establishment of a special fund for the more effectual diffusion of instruction in poor municipalities and among the working classes, for improving the condition of teachers, and, generally, for the purpose of giving a further and an energetic impulse to primary education. You will also be called to legislate upon a reorganization of the public departments.

"In virtue of various acts of the Legislature, land subsidies, subsequently converted into money subsidies, were granted to certain railway companies, and represent an aggregate amount of over \$3,000,000, payable when these lands shall have been allotted, sold, and paid; that is to say, after very heavy expense will have been incurred for surveys and administration. My Government, having been requested to carry this legislation into effect, proposed to the railway companies interested who might be willing to accept the same to commute their rights for amounts smaller than those mentioned in the statutes, but payable immediately, or as they become due. The principle of this arrangement has been accepted by the companies, and you will be called upon to consider a bill to allow the effecting of such commutation.

"Emigration agents are making strenuous efforts to induce our hardy and industrious population to leave the province in order to settle in countries as far distant as Brazil. To arrest this regrettable movement, and to further promote the settlement of our wild lands, my Government will submit a measure to make a homestead of every lot hereafter conceded by the Crown, on certain conditions, and to make such conditions easier than in the past.

"The constant increase of the population, and, consequently, of the unavoidable expenses for the administration of justice, the care of the insane, the providing of means of communication, and the development of public instruction and agriculture

render more and more imperative the readjustment of the Federal subsidies payable under section 118 of the British North America act.

"I placed myself in communication with the Federal authorities in reference to the delimitation of the northern boundaries of the Province of Quebec, and I am happy to say that by an order of his Excellency the Governor General in Council, dated the 8th day of July last, the rightfulness of our claim was admitted, and the territory claimed by my Government, or its equivalent, was acknowledged as forming part of the Province of Quebec."

The Legislature was prorogued on Jan. 9, 1897. Among the bills passed were these:

To incorporate the Asbestos and Dabville Railway Company.

To amend the law respecting dentists.

To repeal the law imposing duties on transfers of property.

To reorganize the departments.

Respecting elementary schools.

To amend the law respecting probate of wills.

Respecting the public debt and its conversion.

To amend the Quebec election act of 1895.

To incorporate the North Shore Power Company.

To incorporate the town of Montreal West.

To incorporate the Municipal Association of Montreal.

To incorporate the St. Hyacinthe City and Grandby Railway Company.

To erect the Quebec Insane Asylum and its dependencies into a separate municipality.

To incorporate the Canada Stone Chinaware Company.

To incorporate the Coaticook Electric Light and Power Company.

To abolish the continuation of community creating legal usufruct in certain cases, and, for that purpose, to amend articles 1323 to 1337 inclusively of the civil code.

To prohibit indecent posters in public streets and places.

To amend the game laws.

To amend the law respecting fisheries.

To amend the act 59 Victoria, chap. xxxiv, respecting benevolent and mutual benefit associations and mutual insurance companies.

To amend the law respecting asylums for the insane.

To amend the law respecting the protection of settlers and the creation of homesteads.

To amend the license law.

To encourage technical education.

Respecting a grant to the Ursulines de Roberval.

Elections.—Early in the year great preparations were made for the provincial elections. The leading issue was economy, which the Flynn Government claimed they had practiced, while the Liberal Opposition, led by Mr. F. G. Marchand, made charges of the grossest extravagance. One of their arrangements was the guaranteeing of the bonds of the Atlantic and Superior Railway for \$8,270,000 on terms which were strongly denounced. The Administrator, Sir Alexander Lacoste (in the absence of Lieut.-Gov. Chapleau), disallowed the measure, and this increased the difficulties of the Government. The Opposition took high ground upon the improvement of the provincial system of education and the general question of electoral freedom from clerical domination. Incidentally, the ever-present Manitoba school problem complicated matters as between Protestants and Catholics. The elections were held in May, and the Flynn ministry was beaten by about 25 majority in the new Legislature.

The following new Liberal Government was formed May 26, 1897: G. G. Marchand, Premier and Treasurer; Horace Archambault, Attorney-General; H. T. Duffy, Commissioner of Public Works; S. N. Parent, Commissioner of Crown Lands; F. G. M. Dechene, Commissioner of Agriculture; A. Turgeon, Commissioner of Mines and Fisheries; J. E. Robidoux, Provincial Secretary; George W. Stephens, J. Shehyn, and J. J. Guerin, ministers without portfolio.

Finances.—The budget speech of Mr. A. W. Atwater, Provincial Treasurer, was delivered in December, 1896. His statement may be summarized briefly:

"For the fiscal year just closed our ordinary receipts have exceeded our ordinary expenditure by \$286,688. Let me deal first with the accounts of the fiscal year and the receipts and expenditure connected therewith which are before you in the shape of the public accounts. Mr. Taillon, in his budget speech delivered on Dec. 21, 1894, estimated the net receipts at \$4,255,499.42. We find the actual receipts to have been \$4,331,196.17, or an excess of actual over estimated receipts of \$75,696.75. Mr. Taillon estimated the expenditure for 1895-'96 at \$4,222,110.97. In this estimate he included the amount to be repaid upon the railway guarantee deposits of \$268,235.62. His estimated expenditure then, without this item, would have been \$3,953,875.35. The actual expenditure, exclusive of the return railway guarantee deposits,

was \$4,099,707, including extraordinary expenditure on public works and buildings, being \$145,831.65 more than the estimate. This, however, included the \$59,518.40 paid out of receipts by the collectors of provincial revenue and sheriffs, which amount appears in the statement of receipts. The actual excess, therefore, of expenditure over the estimates is \$86,313.25. The principal increases have been in respect of agriculture, immigration, and colonization, extraordinary expenditure in connection with public buildings, and miscellaneous services."

Important arrangements were made during the session for the conversion and consolidation of the public debt and the reduction of interest from 4 and 5 per cent. to 3 and $3\frac{1}{2}$ per cent. The liabilities of the province on June 30, 1897, were \$37,344,310, with assets valued at \$11,852,652.

The estimates for the ensuing year were as follow: Public debt, \$1,524,621.53; legislation, \$195,678.96; civil government, \$256,572; administration of justice, \$575,390; public instruction, \$380,260; agriculture, etc., \$288,800; public works and buildings, \$183,521.79; charities, including lunatic asylums, \$339,375.75; miscellaneous services, \$367,700; railways, \$503,240; repayment of railways, \$287,693.99; Aylmer Courthouse fund, \$1,574.

The following are details of the principal amounts voted: Legislative Council, Speaker's salary, \$3,000; members' indemnity and mileage, \$19,865; salaries and contingent expenses, etc., \$12,811.50; Legislative Assembly, Speaker's salary, \$3,000; members' indemnity and mileage, \$61,600; salaries and contingent expenses, etc., \$54,002.45; printing and binding for the Legislature, \$25,400; library of the Legislature, purchase of books, \$2,000; salaries, contingent expenses, etc., \$5,800; expenses of elections, \$2,500; clerk of the Crown in Chancery, salary, \$200; Queen's printer—printing, binding, and distributing the laws, \$5,500; civil government salaries, \$205,572; contingencies, \$51,000; administration of justice, \$478,450; judge of the Sessions of the Peace, Quebec, police magistrates, Montreal, their salaries, those of their officers and contingencies, including salaries of high constable and his deputy, etc., Montreal, \$22,940; reformatory and industrial schools, \$65,000; inspection of public offices, \$9,000.

One of the features of the session was a loan of \$500,000, by legislative enactment, to the Sisters of St. Jean de Dieu for the rebuilding of the Long Pointe Asylum, which had been destroyed by fire.

R

RAILWAY SERVICE IN THE UNITED STATES. Because of the wide area of the United States, the diverse natural resources of the country, and the extent to which the territorial division of labor and localization of special forms of industry have been fostered by the prevalence of unrestricted domestic trade, facilities for cheap, rapid, and safe transportation are of the utmost importance in the economic organization. Though there are within the United States lakes vast enough to float the commerce of the world, and mighty rivers unequalled elsewhere within the domain of civilization, these natural water-ways are but auxiliaries to the general system of transportation, which, partly on account of the topography of the country and the normal trend of commercial shipment, is mainly overland. The early contest for supremacy between canals and railways demonstrated the comparative inadequacy of the former for any service other than

that of feeders for the more efficient system. The railways speedily gained and have successfully maintained a paramount position in the natural transportation system, though they are still unable to compete with either natural or artificial water-ways in the movement of commodities that are shipped in large quantities, the bulk and weight of which are great in proportion to value, and in the movement of which rapid service is not required.

Construction and Mileage.—During the seven decades that comprehend the period of steam-railway transportation there have been constructed throughout the world about 430,000 miles of railway, which are capitalized at nearly \$35,000,000,000. Though the United States occupies approximately but 6 per cent. of the land surface of the earth, and contains an even smaller proportion of its total population, it is traversed by 42 per cent. of this mileage, represented by 30 per cent. of the capital.

LENGTH OF LINE IN MILES.

STATES.	1880.	1895.	INCREASE.		Miles per 10,000 of popu- lation.		Miles per 100 square miles of land area.	
			Actual.	Per cent.	1880.	1895.	1880.	1895.
The United States.	87,801 ^a	180,657	92,856	106	17.51	26.16	2.96	6.08
Alabama	1,780	3,701	1,921	108	14.10	22.24	3.45	7.18
Arizona	294	1,373	1,079	367	72.68	208.51	0.26	1.22
Arkansas	822	2,544	1,722	209	10.24	20.51	1.55	4.80
California	2,177	4,853	2,676	123	25.17	36.54	1.40	3.11
Colorado	1,385	4,551	3,166	229	71.28	100.35	1.34	4.39
Connecticut	923	1,008	85	9	14.82	12.28	19.04	20.81
Delaware	279	318	39	14	19.00	17.14	14.21	16.21
District of Columbia	28	29	1	4	1.60	1.13	47.30	47.62
Florida	529	3,000	2,471	467	19.61	69.74	0.97	5.53
Georgia	2,433	5,102	2,669	110	15.78	25.24	4.12	8.65
Idaho	206	1,085	879	427	63.12	117.31	0.24	1.29
Illinois	7,562	10,649	3,087	41	24.57	25.32	13.50	19.02
Indiana	4,321	6,395	2,074	48	21.84	26.53	12.03	17.81
Indian Territory	277	1,000	1,105 ^b	399 ^b	^c	50.66	0.89	3.23
Iowa	4,993	8,513	3,520	70	30.73	40.50	9.00	15.35
Kansas	3,385	8,812	5,427	160	33.97	56.16	4.14	10.78
Kentucky	1,559	3,034	1,475	95	9.46	14.85	3.90	7.58
Louisiana	522	2,106	1,584	303	5.55	17.12	1.15	4.64
Maine	999	1,643	644	64	15.40	22.61	3.34	5.50
Maryland	931	1,301	370	40	9.95	11.35	9.44	13.19
Massachusetts	1,869	2,119	250	13	10.48	8.61	23.24	26.35
Michigan	3,712	7,678	3,966	107	22.68	33.35	6.46	13.37
Minnesota	2,990	6,045	3,055	102	38.29	42.22	3.77	7.63
Mississippi	1,119	2,505	1,386	124	9.89	17.67	2.41	5.41
Missouri	3,708	6,592	2,884	78	17.10	22.38	5.40	9.59
Montana	18	2,841	2,823	15,683	4.63	195.55	0.01	1.96
Nebraska	1,833	5,566	3,743	205	40.30	47.79	2.37	7.24
Nevada	712	916	204	29	114.32	182.65	0.65	0.83
New Hampshire	1,013	1,206	193	19	29.20	26.14	11.25	13.39
New Jersey	1,649	2,216	567	34	14.58	13.95	22.12	29.72
New Mexico	299	1,437	1,188	397	24.97	83.22	0.24	1.21
New York	5,875	8,103	2,228	38	11.56	12.29	12.34	17.02
North Carolina	1,440	3,437	1,997	139	10.29	19.32	2.96	7.08
North Dakota	699	2,524	4,623 ^d	661 ^d	51.68	125.65	0.48	3.60
Ohio	5,415	8,615	3,200	59	16.93	21.34	13.29	21.13
Oklahoma	^e	382	^e	^e	^e	56.17	^e	0.98
Oregon	347	1,521	1,174	338	19.87	44.08	0.37	1.61
Pennsylvania	5,945	9,751	3,806	64	13.88	16.87	13.22	21.67
Rhode Island	210	221	11	5	7.59	5.82	13.35	20.37
South Carolina	1,393	2,636	1,243	89	13.99	20.83	4.62	8.74
South Dakota	^f	2,798	^f	^f	^f	77.45	^f	3.64
Tennessee	1,816	3,110	1,294	71	11.78	16.01	4.35	7.45
Texas	2,637	9,375	6,678	248	16.94	38.14	1.03	3.57
Utah	706	1,376	670	95	40.06	60.20	0.86	1.67
Vermont	874	981	107	12	26.31	26.84	9.57	10.74
Virginia	1,697	3,574	1,877	111	11.22	19.63	4.23	8.91
Washington	212	2,840	2,628	1,240	28.22	73.89	0.32	4.25
West Virginia	691	1,994	1,303	189	11.18	23.78	2.81	8.09
Wisconsin	2,960	6,051	3,091	104	22.50	32.62	5.44	11.11
Wyoming	507	1,180	673	133	243.85	176.22	0.52	1.21

^a This is 77 miles in excess of the true mileage in 1880, but being the figure assigned by States in the tenth census, it is adopted for this table.
^b Including Oklahoma.
^c No report of population in 1880.
^d Including South Dakota.
^e Included with Indian Territory.
^f Included with North Dakota.

The aggregate length of the railways of the United States on Dec. 31, 1896, was 183,601.05 miles, six times as great as in any other country, and exceeded the length of the lines serving the whole of Europe by nearly 30,000 miles.

It is not sufficient to measure the transportation facilities of a nation in miles; the true criterion is their relation to the demand for the movement of persons and property. Exact determination of the extent of this demand is practically impossible, but approximately accurate conclusions can be reached by comparing mileage with population and area. So measured, the people of the United States are served by a greater length of railways in proportion to their number than those of any other country except British North America, the Orange Free State, and some of the provinces of Australasia. For every 10,000 inhabitants the United States has 26.16 miles of railway; Great Britain and Ireland, 5.34; Germany, 5.50; France, 6.48; Russia, including Finland, 2.20; Spain, 4.27; Brazil, 5.13; Argentina, 19.15; British North America, 31.90; and Australasia, 32.45.

The proportion of railway mileage to area is exceeded only in the most densely populated countries of Europe. With 6.08 miles of railway for every 100 square miles of land area, the United States is surpassed by Great Britain and Ireland with 17.21; by Belgium with 30.25; by the Netherlands and Luxemburg with 14.02; by Germany with 13.54; by Switzerland with 13.52; by France with 11.99; by Italy with 8.21; by Denmark with 9.26; and by Austria-Hungary, including Bosnia, with 7.14. The average for the whole of Europe is but 4.03 miles; for Brazil, 0.23; for Argentina, 0.78; for British North America, 0.46; and for Australasia, 0.44.

The number of passengers carried by the railways of the United States is exceeded in but one country, England; it is twice as great as in France, and 52 per cent. more than in the German Empire. The freight tonnage annually carried by the railways in this country is greater than the totals for Great Britain and Ireland, France, and Germany combined; and the average distance carried is much longer.

American ingenuity has provided railway facilities at a lower average cost per mile than in any other country in which due regard is paid to the requirements of speed and safety. The average capitalization of the railways of the United States

is about \$63,000 a mile, and this includes such costly special construction as the sunken tracks of the New York Central and Hudson River Railroad in New York city; the tunnel that carries the trains of the Baltimore and Ohio Railroad underneath the city of Baltimore, and that which pierces the Hoosac mountain for the Fitchburg Railroad; the elaborate block-signal systems of the Pennsylvania Railroad and other companies; the triumphs of engineering skill required to carry the Denver and Rio Grande Railroad and other Pacific lines over the Rocky mountains; the numerous expensive bridges crossing the Mississippi, the Missouri, the Ohio, and other rivers; and many other extraordinary expenditures rendered essential by the development of the standards by which the adequacy of a modern transportation system is measured. Yet, in spite of the high standards established in order to meet American demands, the average capitalization per mile in this country is but 27 per cent. as high as in England, less than half that of France and Belgium, and not more than two thirds that of Germany, Austria-Hungary, Italy, and Switzerland. The difference is partly due to a difference in land damages. The quality of service in Denmark, Norway, Sweden, and Servia—the only European countries having a lower average capitalization than the United States—is not high enough to invalidate the conclusion. Railway capital in the United States averages \$156.23 *per capita* and \$3,901 per square mile of land surface. For Great Britain and Ireland these figures are \$124.49 and \$40,111, respectively; for France, \$84.45 and \$15,635; for Germany, \$53.34 and \$13,131. The following table shows the number of miles of railroad in the United States in relation to population and area at each census year, with the increase during each decade:

YEARS.	Length, miles.	Increase, miles.	Increase, per cent.	Miles per 10,000 of population.	Miles per 100 square miles of land area.
1830.....	40	.....	.....	0.03	.....
1840.....	2,755	2,715	6,823	1.61	0.13
1850.....	8,571	5,816	211	3.71	0.29
1860.....	28,920	20,348	237	9.20	0.97
1870.....	49,168	20,249	70	12.75	1.66
1880.....	87,724	38,556	78	17.49	2.95
1890.....	163,562	75,838	86	26.12	5.51

More than half the present railway mileage of the United States has been constructed since 1880. Of this increase, 56 per cent. is in the States and Territories west of the Mississippi, where it is equal to 184 per cent. of the mileage of 1880; 19½ per cent. is east of the Mississippi and south of the Ohio and the Potomac, where the increase is 115 per cent. of what was in that section previously; and 25 per cent. is in the region east of the Mississippi and north of the Ohio and the Potomac, where the mileage constructed since 1880 is 53 per cent. of what then existed in that section. The evident conclusion is that in some of the older portions of the country the railway system is now practically completed; and this is confirmed by noticing in the table (given on the preceding page) the very small percentages of increase in all the New England States except Maine. In contrast with the plan of Federal and State aid in vogue during the early development of the railway system, the efforts of some of the State governments in the East are now directed toward preventing construction of unnecessary lines. The figures for 1880 in the table are from the reports of the tenth census; those for 1895 are from the report of the statistician to the Interstate Commerce Commission for June 30 of that year.

The following table shows the railway mileage of the country on June 30 of each year from 1880 to 1896 and at the end of the calendar year 1896, together with the annual increase. The figures given for "operated mileage" include a duplication of physical mileage to the extent of 3,000 to 5,000 miles, owing to the use of the same tracks by two or more companies. Both physical and operated mileage are shown for those years for which such complete data are available, the figures being from official sources with the exception of those for 1896, which are estimated.

YEARS.	Physical mileage.	Operated mileage, including track-age rights.	Annual increase.
1880.....	87,801.00	89,762.68	.....
1881.....	.....	97,868.19	8,105.51
1882.....	.....	108,983.70	11,115.51
1883.....	.....	118,734.54	9,750.84
1884.....	.....	124,303.09	5,568.55
1885.....	.....	127,099.42	2,796.33
1886.....	.....	133,369.40	6,269.98
1887.....	.....	145,409.91	12,040.51
1888.....	149,901.72	154,730.06	9,320.15
1889.....	157,758.83	160,835.58	6,105.52
1890.....	163,597.05	166,841.64	6,006.06
1891.....	168,402.74	172,221.25	5,379.61
1892.....	171,563.52	175,509.35	3,288.10
1893.....	176,461.07	180,581.27	5,071.92
1894.....	178,708.55	182,894.37	2,313.10
1895.....	180,657.47	184,944.44	2,050.07
1896.....	182,599.66	187,003.74	2,059.30
1896 (Dec. 31).....	183,601.05	188,063.69	.....

This table shows two periods of heavy railway construction since 1880, culminating in 1882 and 1887, each followed by a gradual falling off in the amount of new line built. The annual increase in operated mileage can not be taken to represent exactly the amount of new construction, but if both figures could be given they would be not far apart. Using round numbers, therefore, it may be said that the amount of new line constructed in a year has fluctuated between 12,000 miles in 1886-'87 and 2,000 miles since 1893. The average annual increase in operated mileage for the sixteen years has been 6,077.57 miles; but since 1890 the average increase has been only 3,360.35 miles in operated mileage, or 3,167.10 physical miles. It should be understood that the mileage figures in all these tables represent miles of line, not miles of track. The inclusion of second, third, and fourth tracks, yard tracks, and sidings would swell the present total to about 240,000 miles.

Employees.—The operation of this railway system gives direct employment to nearly 800,000 men, or 1 in every 30 persons in the entire country engaged in gainful occupations; and approximately \$500,000,000 a year is expended in wages and salaries. The number of employees of every grade increased from 418,957 in 1880 to 785,034 in 1895. This was an increase of 87 per cent., which is less than the increase in mileage during the same time, the number of employees per 100 miles of line having fallen from 477 to 441.

Equipment.—The equipment of the railways on June 30, 1895, embraced more than 35,000 locomotives, 33,000 passenger cars, and 1,196,000 freight cars of various kinds. The increase in equipment has kept pace with the increase in mileage, and in some particulars has outstripped it.

The increase in the number of locomotives and passenger cars has been almost exactly in proportion to the increase in mileage the former remaining at 20 for each 100 miles of line, and the latter showing a slight increase from 18 to 19 per 100 miles. The freight cars, however, have increased

much more rapidly than the mileage, and the same is true of the cars assigned to the use of the companies themselves; so that the total number of cars per 100 miles of line has increased from 594 to 715. The number of freight cars in use is probably even greater than the figures in this table indicate, owing to the increased use of private cars, which are not reported.

EQUIPMENT.	NUMBER.		PER 100 MILES OF LINE.	
	1880.	1895.	1880.	1895.
Locomotives:				
Passenger.....	5,088	9,999	6	6
Freight.....	9,942	20,012	11	11
Switching and unclass'd	2,361	6,688	3	3
Total.....	17,391	35,699	20	20
Cars:				
Passenger service.....	16,176	33,112	18	19
Freight service.....	499,442	1,196,119	567	673
Companies' service. ...	8,276	41,330	9	23
Total.....	523,894	1,270,561	594	715

Values.—The railways of the country are capitalized at about \$11,000,000,000, a sum fourteen times as large as the national debt, and more than four times as large as the aggregate indebtedness of our National, State, and local governments. The capitalization has increased more rapidly than mileage since 1880, the increase being chiefly in bonds, as shown below:

CAPITALIZATION.	AMOUNT.		PER MILE OF LINE.	
	1880.	1895.	1880.	1895.
Common stock.....	\$2,309,134,322	\$4,201,697,351	.....	.....
Preferred stock.....	304,471,942	759,561,305	.....	.....
Total stock.....	\$2,613,606,264	\$4,961,258,656	29,794	28,602
Funded debt.....	2,390,915,402	5,385,495,573	27,255	31,048
Other forms of indebtedness.....	421,200,894	616,830,156	4,801	3,556
Total.....	\$5,425,722,560	\$10,963,584,385	61,850	63,206

There has been a diminution of \$1,192 a mile in the relative amount of railway stock, and a relative diminution also in the floating debt of the railroads, but these are more than counterbalanced by the increase of \$3,793 a mile in the bonded indebtedness. This tendency is to some extent explained by the number of reorganizations in which new bonds of higher par value, but entitled to a lower rate and aggregate of interest, have been exchanged for those formerly outstanding. There have been also numerous instances of railway consolidations brought about by purchase of stock in one company by an issue of bonds in another, and of construction of branch lines wholly upon the proceeds of bonds issued by the parent company.

Service and Earnings.—The increase in the public service performed by the railways has greatly exceeded the increase in mileage, and in 1895 the service performed was equivalent to carrying more than 12,000,000,000 passengers and 85,000,000,000 tons of freight a distance of one mile. While the mileage has increased 106 per cent., there has been an increase of 112 per cent. in the volume of the passenger business, and of 163 per cent. in the freight traffic. This is shown in the following table, in which the volume of traffic is expressed in passenger miles and ton miles:

The income of the railways has increased much less than the mileage. The following table shows the earnings from each kind of traffic in the two years under comparison:

CLASS OF TRAFFIC.	1880.	1895.	Increase per cent.
Passengers.....	\$144,101,709	\$252,246,180	75.0
Mails.....	10,472,813	30,969,746	195.7
Express.....	8,828,259	24,284,508	175.1
Freight.....	416,145,758	729,993,462	75.4
Unclassified and other	902,055	37,877,566	....
Total.....	\$580,450,594	\$1,075,371,462	85.3
Earnings per mile of line.....	6,612	6,050	

From the fact that gross earnings from transportation increased 85 per cent. while the amount of business increased 112 per cent. in the case of passenger traffic and 163 per cent. in the case of freight, it is obvious that there must have been during this period a marked reduction of charges. This conclusion is emphasized by observing that the earnings from freight and passenger traffic increased only 75 per cent., the largest percentages of increase being in the receipts from the Government and the express companies, for transportation of the mails and goods sent by express. The rate of increase in freight earnings is less than half as much, and in passenger earnings only two thirds as much, as in the volume of the corresponding traffic. Both freight and passenger rates have fallen,

but the decline has been much less marked in the latter case, probably owing to the expense connected with increased speed and otherwise improved accommodations for travel. The average rate per passenger mile in 1880 was 2.51 cents; in 1895, 2.04 cents. The average rate per ton mile in 1880 was 1.286 cent; in 1895, 0.839 cent. The downward tendency in rates on both classes of traffic has been broken by but few and slight temporary augmentations of the average charges. There was an increase in the average passenger rate for 1895 over that for 1894, which is fully explained, not by any actual increase in regular passenger charges, but by a diminished proportion of reduced-rate tickets, the enormous excursion business occasioned by the Columbian Exposition at Chicago being almost wholly included in the official year immediately preceding. Notwithstanding this increase (more than half a mill), the average passenger receipts per mile were less in 1895 than in any previous year except 1894.

The passenger rates in 1895 were a little more than four fifths, and the freight rates a little less than two thirds of the corresponding charges fifteen years before. The yearly saving to the public from the reduced rates, on the basis of the business done in 1895, is \$53,673,821 in passenger fares and

AMOUNT OF TRAFFIC.	1880.	1895.	Increase per cent.
Passengers carried one mile.....	5,740,112,502	12,888,446,271	112
Tons of freight carried one mile.....	32,348,846,693	85,227,515,891	163

\$365,822,392 in freight bills, or nearly \$420,000,000 altogether.

The efficient cause of the reduction in rates has doubtless been competition—not between the railroads to any important extent, but with water routes and between shippers and markets, the latter having produced increasing pressure upon the railways for concessions. The reduction in freight rates has been general; it has not been confined to any particular class of traffic or section of the country. A few examples will serve to illustrate the general tendency. The most important single rate is that on grain and flour from Chicago to New York, which is the basis of all charges on grain and flour shipped from the West to the East. This rate fell from 35 cents per 100 pounds in 1880 to 15 cents in 1896. The charge on packed meats from Cincinnati to New York, another rate of great importance, fell between 1880 and 1895 from an average of 33.41 cents to 26 cents per 100 pounds. The rates on cotton, the great staple product of the South, have diminished in like manner. The cotton rate to New York from Memphis fell from 74 cents in 1880 to 50½ cents in 1895; and the rate from New Orleans, which is affected by the competition of the water routes, was 55 cents in the former year and 44 cents in the latter. These are not extreme instances, but are typical reductions affecting some of the most important articles shipped.

It must not be supposed that the amount saved to the public by the decline in rates represents a net loss to the railroads. The lowering of rates has helped materially to bring about the enormous increase in traffic, which in turn has made possible a relative saving in the expense of conducting the business. The increase in the volume of traffic has not been accompanied by a correspondingly great increase in operating expenses, several causes having combined to produce greater economy of operation. There was between 1880 and 1895 an increase of about 5 per cent. in the density of passenger traffic, and 30 per cent. in that of freight traffic. The average efficiency of one employee shows a much more striking increase, being represented by 13,701 passenger miles and 77,213 ton miles in 1880, and by 15,526 passenger miles and 108,565 ton miles in 1895. The efficiency obtained in the use of the equipment shows on the whole no decided change, the increase in the work done by each locomotive

being about offset by a diminution in the amount of traffic to a car. In the case of passenger cars this diminution is easily explained by the increased and often unnecessary frequency of trains between the same points, due to rivalry of competing roads, and by the increased use of sleeping and parlor cars. These causes have resulted also in a diminution of 3 in the average number of passengers to a train. The average freight-train load, on the other hand, has increased 47 per cent., but the average efficiency obtained in the use of freight cars has diminished almost as much as that of passenger cars. It is impossible, under present conditions, for the railways to use their cars economically while moving the crops. As New England has almost ceased to grow wheat, and as this and other bulky products have been shipped in larger and larger quantities from the West, it has become necessary to return from the Atlantic seaboard every year an increasing number of empty cars. A less important and less inevitable waste arises from the occasional practice of granting, as a special concession to certain shippers, the privilege of keeping cars for a specified time for storage. Finally, examining the efficiency of capital in the railway business, it is seen to have increased nearly one-third in the movement of freight, and somewhat less than one twentieth in the case of passenger traffic. Stating the results in different words, as the traffic has increased a greater amount of work has been accomplished by each mile of track, each employee, each locomotive, each freight train, and each dollar of capital, while the reverse is true of passenger trains and both passenger and freight cars. The net result is that the expense of operation as a whole has increased much less rapidly than the volume of traffic. The operating expenses rose during the period under consideration from \$339,516,302 to \$725,720,415, an increase of 114 per cent. This is a little more than the rate of increase in the passenger traffic, but much less than the rate of increase in freight traffic. It is evident that the railway business as a whole is, in the language of the economists, subject to the law of increasing return, an increase in the amount of work done being accompanied by a less than proportional increase in cost.

On the other hand, operating expenses have increased more rapidly than gross earnings. They were 58.5 of the earnings from transportation in

ITEMS.	AMOUNTS.		PER MILE OF LINE.	
	1880.	1895.	1880.	1895.
<i>Income:</i>				
From transportation.....	\$580,450,594	\$1,075,371,462	\$6,612	\$6,050
From other sources.....	80,844,798	132,432,133	921	745
Total income.....	\$661,295,392	\$1,207,803,595	\$7,533	\$6,795
<i>Expenditures:</i>				
Operating expenses.....	\$339,516,302	\$725,720,415	\$3,668	\$4,083
Taxes.....	13,283,819	39,832,433	151	224
<i>Fixed charges:</i>				
Interest on funded debt*.....	126,442,310	252,512,920	1,440	1,420
Interest on current liabilities.....	9,037,798	7,860,261	103	44
Rents.....	51,790,719	94,324,738	590	531
Miscellaneous.....	1,879,848	31,436,569	21	177
Total fixed charges.....	\$189,150,675	\$386,134,488	\$2,154	\$2,172
Dividends.....	70,550,342	85,287,543	804	472
Other payments from net income.....	.....	673,957	...	12
Total from net income.....	\$70,550,342	\$85,961,500	\$804	\$484
Total expenditures.....	\$612,501,138	\$1,237,648,836	\$6,977	\$6,963
Surplus.....	48,794,254	29,845,241	556	...
Deficit.....	.....	.....	...	168
Grand total.....	\$661,295,392	\$1,207,803,595	\$7,533	\$6,795

* Accrued.

1880, and had risen by 1895 to 67·5 per cent. Accordingly, a smaller proportion of the receipts is available for the payment of interest and dividends, and the result is a marked diminution in the return to the capital invested, for the capital itself has increased more rapidly than the earnings. The statement on page 707 is a condensed income account showing the amount and disposition of railway earnings in 1880 and 1895. It is worthy of note that the amounts received and disbursed by the railroads in a year exceed the aggregate receipts of National, State, and local governments, and equal 15 per cent. of the country's total annual production of wealth.

Compared with mileage, the income both from operation and from other sources has diminished, while operating expenses, taxes, and fixed charges have increased, notwithstanding a diminution in accrued interest. The result is a very decided falling off in dividends from \$804 per mile of line in 1880 to \$472, or (including other payments from net income) \$484, in 1895. In other words, while the mileage more than doubled, the aggregate sum paid in dividends increased only 50·9 per cent. In declaring dividends to the amount of \$85,287,543 in 1895, the railway companies used \$29,845,241 more than was available for that purpose from the revenue of the year, and a net deficit of that amount was therefore created, to be met, if at all, either out of the accumulated surplus of former years or by the creation of current liabilities. The average rate of interest accruing on railway bonds in 1895 was 4·69 per cent., but there is no official statement showing how much of the accrued interest was actually paid. The average rate of dividends was 1·72 per cent., but \$3,475,640,203 of the stock, or 70·06 per cent. of the whole, paid no dividends whatever. On the dividend-paying stock the average rate of interest was 5·74 per cent. Treating the accrued interest as having been all paid, the total return to capital may be stated at \$196,992,652 in 1880 and \$337,800,463 in 1895, a gain since 1880 of only 71·5 per cent., although the capital had more than doubled. It is evident that, on the whole, the return to capital invested in railways is by no means exorbitant. Unofficial reports show that the year 1896 brought no very important changes in the distribution of dividends.

Bankruptcy.—During the period from 1880 to 1896 inclusive 412 railroads, operating about 90,000 miles of line and \$5,000,000,000 of capital, were placed in the hands of receivers, and 506 roads, with 73,000 miles of line and a capitalization of nearly \$4,500,000,000, were sold under foreclosure. In studying these totals, however, some allowance should be made for duplication, some roads having been placed with receivers more than once. On June 30, 1895, about 38,000 miles of railway, or more than one fifth of the entire mileage of the country, were in the hands of receivers, and hence at least nominally controlled by the courts.

Discrimination.—The most characteristic feature of the last decade in railway transportation is the attempt to prevent unjust discriminations by means of an act of Congress and a commission appointed for its enforcement. The interstate commerce law, like most important legislation, consists of a series of compromises. This explains why it attempts to apply three separate remedies, each of which had been loudly advocated by a considerable body of adherents as a complete cure for the evils of unregulated transportation. These remedies are: 1. A summary process for hearing and adjudicating complaints and enforcing relief. 2. Publicity of railway methods and accounts. 3. Perpetual competition among railways. Though the law has been in force ten years, and has been several times

amended, these fundamental principles are unaltered. The first has been deprived of all practical effect by the refusal of the United States courts to consider the conclusions of the commission as final as to either facts or law. The others have been enforced with reasonable continuity, but have by no means produced the effect desired. Unjust discriminations between individuals, classes of traffic, and communities continue to exist, while the unrestrained competition imposed by the law has assisted in producing the present unfortunate financial condition of numerous important railways. Public opinion has gradually passed to the side of the railways, and there may be said to be a strong balance of sentiment in favor of permitting pooling arrangements under strict Federal supervision. In the meantime railway officials and attorneys are striving to find some way to secure the maintenance of fair charges, elimination of the unjust discriminations always produced by active competition, and an equitable division of traffic without violating the statute. The Joint Traffic Association, which has just completed the first year of its existence, and the more recently organized Southwestern Traffic Association and Western Freight Association are expressions of this desire. These associations are all organized on a similar plan, and, among other things, involve the delegation of rate-making powers to boards consisting of representatives of each interested road, the concentration of agencies, and the gradual abolition of separate solicitation for traffic. Though the one first organized has had remarkable success, it is yet too early to decide whether the divergent interests of the separate railway corporations are made sufficiently harmonious to give to these associations the cohesive qualities essential to permanent success.

On March 22, 1897, the Supreme Court of the United States rendered a decision by which all such associations as those described seem to be declared illegal under the anti-trust law.

REFORMED CHURCH IN AMERICA. The statistical reports of this church, presented to the General Synod in June, give the following footings: Number of churches, 634; of ministers, 654, with 7 candidates; of families, 58,371; of communicants, 107,960; of baptized noncommunicants, 45,188; of baptisms during the year, 6,283 of infants and 1,315 of adults; of members received on confession, 5,585; of Sunday schools, 915, with a total enrollment of 120,808 names; number of catechumens, 27,800. Amount of contributions for denominational benevolent objects, \$204,889; for other objects, \$100,754; of contributions for congregational purposes, \$1,038,321. These figures show an increase of 5 churches, 2 ministers, 666 families, and 3,256 communicants; a decrease of \$23,458 in contributions for denominational benevolent objects and of \$11,259 in those for other objects, and an increase of \$32,818 in contributions for congregational purposes.

The report of the Board of Education to the General Synod showed that 114 students had been aided, 26 new names had been enrolled, and 13 students had entered the ministry during the year.

The Board of Publication reported that it had a business account of \$16,000. The contributions had amounted to \$1,388, the smallest amount received during the last fifteen years. The Synod directed the board to discriminate between its purely business affairs and its benevolent work, and to report separately concerning them.

The total receipts of the Board of Home Missions had been \$72,217; of which \$40,414 were in contributions from the churches, Sunday schools, and individuals, to home missions and the Church Building fund; \$10,262 from legacies, and upward of

\$20,000 contributed through the Woman's Executive Committee. Eighty-six churches, with 68 missionaries, had been assisted in the East, and 131 churches, with 84 missionaries, in the West. The assisted churches in the East were situated frequently in new centers of population, where, if on the outskirts of large cities, they soon became self-supporting. The mission churches returned in the aggregate 9,059 families; 13,539 members, 1,016 of whom had been received during the year on confession of faith; 17,934 members of Sunday schools; 6 new churches organized, 2 churches disbanded, and 5 become self-supporting. The low state of the treasury had prevented the board's responding to an appeal made to the previous General Synod for help among the colored people of the South. The General Synod advised the board to make further inquiry into the expediency of instituting missions among the colored people of South Carolina and the District of Columbia, and to proceed as they might judge best in the matter; also to ascertain the financial system existing in the churches receiving aid, with an ultimate view to promoting self-support; and to introduce, so far as might be practicable, the principle of local or classical support of new missionary enterprises.

The total receipts of the Board of Foreign Missions had been \$111,112, and the expenditures had exceeded this sum by \$8,000. The growth of the missions during the forty years since they were established on an independent foundation (they having till 1857 been associated with the American Board) is reviewed in the report, which says: "The 2 missions of 1857 have increased to 5, while in every element of work and fruit the increase has been many times as great. The 6 stations have become 23, nearly four times as many; the 2 outstations have increased more than a hundredfold, till they number 236; for 17 missionaries, men and women, there are 78, with 6 others under appointment; 33 ordained native ministers, where there were none forty years ago, and 247 other native helpers where there were only 22. More than six times as many churches (47) number nearly twenty times as many communicants (5,306). Nineteen boarding schools for boys and girls gather nearly 1,000 scholars, and 4 theological schools or classes have 79 students, where there were none of either class in 1857. For the 6 day schools there are 159, and into them are gathered 5,859 scholars, for the 87 of forty years ago. During the forty years 143 missionaries have gone to the different fields (55 men and 88 women, married and unmarried)—16 men and 22 women to China, the same number to India, 17 men and 33 women to the two missions in Japan, and 6 men and 1 woman to Arabia." In China one effect of the massacres of 1895 had been to call more public attention to the Christian "doctrine." Valuable evangelistic work on extended tours was rendered by the women of the Amoy mission. Substantial progress was making in the evangelistic work in the Arcot mission, India. The mission in Japan had celebrated the quarter centennial of the organization of its first church. The Arabian mission in its work among the Moslems found opportunity also among the slaves taken by the British from the traders. The General Synod asked the board to consider the advisability of appointing an agent who can devote his time to presenting the cause of foreign missions among the churches.

The General Synod met in its ninety-first regular session at Asbury Park, N. J., June 2. The Rev. Charles W. Fritzt, D. D., was chosen president. A communication was received from the General Synod of the Reformed Church of the Netherlands, asking for an interchange of delegates, who, besides

conveying the greetings of the churches, should have seats as members having full powers of discussion. The proposition was accepted, and the Synod of 1898 is expected to appoint delegates to the General Synod of the Netherlands, which will meet in the summer of that year. It was also resolved that a delegate be appointed to convey by letter the fraternal greeting of the Church to the Reformed Church of South Africa, with a proposition for regular correspondence. A report was made that the plan of co-operation in home missions of Presbyterian and Reformed churches had been adopted by the General Assemblies of the Northern, Southern, and Cumberland Presbyterian churches, the General Synods of the Reformed churches in America and in the United States, and the General Assembly of the Presbyterian Church in Canada. The Committee on the Amsterdam Correspondence (see "Annual Cyclopædia" for 1895, REFORMED CHURCHES) reported that, having obtained subscriptions seemingly sufficient to warrant the step, they had appointed an agent to go to Holland and secure copies of such papers as might seem important. They would, further, endeavor to obtain additional funds to provide for translating and editing the material collected, with the expectation that it would then be published without further expense to the Church. The correspondence in question is regarded as of great importance, in that it embraces a history of the Reformed Dutch Church in the United States as well as of the older churches, down to and beyond 1771. The work of the committee was approved, and the Rev. E. T. Corwin, its agent, was designated official historiographer of the General Synod, to gather, arrange, and edit, without expense to it, historical material, "such as this of the Amsterdam Correspondence," and also such as would probably be included in the digest heretofore authorized, and in a new edition of the manual. The term "baptized noncommunicants," as it appears in the statistical tables, was defined to mean all those whose names appear on the roll of baptized members of the Church who have not been received into full communion. The Synod reaffirmed its belief that the observance of the Fourth Commandment is of perpetual binding obligation on all men; advised all members to promote it, and ministers to be diligent in defending it; and commended the American Sabbath Union and the Woman's National Sabbath Alliance.

REFORMED EPISCOPAL CHURCH. This Church has, according to the latest collected statistics, 87 ministers, 93 churches, and 8,863 communicants.

The fifteenth General Council met in the city of New York, June 9. Bishop Samuel Fallows was chosen presiding bishop. A woman, presenting her credentials as a delegate, the question of admitting her was referred to the Committee on Constitution and Canons, who decided that she was ineligible. The treasurer of the body reported that his receipts had been \$19,226, and that a balance of \$2,600 remained on deposit. The receipts of the Special Church Extension Trust had been \$30,900, and its disbursements \$26,000, spent chiefly in aid to churches. The bishops, rendering account of their several jurisdictions, reported that 1,494 members had been confirmed. The work of Bishop P. F. Stevens was among the freedmen of South Carolina and other States of the South, and included 17 ministers, 16 congregations, 24 missions, 1,295 communicants, and 2,000 adherents. In this jurisdiction 249 confirmations were returned. The secretary of the Publication Society reported that a new prayer book, containing the Bishop's Psalter, had been published. The introduction of a resolution restricting the use of vestments in the services of

the Church gave rise to an earnest debate, at the close of which the resolution was adopted "that no official dress other than the black academic gown shall be used by the ministers of the Church in any of the services of the Church; provided, that in any church in which the surplice is now used it may continue to be used, so long as that church shall so elect; and provided, also, that any bishop who now uses the bishop's robes may continue to use them within the limits of his jurisdiction so long as he shall so elect." Upon the announcement of the vote on this resolution Bishop Cheney read a letter of protest against it, characterizing the vote as a fatal blow at Christian liberty, and offered his resignation from the boards and committees of the church of which he was a member. He was followed in this act by four other members of committees. Proposed changes in the constitution and canons and in the prayer book were laid over till the General Council of 1900.

The Annual Synod of the Reformed Episcopal Church in England met in Liscard, May 31. Bishop Eldridge was unanimously elected presiding bishop. The bishops' report on the state of the churches was "in every way satisfactory and encouraging," and showed that the year had been one of decided progress. A committee was appointed to arrange the working of a prayer and workers' union. At a public meeting held during the sessions of the council, Bishop Eldridge made an address explaining and vindicating the purposes and methods of the Church.

REVENUE-CUTTER SERVICE, UNITED STATES. This service was organized in 1790 by President Washington, at the suggestion of Alexander Hamilton, first Secretary of the Treasury, with a view to replenishing the exhausted finances of the republic by stimulating and protecting its commercial interests. The officers chosen by the President to form this new corps were selected from the old Continental navy, their fighting qualities being the best recommendation for their appointment, and a little fleet consisting of 10 vessels was fitted out and placed under the control of the Treasury Department. For six years the Revenue Marine, as the service was originally termed, constituted the sole naval force of the United States, while the expense of their maintenance, as well as their original cost of building and equipping, was charged against the revenue derived from imposts and tonnage. Very primitive ideas were held in those early days regarding naval requirements, to judge from the compensation that was considered sufficient for the officers and seamen to whom were assigned such important duties. The salary of a captain was \$30 a month, besides his subsistence; to the first, second, and third mate was paid \$20, \$16, and \$14 respectively; to the mariners, \$8, besides the rations allowed to a soldier in the army. But in 1793 the compensation of a captain was increased to \$40 a month, and that of his subordinates proportionately.

Established upon a military basis, the Revenue-cutter Service has performed an active part in every war undertaken by the United States. In 1797, when hostilities with France began, several large vessels were added to the service, to act as a coast defense, and the little fleet of the Treasury Department, then numbering 20 vessels, proved itself a valuable auxiliary to the infant navy. Sixteen of the 22 prizes taken from the French were captured by revenue cutters, whose roll of officers held the names of Barney, Truxton, Nicholson, and Stephen Decatur, and in whose ranks were found the historic "Constitution" and "Constellation," afterward transferred to the naval establishment. In 1794, the Revenue-cutter Service distinguished itself again by aiding in the enforcement of the law

prohibiting the slave trade. Several vessels were captured by the vigilant cutters in southern waters, and an aggregate of 487 negroes intended to be sold into bondage were thus liberated.

In 1799, by act of Congress, the Revenue Marine was declared to be a part of the available naval force in time of need, a distinguishing pennon was bestowed upon each cutter, and the term "lieutenant" was substituted for that of "mate" among her subofficers. To-day, when visited by the Secretary of the Treasury or by the President of the United States, each cutter displays in addition to the national ensign a president's flag or a secretary's flag.

The next good work performed by the service was the suppression of piracy in the Gulf. A relentless warfare was waged against the freebooters by the cutters, which boldly attacked pirate vessels of far superior size and force and compelled them to strike their colors, pursuing them even into their bayous of rendezvous until their harboring along the southern coast was completely broken up. During the War of 1812 the revenue cutters bore a prominent part. Only one week after the declaration of hostilities the cutter "Jefferson" seized the British schooner "Patriot," with a valuable cargo, the first prize taken from the enemy. This important capture was followed by 12 others and the taking of 900 British prisoners by the cutters while performing the dangerous duty of coast guard. The gallantry and fearless character of the officers of the service called forth words of admiration even from the enemy on several occasions. While co-operating with the navy throughout the Seminole war, the prompt and efficient conduct of the Revenue Marine drew forth from the commanding naval officer the strongest eulogies. From 3 to 5 of the cutters were constantly on the coast of Florida, rendering assistance to the inhabitants, to the army, and to the navy as long as the Indians were hostile, and 7 cutters gained for themselves a high reputation during the struggle with Mexico.

Since the discipline upon a revenue cutter is the same as that maintained upon a war ship, the service is always ready for a call to arms. As in every former emergency, it was the revenue cutters that responded first to the summons of the endangered Union. At the cry for aid from Fort Sumter, it was the cutter "Harriet Lane" that steamed first to the rescue of the garrison. At every post of danger, at every point requiring support, either offensive or defensive, during the four years' struggle, the ubiquitous cutter was found. All the older officers at present in the service saw active duty in the civil war. The "Harriet Lane" shared in the attack on Newport News and Hatteras Inlet, and the cutter "Miami" in that on Sewall's Point, while the "Naugatuck" was with the ironclads laying siege to Fort Darling with Rogers. Several other cutters served in connection with the Potomac flotilla, and were instrumental in preventing the transportation of supplies from North to South. The "Forward" arrived at Annapolis as soon as Gen. Butler reached that point himself, and furnished him with a valuable auxiliary. It was the "Nemaha" that received Gen. Sherman on board after his famous march to the sea, and had the honor of conveying him to the fleet of gunboats below Savannah. The cutter "Hercules" suffered the loss of her commander, Capt. Thomas N. Dungan, who was killed in action near the Virginia shore.

Even in time of peace the officers of the Revenue-cutter Service are exposed to the perils of war, as each commander is directed, in case of failure on the part of any vessel arriving in a port of the United States on being hailed to come to and submit to proper inspection, to fire first across her

bow as a warning, and, in case of persistent refusal to allow an examination, to compel obedience by means of shot and shell. Each cutter, therefore, carries great guns and a full complement of small arms for the use of the crew if forced by stress of circumstances to resort to harsh methods in executing and securing respect for those laws which the Secretary of the Treasury is bound under his oath of office to enforce.

Another duty that has fallen to the lot of revenue vessels was the natural outgrowth of their cruising always in close proximity to the coast. They were witness to many shipwrecks, and, from instincts of humanity, rendered all the assistance in their power

partment resulted in the birth of the Life-saving Service as an independent bureau in 1878, and Mr. Kimball, in recognition of his exceptional fitness for the post, was appointed its general superintendent, which office he still holds. But the connection of the Revenue-cutter Service with this branch of the public service has not ceased, for 12 of its officers are detailed to drill and discipline the crews at life-saving stations, and to inspect the condition of the buildings and equipments. A glance at the annual reports shows an average of 100 persons saved from drowning each year by the Revenue-cutter Service, irrespective of the Life-saving Service, while the record for 1895 registers an



THE "FORWARD."

to the sufferers. Under the law of 1837, requiring the President to assign public vessels to service on the coast during the winter months for the relief of storm-driven vessels, ships of war were at first designated, but could not perform the work, owing to their size and draught, and were soon replaced by the revenue cutters. These little vessels have since performed the perilous task every year in a most creditable manner, and its accomplishment demands superior knowledge of coast waters, skill, and discretion. During seventy years of winter cruising for the relief of distressed navigation, only one wreck of a cutter has occurred, that of the "Gallatin," which stranded on the New England coast in a blinding snowstorm. From this requirement of guarding the coast line with a view to preventing disasters and the fatal consequences of unavoidable wrecks, was evolved that grandly benevolent institution the Life-saving Service, which owes its present perfect system to the unrelenting, zealous efforts of Sumner I. Kimball, chief of the Revenue Marine from 1871 to 1878, who detailed some of his most efficient officers to set in order the affairs of the incipient life-saving districts. While a branch of the Revenue Marine, the Life-saving Service grew to such size and prominence that the attention of the navy was covetously attracted. But the struggles on the floor of the House of Representatives for and against its transfer to the Navy De-

aggregate of 122 vessels in actual distress assisted, their cargoes being valued at \$1,081,592, a sum \$150,000 in excess of the entire appropriation for the maintenance of the Revenue-cutter Service. When vessels of the service are in commission on the Great Lakes the officers are specially charged with the duty of aiding vessels in difficulty or disaster, and never, no matter how severe the weather, has a signal of distress been exhibited in vain without sight of the service.

The Revenue-cutter Service has developed with the growth of the nation. Its multifarious duties, as formulated in the volume of regulations recently published, cover every class of maritime necessity. The list is as follows:

1. Protection of the customs revenue.
2. Assistance of vessels in distress.
3. Enforcement of the laws pertaining to the quarantine.
4. Enforcement of the neutrality laws.
5. Enforcement of the navigation and other laws governing merchant vessels.
6. Protection of merchant vessels from piratical attacks and the suppression of piracy.
7. Protection of the seal fisheries and sea-otter hunting grounds in Alaska.
8. Protection of wrecked property.
9. Protection of the timber reserves of the United States against depredations.

10. Suppression of illegal traffic in firearms, ammunition, and spirits in Alaska.

11. Suppression of the slave trade.

12. Suppression of mutinies on board merchant vessels.

13. Superintendence of the construction of life-saving stations.

14. Inspection and drilling of crews of life-saving stations.

15. Assisting the Commissioner of Fish and Fisheries.

16. Enforcement of the provisions of law in regard to the anchorage of vessels in the ports of New York and Chicago.

17. Co-operation with the navy when directed by the President.

18. Establishment and maintenance of a refuge station at or near Point Barrow, Alaska. (The refuge station at Point Barrow was discontinued in 1896.)

In fulfilling these requirements the time of the cutters is fully occupied. The "Manhattan" is engaged in enforcing the regulations governing the anchorage of vessels in New York harbor and bay, for although most vessels, on being notified that they are outside of the prescribed limits, comply with instructions at once, some are refractory, and the patrol steamer is obliged to use force in moving them from channel ways to proper anchorage. The Chinese exclusion act intrusts co-operatively to the cutters stationed on the Pacific coast the prevention of unlawful landing of Chinese subjects and smuggling of opium in large quantities. A larger patrol force than at present exists is needed on the Great Lakes, where the annually increasing commerce puts forth its vast demands. The disturbed condition of affairs in Cuba has rendered necessary the assigning of several vessels to duty on the coast of Florida to maintain neutrality, and, in connection with the Marine-hospital Service, to prevent the importation of contagious diseases.

For fulfilling the regulations respecting extinguishing fires, a terrible opportunity was given by the Chicago catastrophe in 1871. The cutter "Johnson" is still remembered with gratitude by the inhabitants, to whom she brought relief when they were driven from their homes, shivering with cold and in a starving condition. As the cutter, after several hazardous attempts to draw near the burning city, was forced to turn aside from the channel obstructed by *débris*, she steamed into the first basin below the lighthouse and gave her attention to the sufferers huddled together on the shore and taking refuge in shanties rudely constructed from dry-goods boxes. During the three days that the vessel remained near Chicago her provisions were liberally bestowed, officers and men uniting in the task of cooking and distributing the food.

The little fleet of cutters employed in Bering Sea is dealing with important international issues which require the utmost prudence and judgment. Ever since the acquisition of Alaska revenue cutters have been furthering the interests of the United States in its waters. Ten days after the ratification of the treaty for the purchase of the Territory, May 28, 1867, the cutter "Lincoln" was ordered to that region. She carried several scientific men from the Smithsonian Institution and the United States Coast Survey, who brought back the first information concerning the new Territory. But the duty of exploration was soon superseded by the commission to enforce the regulations of the *modus vivendi* with Great Britain, which treaty limited the quota of seals to be taken on the Pribilof Islands during each year to 7,500. The ruthless slaughter of these creatures by speculators had aroused both nations to a recognition that something must be done to prevent the

extinction of the herd. The award of the Tribunal of Arbitration held in Paris, Feb. 29, 1892, prohibited the hunting and killing of seals at any time within 60 miles of the Pribilof Islands, the great seal resort of the world, or during the months of May, June, and July in other Alaskan waters. By



CAPTAIN CHARLES F. SHOEMAKER.

various legislative acts Congress has given effect to this award; and each year since a proclamation is issued by the President warning all vessels entering these waters against violating any of the regulations for the protection of fur-bearing animals. An officer of the navy was placed in command of a joint fleet composed of naval vessels and revenue cutters and dispatched to patrol Bering Sea. In 1895 much apprehension was felt lest the area of the award might not be thoroughly covered, because this patrol duty was committed entirely to the charge of five cutters, Capt. C. L. Hooper, R. C. S., being in command. The area covered by the vigilant little fleet extends over 60 degrees of longitude and 25 degrees of latitude, making an aggregate of 77,461 miles of cruising. The last annual report of operations shows a total of 94 vessels boarded and examined, 54 of which were engaged in the fur-seal trade. To ascertain whether they were complying with the conditions of their license, 31,000 seal skins were actually counted and carefully scrutinized. Four vessels, three of which were British and one American, were seized for violation of the treaty.

Incidental to the commission of patrolling Bering Sea and standing guard beside the Pribilof Islands, the ubiquitous cutters carry supplies to the various mission stations, afford relief to the whaling fleet, give medical attendance to American and native settlers on the coast, suppress the illicit sale of liquor and firearms to the Eskimo, and are ever on the watch to rescue distressed seamen whose vessels have been crushed by ice or driven on the inhospitable shores of the Arctic Ocean. Each year the cutters have returned from Point Barrow bringing back to civilization 40 to 60 persons who would otherwise have perished on the barren coast of northwestern Alaska. During the past five years the cutter "Bear," which originally formed one of the Greely relief

fleet, and is particularly adapted by construction to navigate among the ice floes, has been placed at the disposal of the Secretary of the Interior to further his project of introducing domestic reindeer into the Territory. The "Bear" has made several trips to Siberia, bringing back an average of 150 deer each year and landing them at Teller Reindeer Station, Port Clarence. Occasionally a cutter is used in the interest of the Department of Justice to arrest criminals and secure witnesses in Alaska who could not otherwise be readily reached, owing to the remote locality. Indeed, it is noteworthy that whenever special service of an arduous character is required upon the sea the nation turns to its first and oldest maritime organization.

The service is peculiarly situated. The power that is exercised by the President in regard to directing revenue vessels to co-operate with the navy in time of war is a power he can exert over no other branch of a civil establishment. The Revenue-cutter Service, from its connection with the Treasury Department, is in reality a civil institution, but originating and continuing upon a military basis. Its officers, like those of the navy, are commissioned for life, appointed by the President, and confirmed by the Senate; but, unlike the navy, the highest rank attainable in this corps is that of captain, and the highest compensation only \$2,500 a year. While the duties of the officers subject them to the dangers of war as well as of infectious disease, there is no pension list for the corps. Amid the calls of their profession the men's lives may be sacrificed and themselves incapacitated for further service; but the present law reads that only when an officer of the Revenue-cutter Service becomes disabled or loses his life in the line of duty while co-operating with the navy is his name entitled to be placed on the pension list. With this exception, his widow and orphans are left unprovided for. Nor is there any retired list for the superannuated. The names of men eighty years of age who had served in the Mexican War were to be found upon the active list until the last Congress appointed a commission to examine into this state of affairs and made provision for placing these aged officers on a roll denominated "permanent waiting orders," with half pay. Under the operation of this legislation 39 aged and infirm officers were removed, opening vacancies for promotion of younger men, physically and mentally qualified to perform whatever duty might be assigned to them. But only partial relief is afforded to the necessities of the situation by this enactment, as its beneficiaries are only those who were found disqualified by old age and broken health at the date of the passage of the act.

The Revenue-cutter Service numbers 850 seamen and 222 officers. Capt. Charles F. Shoemaker, R. C. S., chief of the bureau, served on guard duty in the port of New York during the civil war, and for thirteen years was inspector of life-saving stations, where he won a high reputation for executive ability. It is his constant aim to secure the best equipped men to take charge of the cutters, and he superintends in person the boards that examine candidates for the Revenue Marine Corps. The Revenue-cutter Service holds open a chance for merit alone. Any young man between the ages of eighteen and twenty-five may enlist, provided he is able to pass the required physical and mental examinations. To promote efficiency in the corps, the cadet system is in force, by which those entering the service are trained in their several duties. During this preparatory period of two years the compensation of the cadets is \$500 a year, and the cutter "Chase," stationed at Baltimore, affords them schooling facilities, her officers acting as instructors in the art of navigation, military drill, etc., a college professor

being also employed to conduct the studies of the young men. At the end of each school year the "Chase" goes upon a didactic cruise, to give the cadets experience in practical seamanship. At the end of the two years of initial study a competitive examination is held, and promotions are made upon the merit of the contesting parties, all political and personal influence being ignored. Besides the other advantages of the cadet system it has proved very economical, since whenever a vacancy occurs in the grade of third lieutenant, the place is held open until the following regular spring examination, and this regulation entails a saving that more than equals the extra expense of the system.

Economy is strictly enjoined upon all executive officers of the service, and it is forbidden to use the cutters for any purpose beyond their legitimate business. "Duty" is the watchword of the corps. All pleasure parties are at the private expense of the individuals participating. In fact, the multifarious requirements of the Revenue-cutter Service furnish unremitting employment for the comparatively small force of vessels. There are only 35 cutters, most of them old and well worn. Three new ones are being built, the "Golden Gate," the "Daniel Manning," and the "Walter Q. Gresham," and two new ones have been ordered for the Great Lakes. The triple-expansion engines in these cutters exhibit the latest improvements in marine machinery.

The introduction of steam as a motive power for the vessels, in 1861, revolutionized their whole management, and a corps of engineers was added to the Revenue Marine. Appointments to this corps are conducted in a manner similar to the rules of the cadet system. Any young man between the ages of



CAPTAIN JOHN W. COLLINS.

twenty-one and twenty-eight can enter this service, provided he can pass satisfactorily the prescribed academic examination and the physical test of the marine-hospital surgeon, and can also furnish evidence that he has had practical experience in the management of machinery. His salary during the probationary period of six months is \$900 a year,

after which he is eligible for promotion to the grade of second assistant engineer, with a compensation of \$1,200. Many colleges in the United States obtain a bulletin of the vacancies in this corps prior to commencement day, and post it conspicuously to stimulate the exertions of the students. The chief engineers of the Revenue-cutter Service, who receive a compensation of \$1,800 a year, are appointed by the President and confirmed by the Senate, but the lower grades are filled by examinations always. The new office of engineer in chief has recently been created by act of Congress, upon the recommendation of Secretary Carlisle, who proposed the name of John W. Collins (one of the twenty-six chief engineers) to hold this responsible post, on account of his exceptional fitness. Mr. Collins's connection with the service began during the civil war, and as he is acquainted with its every grade by personal experience, he has proved himself very energetic in raising the standard of efficiency throughout the engineer corps, insisting that all applicants be found both practically and theoretically competent by the severest tests. He designs all the machinery for the new vessels.

The following are the names of the vessels in the service: "Woodbury," "Dallas," "Dexter," "Manhattan," "Hamilton," "Crawford," "Chase," "Winona," "Colfax," "Morrill," "Boutwell," "McLane," "Forward," "Seward," "Galveston," "Wolcott," "Rush," "Bear," "Corwin," "Grant," "Perry," "Johnson," "Fessenden," "Hamlin," "Hudson," "Chandler," "Washington," "Guthrie," "Smith," "Hartley," "Calumet," "Tybee," "Penrose," "Sperry," and "Windom."

RHODE ISLAND, a New England State, one of the original thirteen, ratified the Constitution May 29, 1790; area, 1,250 square miles. The population, according to each decennial census, was 68,825 in 1790; 69,122 in 1800; 76,931 in 1810; 83,015 in 1820; 97,199 in 1830; 108,830 in 1840; 147,545 in 1850; 174,620 in 1860; 217,353 in 1870; 276,531 in 1880; and 345,506 in 1890. By the State census of 1895 it was 384,758. Capitals, Providence and Newport.

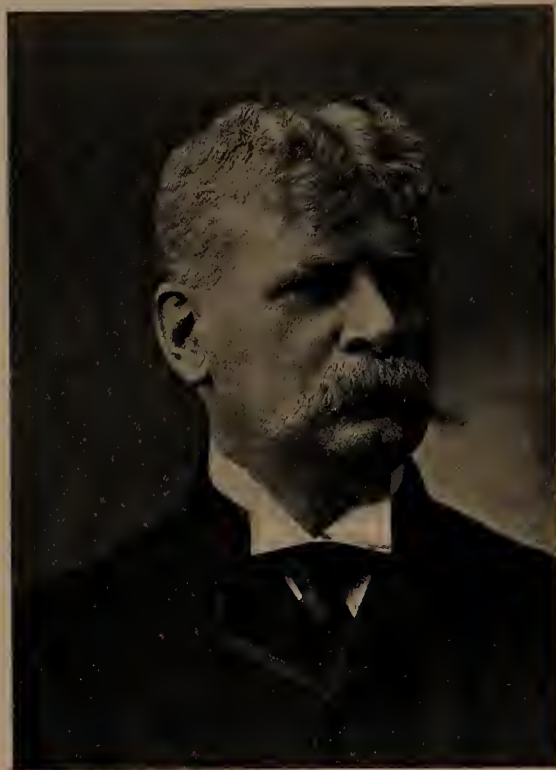
Government.—The following were the State officers during the year: Governor, Charles W. Lippitt, succeeded in May by Elisha Dyer; Lieutenant Governor, Edwin R. Allen, succeeded by Aram J. Pothier; Secretary of State, Charles P. Bennett; Treasurer, Samuel Clark, who died Dec. 27, and was succeeded by Clinton D. Sewell; Attorney-General, Edward C. Dubois, succeeded by W. B. Tanner; Adjutant General, F. M. Sackett; Auditor, A. C. Landers; Superintendent of Education, T. B. Stockwell; Chief Justice of the Supreme Court, Charles Matteson; Associate Justices, John H. Stiness, Pardon E. Tillinghast, George A. Wilbur, Horatio Rogers, W. W. Douglas, and Benjamin M. Bosworth; Clerk, B. S. Blaisdell. All are Republicans.

Finances.—By the Auditor's report in April it was shown that the receipts for the preceding year were \$1,453,843.82. Included in this amount is \$48,565.98, which represents the proceeds of loans. The receipts of the year showed an increase of nearly \$27,000. The expenditures were \$2,031,109.28. Included in this amount is \$642,060.19, paid on account of the construction of the new Statehouse, which is provided for by the issuing of bonds. The additional sum of \$52,500 for interest on these bonds, and \$20,000 paid for the sinking fund established for their redemption are also included in the amount expended. Assuming a deficit of nearly \$91,000 on the first day of the year, the expenditures of the State were met.

Education.—The enrollment in the public schools in 1896 was 59,241; the average number

belonging, 46,261; the average attendance, 41,691; the number of teachers, 1,702, with an average of 1,551; and the total expenditures \$1,905,885.85, of which \$646,907.74 was for permanent improvements.

There were 47 free public libraries, which received State aid to the amount of \$5,853.75. The



ELISHA DYER, GOVERNOR OF RHODE ISLAND.

number of volumes in them was 261,684, and the number of patrons was 45,298.

At the Agricultural College a two years' course in roadmaking has been established, including English literature, geometry, trigonometry, surveying, electrical mechanics, physical geography, mineralogy, geology, and steam engineering, besides a month's work each spring at actual roadmaking, ten hours a day. The college graduated 10 students in June.

The Friends' School held its one hundred and thirteenth commencement in June, with a graduating class of 27.

The registration at Brown University shows 860 names, including the 149 on the roll of the Women's College. About 120 were graduated at the commencement. There were 27 graduates of the Women's College. Pembroke Hall, its new building, was dedicated Nov. 22.

Much interest was shown throughout the country in the resignation of Dr. E. B. Andrews, President of Brown University, on account of the principle involved. Because of his views in regard to the free coinage of silver, which were judged to be injurious to the interests of the university, the corporation appointed a committee to confer with him concerning his public utterances on the subject. The outcome of the conference was his resignation. The action of the corporation was criticised as an attempt to interfere with the freedom of individual opinion. At length the corporation requested him to withdraw his resignation, and it was withdrawn Sept. 14.

Exercises in connection with the dedication of an historical tablet placed on the First Baptist Church of Warren were held May 25. The tablet

commemorates not only the fact of the erection of the first Baptist meeting-house in Warren, but also that in 1767 was erected the parsonage, which for three years was the home of Rhode Island College, now Brown University. The church and parsonage were burned by British troops May 25, 1778.

The one hundred and fiftieth anniversary of the incorporation of the town of Warren and the fiftieth anniversary of the Warren High School were celebrated.

Military.—There were 151 inmates of the Soldiers' Home at Bristol, in May, 26 of whom were in the hospital.

The hospital corps of the State militia celebrated its first anniversary Oct. 19 with a parade and drill. It was organized in October, 1896, but the service performed on July 4, when more than 50 who had been overcome by the heat of the day were succored by the corps, first brought it prominently before the public. The State camp was held at Quonset Point in July, with a larger attendance and better work than in 1896. A design has been accepted for a new State armory, the estimated cost of which is \$286,000.

Charities and Corrections.—The inmates at the State institutions at Cranston, Dec. 21, were classified as follows: House of Correction, 210 men, 112 women, 322; State Hospital for the Insane, 319 men, 354 women, 693; State Almshouse, 154 men, 163 women, 26 boys, 28 girls, 371; State Prison, 177 men, 4 women, 181; Providence County jail, 273 men, 21 women, 294; Sockanosset School for Boys, 304; Oaklawn School for Girls, 41. The number of inmates at the State institutions Dec. 21, 1887, was: Men, 1,117; women, 654; boys, 330; girls, 69. Total, 2,170. There were 181 patients at the Butler Hospital for the Insane, Jan. 1. The State Home for the Care of Dependent and Neglected Children had an enrollment of 125 in April. Several of the institutions are badly overcrowded.

The boys at Sockanosset School turned out work valued at \$3,915.78. The expenditures were \$50,022.22.

The report of the warden of the State Prison shows the receipts to have been \$26,455.02, while the expenditures were \$49,995.60, or an excess of \$23,540.58 of the expenditures over receipts.

The condition of unoccupied convicts was described in February as follows: "A shocking state of affairs exists at the State Prison. There are men confined within those gaunt gray walls who can not be provided with work. These men want to labor during the day so as to take their minds off their miserable situation, but there is nothing for them to do. The contract shops are overcrowded, and every inch of available space is employed. In the prison yard is a little one-story wooden building which they call the 'annex.' In this annex 130 men are confined, owing to the lack of cell room in the prison proper. From morning until night the 130 prisoners, most of whom are short-term men, sit and mope. In other States the prison rules permit the men thus confined to converse one with another, to read, and to play checkers, but at Cranston the regular jail discipline prevails, and the inmates of the annex may do absolutely nothing but think."

The gross expenses of the State institutions were \$250,521. The receipts from labor, etc., \$42,080.78.

Banks.—The condition of the banks, as reported in January, was as follows:

The total resources reported by savings banks, including those in liquidation, amount to \$72,591,433.95, which shows a shrinkage since the last report of \$49,951.95. Deposits decreased nearly the same amount, but the number of depositors gained 896, and of this gain 610 were of those depositing

under \$500. Seventeen savings banks declared annual and 13 semiannual dividends. The savings banks hold, in loans on mortgages of real estate, \$26,924,985.19; in bank and other stocks, \$3,917,817.91; in United States bonds, \$3,040,887.50; in State Bonds, \$347,455.56; and in all other bonds, \$26,362,085.16. The amount of deposits is \$68,683,697.90, and the whole number of depositors is 136,148. Of the real-estate mortgages all but \$4,269,344.08 is in Rhode Island property.

The total resources of the trust companies show a shrinkage of \$715,706.65. Their deposits on participation account increased \$437,788.14, and depositors 635, but deposits on general account decreased \$1,235,131.99. The average rate of dividend for the year was $3\frac{1}{2}$ per cent. Of the \$2,340,430.09 invested by the trust companies in real estate, somewhat more than half is in property in other States.

The Mercantile Trust Company of Providence went into voluntary liquidation in November. The old Union Bank, which went into liquidation in 1889, has paid its debts in full and the shareholders have been paid \$45.59 $\frac{1}{2}$ per share. The Phoenix Savings Bank suspended payment in March.

The report of the national banks in June shows that the total resources of these banks amount to \$55,866,198.21. The average reserve held is 25.54 per cent.

Labor.—A dispatch from Providence, Dec. 1, says: "The voluntary offer of Charles Fletcher to restore the schedule of 1893 to the operatives of the Providence and National worsted mills has been carried out, for to-day the increase of 20 per cent. goes into effect. The other mill owners have fallen into line, and about 25,000 operatives will be drawing the new pay."

The New Capitol.—In order to test the right of the Capitol Commissioners to contract for a State-house that will cost at least \$3,000,000, while the Legislature had authorized an expenditure of only \$1,500,000, the Governor asked the opinion of the Supreme Court. The answer was in favor of the commission. As no limit was mentioned in the act providing for the building, the court held that it was not exceeding its powers. At the same time, the commissioners were warned that, while they have the authority to proceed, they must not contract for work without funds, but if the funds get low must apply to the Assembly.

The Assembly proposed to leave the building without the dome for the present, and to defer the work on the terraces and approaches, as well as on the interior decorations. The commission presented its report in May, giving the following statement:

"The price for so much of the building as has been contracted for is \$1,576,000. This provides the building ready for occupancy, with the exception of the elevators, the electric wiring and lamps, a boiler house with boilers and conduit to the State-house, and the furniture. The estimated expense for these matters is \$168,000.

Revision of the Constitution.—The commission to revise the Constitution authorized by the Legislature was appointed by the Governor in March. Four of the 15 members are Democrats. The work was not finished at the close of the year.

Political.—State officers were elected April 7. There were five tickets—the Republican, Democratic, Prohibitionist, Socialist-Labor, and Liberal.

The Prohibitionists held a State convention in Providence, Feb. 22.

The Democratic convention in Providence, March 10, adopted resolutions of which the following is a part:

"We charge the Republican Legislature with cowardice, in that they have three times refused to

legislate before election so that the people before re-electing them could judge of their acts, and after election have passed bills in the interests of the monopolistic corporations and inimical to the rights of the people of this State, and we invite the close attention of the citizens of this State to the character of the legislation which will be attempted after the present election is past."

The ticket follows: For Governor, Daniel T. Church; Lieutenant Governor, Fayette Bartlett; Secretary of State, Miles A. McNamee; Attorney-General, George T. Brown; Treasurer, Edmund Walker.

The Socialist-Labor party met in convention March 12, and adopted the following declaration of principles:

"That the proceeds of all wealth created should be distributed equitably among the actual producers, and that the instruments of production should be the property of society.

"That the capitalist class, by controlling the political power, appropriates to themselves the greater part of the product of labor, and possess themselves of the tools of production, and this causes all the iniquities from which the working class now suffer.

"That to secure the product of labor and the machinery of production to their rightful owners, the working class must unite at the polls, withdraw the political power from the capitalist class, retain it in their own hands, and institute the co-operative commonwealth—the employment of themselves by themselves."

The ticket was: For Governor, Franklin E. Burton; Lieutenant Governor, Bernard J. Murray; Secretary of State, James Jefferson; State Treasurer, Frederick J. Frank; Attorney-General, John Devlin.

The Republican convention, held in Providence, March 16, chose the following candidates: For Governor, Elisha Dyer; Lieutenant Governor, Aram J. Pothier; Secretary of State, Charles P. Bennett; Attorney-General, Willard B. Tanner; General Treasurer, Samuel Clark. These candidates were elected.

Following is the vote for Governor: Dyer, Republican, 24,309; Church, Democrat, 13,675; Peabody, Prohibitionist, 2,096; Burton, Socialist, 1,386; Larry, Liberal, 357.

Legislative Session.—The Providence session began Jan. 26, and the Newport session May 25. J. Edward Studley was Speaker of the House. The Governor's message explained that, to meet the excess of expenditures for the year, it had been necessary to discount a note for \$50,000, and draw upon the tax for 1897 to the extent of more than \$25,000. Balances from the appropriations for Providence County jail, for lands in Cranston, and for the Providence armory, amounting to \$137,905.35, had been referred back to the treasury in accordance with resolutions of the Legislature. The regular income from ordinary sources was larger than that of any previous year by \$26,817.28.

An act was passed to provide for licensing and regulating the receiving, boarding, and keeping of infants. It requires that any person other than an overseer of the poor, or manager of any State or charitable institution, or any duly authorized officer or agent of the same, who receives, boards, or keeps for hire, any infant under the age of two years not related by blood or marriage to, or not legally adopted by, or committed to him, must have a written license from the Board of Charities and Corrections, approved by the Board of Health of the city or town where it is proposed to keep the child. The penalty for violation of the act is a fine of \$100, or imprisonment for one year, or both; and if the defendant in a prosecution claims rela-

tionship to the child in question, or legal custody of it, the burden of proof is with him.

Another act for the protection of children forbids the employment of any under the age of sixteen years in theatrical and circus performances and the like, unless it be in connection with churches, or schools, or private instruction in dancing or music, or unless it be under the auspices of a Rhode Island society incorporated, or organized without incorporation, for a purpose authorized by law, or unless it be with the written consent of the mayor of the city or the president of the town council where such child is to be employed; or in any mendicant or wandering occupation, or for the exhibition of deformity, etc., the Society for the Prevention of Cruelty to Children may seize and detain any child so occupied as a witness at the trial of the person responsible.

The color of the State flag was changed from blue to white, the original color, which was changed to blue in 1883.

Power was given to the authorities of Providence to establish a public-school teachers' retirement fund. The sources of the fund are to be legacies and gifts; 1 per cent. of the salaries paid to teachers who shall, prior to Oct. 1, 1897, elect to come under the provisions of the act; and 1 per cent. of the salaries paid to all teachers appointed after said date; provided that no teacher shall be assessed for more than 1 per cent. of \$1,200 a year; and interest or income from these moneys. Those entitled to payments from the fund are teachers who have contributed at least five years and have taught a certain time—for men at least thirty-five years and for women at least thirty—of which service twenty years shall have been in the public schools of the city—next preceding the time of retirement. The annuity received shall be equal to one half the salary at the time of retirement, provided that in no case shall it exceed \$600 a year.

Some changes were made in the road laws, and \$30,000 was appropriated for macademizing sample sections of highway not more than one half mile in length, under the direction of the highway commissioner.

The laws on insolvency were amended, providing that in suits for assigned property the assignee may intervene in any action relating to the property of the insolvent, and may take upon himself the prosecution or defense of such suits. Judgments in suits begun in the lifetime of one who has left an insolvent estate, or before the estate was declared insolvent, are to be included with the other claims.

It was provided that any person who is so addicted to the habitual, excessive, and dangerous use of alcohol or of any poisonous drug, as to render it necessary for his own welfare or for the safety of the community that he should be restrained and cured, may be restrained by his next friend either within his own house or in the Butler Hospital for the Insane during such period, not exceeding one year at any one time, as may be requisite to effect his cure.

A sixth Associate Justice of the Supreme Court was provided for.

Among the appropriations were the following: For expenses of the General Assembly, \$32,300; judicial expenses, \$103,500; for educational purposes, \$171,800; for free public libraries, \$6,500; for the State Home and School, \$20,000, besides the products of the farm; for support of the indigent insane, \$8,000; for State printing, \$34,000, and binding, \$6,500; for advertising and publishing laws, \$10,000; for militia and military affairs, \$45,950; for the Board of Charities and Corrections, \$225,000; for relief of Union soldiers, sailors, and

marines, \$13,000; for the Soldiers' Home, \$18,000; for the College of Agriculture, \$10,000; for the Institute for the Deaf, \$19,000; for the interest on Statehouse bonds, \$52,500.

A section of the criminal law was amended to read as follows: "Whenever an indictment shall be found against any person for any offense, and the petit jury shall not be satisfied that he is guilty of the whole offense, but shall be satisfied that he is guilty of so much thereof as shall substantially amount to an offense of a lower nature, or that the defendant did not complete the offense charged, but that he was guilty only of an attempt to commit the same, the jury may find him guilty of such lower offense, or guilty of an attempt to commit the same, as the case may be, and the court shall proceed to sentence such convict for the offense of which he shall be so found guilty, notwithstanding that such court had not otherwise jurisdiction of such offense."

An appropriation of \$10,000 was made for additions and improvements at the permanent camp grounds, and it was provided that "the first machine-gun battery shall be composed of one battery of not more than 4 guns, and shall consist of 4 commissioned officers and not more than 50 privates."

A resolution was adopted calling for the appointment of a commission to revise the Constitution, to consist of 15 members and to be nonpartisan; and another asking that the Rhode Island Congressmen support a bill in Congress for the preservation of the frigate "Constitution."

A matter of historical interest was brought up in the Senate in February. A copy was shown of the log of the British frigate "Rose," which was at anchor in the harbor of Newport during the early part of 1775, giving account of an action between two colonial sloops and a tender of the frigate. The document goes to show that this State had the first conflict in the Revolution between vessels regularly commissioned by this colony and a naval vessel of Great Britain. It was ordered printed.

Other acts were: Providing for the testing and labeling of fertilizers.

Amending the game laws.

Empowering Roman Catholic Church corporations to acquire and hold lands for burial purposes and property in trust for the maintenance and improvement of burial grounds.

Prohibiting the selling of cigarettes to boys under sixteen years of age.

ROMAN CATHOLIC CHURCH. The hope of Leo XIII for the unification of all branches of the Christian Church was further indicated in the year 1897 by an encyclical letter, issued in May and entitled "The Operation of the Holy Spirit in the Church." It is an earnest appeal for the return of all dissident Christians to the original unity of the Church. That the long-continued efforts of the Holy Father toward this end have been partly, at least, crowned with success was shown in 1897 by the return to Catholicism of some thousands of schismatic Copts under the hierarchy established in Egypt. The schismatic Bishop of Diarbekir, in Mesopotamia, early in the year voluntarily surrendered his orders and declared his allegiance to the see of Rome. Leo XIII also lent his aid toward a resolution of the difficulties of the election of a successor to Gregorius Yusef, pontiff of the Arabian Greek Church. The Greek College of the Propaganda at Rome was given over to the instruction of candidates for the Greek rite only, under the government of the Benedictines.

By a new apostolic constitution issued on the feast of St. Francis of Assisi (Oct. 4) Leo XIII inaugurated a change in the government and constitution of the four religious communities known as the Observantists, Reformed Friars Minor, Dis-

calced (barefooted) Franciscans, and Recollects. These orders, which were offshoots from the original institute founded by Francis of Assisi, previously had had autonomy and distinct customs and privileges. Henceforth they are to be united under the same rule and constitution and governed by one minister general. This change was an important one, implying a decided reform in many respects in some of the communities. All hereafter are to be called Friars Minor, to wear the same habit, and surrender all distinctive privileges. The two other Franciscan orders, the Conventuals and Capuchins, remain distinct.

Among the other principal public acts of the Holy See this year was the important document, issued in January, enforcing anew the rules of the Index against prohibited books. In August the Pope issued an encyclical letter to the bishops of Austria, Switzerland, and Germany, on the occasion of the tercentenary of the blessed Peter Canisius, one of the first Jesuit priests, and an apostle of Catholicism in the time of the Reformation. He also delivered several allocutions during the year before the cardinals and to different deputations or pilgrimages. The most important of these was the one delivered to the French workmen on the occasion of their pilgrimage to the Vatican. In January he sent an encyclical letter to the bishops of France, on the occasion of the twenty-fifth anniversary of their national vow (the building of the Church of the Sacred Heart at Paris). In August he wrote a similar encyclical to the episcopate of England, which was about to celebrate the thirteenth centenary of the landing in Kent of St. Augustine and the missionaries from Rome.

The most important of the decisions of the Holy Office during the year was that affirming the authenticity of 1 John v, 7: "Because there are three who give testimony in heaven: the Father, the Word, and the Holy Ghost, and these three are one." The modern editions of the New Testament omit this verse, since, according to German and English critics, the Greek manuscripts do not give it. Since the verse in question had an important bearing on the Catholic teaching of the distinction of Three Persons together with the unity of their nature in Godhead, its rejection by critics caused Catholics to have recourse to the apostolic see and to submit the question whether this verse was to be rejected or its authenticity doubted. The reply of the Holy Office, given Jan. 13, was "No" in both particulars.

The Pope strongly disapproved of the celebration of the nineteenth centenary of the Redemption, as he had previously disapproved of a similar centenary of the birth of the Blessed Virgin. He demonstrated his usual activity in the matter of ecclesiastical studies by several important reforms in the Vatican seminary, the seminaries of Spain, Mexico, and South America, as well as by a fatherly letter concerning the attendance at Italian universities of members of religious or teaching orders or of the secular priesthood. During the year the King of Siam visited him at the Vatican, as also did the extraordinary ambassador of the Shah of Persia.

Leo XIII has pleased all the lovers of art by the restoration of the Borgia apartments, in which were many masterpieces of the Renaissance. Reproductions of paintings of this epoch were published in a magnificent work, copies of which were sent by the Pope to the sovereigns of Europe and to President McKinley. The long and tedious conflict concerning the new Church of St. Joachim, at Rome, was settled by a decision in favor of the Pope, and the submission of the Abbé Brugidon, formerly pastor of that church.

Two saints were canonized by the Consistory of Cardinals in the year, Anthony M. Zaccaria, founder of the Barnabites, and Peter Fourier, of Mattaincourt, surnamed the Apostle of Lorraine. A consistory held in April created four cardinals: Most Rev. J. M. Martin de Herrera y de la Iglesia, Archbishop of Santiago of Compostella, born Aug. 26, 1835; the Most Rev. P. Ercole Coullié, Archbishop of Lyons, born March 14, 1829; the Most Rev. J. W. Labouré, Archbishop of Rennes, born Oct. 27, 1841; and the Most Rev. W. M. Romano Sourrieu, Archbishop of Rouen, born Feb. 27, 1825.

Statistics.—Five cardinals died in the year 1897: William Sanfelice di Acquavella, Archbishop of Naples; Angelo Bianchi, Prodatary, Bishop of Palestrina; Camillo Siciliano di Rende, Archbishop of Benevento; Anatolo Moneschillo y Viso, Archbishop of Toledo, Patriarch of the West Indies; Joseph Guarino, Archbishop of Messina.

The Roman Catholic Church is governed by the Bishop of Rome as its head. He is assisted by a senate, known as the Sacred College of Cardinals. This body when complete numbers 75. The members are ranked by ancient custom in 3 divisions: Cardinal bishops, of whom there are 6; cardinal deacons, of whom there are 16; and cardinal priests, of whom there are 53. Each cardinal has what is called a title—that is, a local church at Rome—of which he is nominally the head or pastor. The episcopate of the Catholic Church is divided into patriarchal, archiepiscopal, and episcopal sees. These again are divided into the Latin rite and Oriental rite. There are 8 Latin patriarchal sees, which have now only an historical importance—Constantinople, Alexandria, Antioch, Jerusalem, Lisbon, East Indies, West Indies, and Venice. The Oriental patriarchal sees are 6: Antioch, from which are named three patriarchs, of the Melchite rite, the Maronite rite, and the Syriac rite; Cilicia, of the Armenian rite; Babylon, of the Chaldaic rite; and Alexandria, of the Coptic rite.

There are 191 archiepiscopal sees in the Catholic Church, of which 173 belong to the Latin rite. The episcopal sees number 767, of which 714 are of the Latin rite. There are besides certain abbeys, archpresbyteries, priories, prelates, and prelatures of an episcopal character, 17 in number, making in all some 1,064 officers of episcopal or quasi-episcopal character or jurisdiction.

The Catholic Population of the World.—In 1897 the number of Catholics was reckoned as follows: Europe, 158,753,710; Asia, 9,320,000; Africa, 2,800,000; America, 51,100,000; Oceanica, 980,000; total, 223,000,000.

The United States.—On Jan. 19 Dr. T. J. Conaty, formerly of Worcester, Mass., was installed as the rector of the Catholic University at Washington. Bishop Keane, his predecessor, having resigned, was called to Rome and was there raised to the dignity of Archbishop of Damascus *i. p. i.* and made a canon of St. John Lateran and advisor to the congregations of Propaganda and Ecclesiastical Studies. The Sisters of Notre Dame undertook the establishment of a college for the higher education of women by the purchase of 20 acres of land in the immediate proximity of the Catholic University.

The Catholic Summer School met, in July, at Plattsburg, N. Y., for a six weeks' session. A summer school was also held at Madison, Wis., and a winter school was conducted at New Orleans.

The question of members of the Greek Catholic Church living in the United States was settled in May by a pontifical decree permitting them to conform to the Latin rite, provided that no Greek church should be accessible to them. When, however, they should return to their own country, they must adopt again the Oriental rite.

The annual meeting of the archbishops of the United States was held at Washington, Oct. 31.

The following episcopal appointments were made during the year: Right Rev. James Trobec, Bishop of St. Cloud; Right Rev. Thomas J. Lenihan, D. D., Bishop of Cheyenne; Right Rev. John J. Monaghan, D. D., Bishop of Wilmington; Right Rev. Edward P. Allen, D. D., Bishop of Mobile; Right Rev. Edward W. O'Day, Bishop of Nesqually; Right Rev. James Quigley, Bishop of Buffalo; Right Rev. John Fitzmaurice, Coadjutor Bishop of Erie; Right Rev. Edmond F. Prendergast, D. D., Titular Bishop of Scillio *i. p. i.*, Auxiliary Bishop of Philadelphia. The Most Rev. P. L. Chappelle was transferred from the archdiocese of New Mexico to that of New Orleans.

Other appointments: Very Rev. Joseph Eigenmann, appointed provincial of the Congregation of the Fathers of the Holy Ghost in the United States; Rev. Father Fidelis, C. P., elected general consultor of the Passionist Congregation for the United States; Very Rev. Edward J. Purbrick, S. J., appointed provincial of the New York and Maryland provinces of the Jesuit order to succeed Very Rev. William O'B. Pardow; Very Rev. George Deshon, elected superior general of the priests of the Institute of St. Paul the Apostle.

The College of St. Francis Xavier, in the city of New York, on June 21, celebrated its golden jubilee. On Dec. 5 was celebrated the fiftieth anniversary of the Cathedral of Milwaukee. Most Rev. Patrick J. Ryan, Archbishop of Philadelphia, celebrated his twenty-fifth anniversary of episcopal consecration on April 21. The golden jubilee of Very Rev. Augustine F. Hewitt, Superior General of Priests of the Institute of St. Paul the Apostle was celebrated on March 27, and was followed by his death on June 3. Other deaths were: Most Rev. Francis Janssens, D. D., Archbishop of New Orleans, on June 12; Most Rev. Thomas L. Grace, Bishop of St. Paul; Right Rev. J. T. Butler, D. D., Bishop elect of Concordia, Kan.; and Rev. Father Havermans, of Troy, N. Y., the oldest priest in the United States.

Alaska.—The Very Rev. John B. Rene, S. J., was made Prefect Apostolic of Alaska, with residence at Juneau City. There are in Alaska 11 priests, 8 churches, 3 hospitals, 5 schools, and 2 orphanages with 250 pupils.

Canada.—The hierarchy of Canada is composed of 8 archbishops and 24 bishops. The clergy number 2,917, of which 2,208 are diocesan, 709 religious. There are 2,555 churches and chapels, and 14 seminaries with 711 students. There are 85 schools or colleges for boys and 275 academies for girls. The charitable institutions are 240. The Catholic population numbers 2,092,936. The most important religious event of the year was the encyclical of the Pope, issued to the Canadian episcopate on Dec. 8, by which he counseled patience under the oppressive legislation that took from the Catholic people of Manitoba their established rights in the matter of schools. He advised moderation, mildness, and charity, in order thereby to obtain more quickly a thoroughly Christian legislation. Until that time he desired the Catholics to draw from the existing laws all the good possible, and, where it might prove necessary, to found schools themselves, and to provide them with teachers who should not be inferior in learning and training to the teachers of the state schools.

For furthering the adjustment of the Manitoba school question, the Pope appointed Right Rev. Mgr. R. Merry del Val apostolic delegate to Canada. Mgr. Paul Bruchesi was consecrated Archbishop of Montreal, Aug. 8. The episcopal see of Vancouver island was made vacant by the death of Right Rev.

John N. Lemmens, Aug 31. Right Rev. J. E. Legal was appointed Coadjutor Bishop of St. Albert.

England.—Among the chief events of the year was the passage of the educational bill, which was much desired by Roman Catholics, as it embodied the principles of denominational education. A desire long cherished by English Catholics was at last satisfied by the pontifical permission to study at the Universities of Oxford and Cambridge. Houses of study were at once opened in both of these institutions for Catholic youth, and before the close of the year there were at Oxford more than 41 Catholic students.

The Queen's jubilee was celebrated with much enthusiasm by the Catholics of England. Cardinal Vaughan issued a pastoral letter in praise of her Majesty's reign and general policy. The Catholic hierarchy of Australia joined in the same sentiments. The following words express the sentiments of the address: "The auspicious event thus commemorated, as it is without precedence in the history of the empire, so does it mark an epoch glorious beyond a parallel in the expansion of commerce, in the spread of intellectual culture, in the development of scientific research, and in the general elevation of the social condition of the people. Of the many measures of state policy that have left their impress on your reign we note with special interest the adoption of the great principles of religious equality as being secured to all your Catholic subjects, and we would fain recognize in the manifold blessings which benign Providence has bestowed the merited reward of an enlightened legislation." During the year the Anglican archbishops made a reply, temperate in tone, to the papal bull "*Apostolicæ Curæ*," of the preceding year, whereby the validity of English ordinations had been formally rejected by the Pope after hearing the report of a special commission of theologians. In September the Catholic Church of England celebrated the thirteenth centenary of the arrival of St. Augustine and his missionaries at Ebbfleet, in Kent; all the bishops of England and representatives of the French episcopate were present.

There are in England 25 Catholic episcopal sees, with 1 archbishopric and 1 cardinal. The clergy number 3,090, of whom 2,143 belong to the diocesan clergy and 947 to the religious orders. There are 1,812 churches or chapels.

Right Rev. John Carroll, third Bishop of Shrewsbury, died Jan. 14.

Ireland.—The most important event of the year was the agitation for the establishment of a Catholic university. The promise of this very desirable institution, which seemed so difficult to obtain, was at last brought about in the speech of Mr. Arthur Balfour, in the House of Commons, proclaiming it the desire and intention of the Government to grant to Ireland a specifically Catholic university. This seemed necessary on account of the Catholic opposition to Trinity College, Dublin, and the 3 Queen's colleges, in which alone the Irish Catholics have hitherto been able to obtain a university education in their own country. In June the thirteenth centenary of the death of St. Columba was celebrated on the Scotch island of Iona by pilgrimages, celebration of masses, and discourses. Not only the Catholics, but Anglicans and Presbyterians held such celebrations. It was a public acknowledgment that to a great extent the British Isles owed the benefit of civilization and religion to St. Columba, born in Donegal, in Ireland, and the parent of numerous Columban monasteries in Ireland, Scotland, and England. Another event of importance was the translation to Ireland of the relics of the blessed Thaddeus McCarty, an Irish bishop of the fifteenth

century, who died in the odor of sanctity and was buried at Ivrea, in northern Italy. In July the Irish bishops issued to their people an important pastoral concerning the authority of the Church in reference to political affairs. The following words give the spirit of this document: "No matter what given line of action may conduce to the temporal prosperity, whether of individuals or of a people, or to the advancement of a political cause, worthy in itself of all encouragement and praise, that line of action becomes unlawful in the light of Christian morality if it be in conflict with any principle of morals." During the year there took place a large and important pilgrimage of the Irish clergy and people to Rome. The vacant episcopal see of Ross was filled by the appointment of Right Rev. Denis Kelly, D. D.

France.—The Pope repeated during the year his instructions to the bishops and faithful of France, inculcating a reconciliation with the republic as the existing form of government. There was much enthusiasm in the direction of the canonization of Joan of Arc. A pilgrimage of French workingmen visited the Pope in August. In most of the French dioceses services were held in honor of the Franco-Russian alliance.

Germany.—The archiepiscopal see of Freiburg, in Baden, long vacant as the result of a conflict between the civil authorities and the cathedral chapter, was filled by the appointment of Bishop Kompf, of Fulda. In the year the venerable Father Kneipp, who had established the famous water cure at Wörrishofen, passed away.

Norway, Sweden, Denmark.—In the northern kingdoms the Catholic Church, so long excluded from them, made much progress in the year 1897. The Norwegian Storting abrogated in part the last of the restrictions against Catholicism, by which the Jesuits and other religious orders were forbidden to establish themselves in the country. The restrictions remained in force against the Jesuits as an order, although they may remain there individually. The other religious orders, male and female, were allowed to establish themselves in that country.

Russia.—Several favorable modifications took place in the relations of the Holy See to Russia. They were only concessions of detail, but none the less important as showing an apparent amelioration in the relations which had been strained for some time. As a result of one concession the Catholic bishops of Russia were permitted to go to Rome without a special ukase. Seven new bishops were nominated at once and consecrated. It was also stipulated that the Uniat Catholics, 3,000,000 of whom adhered to Rome at the end of the sixteenth century, should thenceforth be left to worship undisturbed. Only a few thousands of them were found still faithful to the Roman communion. This question was always one of the most burning points between the two powers. The question of the obligatory teaching of the Russian language in all the Polish seminaries, under the control of a Russian official, remained still a cause of dissension. No complete peace was concluded between Russia and the Holy See, and all relations between the bishops and the Pope were still carried on by means of the Ministry of Worship, which involved the refusal of a free communication of the episcopacy with Rome. The Poles were not all satisfied with the conduct of the Pope; they accused him, though wrongfully, of separating the cause of religion in Poland from the general national aspirations of the entire Polish people. The Russian priest Tolstói, a relative of the writer, was severely punished for the conciliatory attitude which he manifested toward the Pope during a somewhat

lengthy stay at Rome. In all these matters the most anti-Catholic influence was that of Pobedonoseff, who was a champion of a Russification by which the Protestants of Finland and the Catholics of Poland were equally to be forced into a system that meant the destruction of both religions.

Switzerland.—The fourth International Scientific Congress of Catholics was held at Freiburg about the middle of August, and was attended by some 700 members from all parts of Europe and from the United States. The third centenary of the death of blessed Peter Canisius was celebrated in that town on the same occasion, this having been the seat of his labors; at the same time an encyclical letter to the bishops of Switzerland, Austria, and Germany was received, in which the Holy Father urged again the principles and methods of Catholic education.

Spain.—The most notable ecclesiastical event of the year was the excommunication of the Minister of Finance by the Bishop of Majorca for the confiscation of certain property belonging to the sanctuary of Lluch; the confiscation had been ordered by the civil authorities. After some negotiations the matter was amicably settled.

Italy.—The relations of the Holy See with the Italian Government did not substantially change in the year 1897. The prohibition to Catholics to vote in state elections was maintained by a repetition of the previous papal advice. Several congresses of a particular or general character were held in pursuance of Catholic interests, at Venice, Genoa, Milan, and elsewhere in Italy. This work of Catholic congresses, general and local, attracted the serious attention of the Italian Government, which issued late in the fall a series of circulars of a repressive nature. During the year the fifteenth centenary of St. Ambrose was celebrated at Milan, and a colossal statue was erected at Bagnorea to the great Franciscan theologian St. Bonaventure.

Foreign Missions.—In China the church in Tientsin was formally dedicated, in the presence of French officials and Chinese mandarins. This was taken as an official reparation of the cruel massacre perpetuated in 1870, whereby several French missionaries and sisters lost their lives, together with many native Catholics. The murder of two German missionaries by a Chinese mob led to a demand for indemnity on the part of the German Emperor, which ended in the seizure and retention by the German authorities of an important port and extensive territory.

The notable events of the year in Japan were the opening of a new church at Sendäi, a spot famous in the Catholic history of Japan, of the Church of the Twenty-six Martyrs at Nagasaki, and of the hospital of Osaka.

In Turkey during the Turco-Grecian War the Pope interfered with success at Constantinople for the protection of Catholic and other Greeks in that city.

The Catholic missions in Madagascar increased rapidly under the protection of the French Government. There were in 1897 in Madagascar 61,464 Catholics, with 258,956 catechumens or persons preparing for baptism.

From the report of the Seminary of Foreign Missions at Paris it appears that in the missions controlled by that society there were in 1897 38,882 adult baptisms and 172,716 baptisms of pagan children. The report of the Lyons Society of the Propagation of the Faith shows that in 1897 the sum of 517,113 francs was raised for missionary purposes. Similar associations existed in all parts of the Catholic world.

In general in 1897 the Catholic Church had 13,300 missions in foreign or pagan lands. Of these

8,500 were French. There were 4,500 brothers (laymen) engaged in the same work. Some 52,000 women were occupied as sisters in these missions, and of these 33,000 were French; so, too, of the 119 priests murdered in these missions 95 were French, which is equivalent to saying that the foreign missions of the Catholic Church were chiefly carried on by the French.

ROUMANIA, a monarchy in eastern Europe. The legislative power is vested in a Senate of 120 members, elected for eight years by property holders divided into two classes, and a Chamber of Deputies containing 183 members, elected for four years by all the people who pay taxes, divided into three electoral classes. The reigning sovereign is Carol I, a prince of Hohenzollern-Sigmaringen, who was elected Domn of Roumania on April 20, 1866, and was proclaimed King on March 26, 1881. The ministry at the beginning of 1897 was made up as follows: President of the Council and Minister of Agriculture, Commerce, Industry, and Domains, M. Aurelian; Minister of Justice, M. Phedre; Minister of Public Instruction and Worship, M. Mazerco; Minister of War, Gen. C. Budisteano; Minister of Foreign Affairs, C. J. Stoicesco; Minister of Finance, G. C. Cantacuzino; Minister of the Interior, M. Lascar; Minister of Public Works, M. Porumbaro.

Area and Population.—Roumania has an area of 48,307 square miles, with a population in December, 1894, of 5,417,249. The number of marriages in 1896 was 47,230; of births, 232,417; of deaths, 166,189; excess of births, 66,228. Bucharest, the capital, had 232,009 inhabitants in 1894.

Finances.—The revenue in 1896 was 202,507,632 lei, or francs, and the expenditure 216,560,567 lei, leaving a deficit of 14,052,935 lei. The budget for the financial year 1898 makes the revenue 215,153,000 lei, of which direct taxes produce 33,610,000 lei, indirect taxes 61,160,000 lei, State monopolies 50,170,000 lei, domains 25,383,000 lei, public works 16,838,000 lei, the Department of the Interior 10,242,000 lei, that of Finance 4,570,000 lei, that of War 1,325,000 lei, that of Foreign Affairs 160,000 lei, that of Worship and Instruction 200,000 lei, that of Justice 200,000 lei, and other sources 11,295,000 lei. The total expenditures are set down as 215,153,000 lei, of which 76,215,109 lei are for the service of the public debt, 66,500 lei for the Council of Ministers, 6,146,898 lei for the Department of Domains, 5,642,070 lei for that of Public Works, 18,510,787 lei for that of the Interior, 25,324,927 lei for that of Finances, 44,470,335 lei for that of War, 1,635,181 lei for that of Foreign Affairs, 27,084,424 lei for that of Worship and Instruction, 6,613,196 lei for that of Justice, and 443,573 lei for a fund for supplementary and extraordinary credits. The public debt on April 1, 1897, amounted to 1,240,432,700 lei, on which the annual charge is 73,291,518 lei.

The Army and Navy.—Military service is obligatory for all Roumanians from the age of twenty-one. The period of service is seven years with the colors or on leave, and two years in the reserve, but active service in the permanent army must not exceed three years in the infantry, four years in the territorial cavalry, or five years in the territorial infantry. There are four army corps of two divisions each, with a special division for the Dobrudja. The peace effective of the permanent army in 1897 was 3,269 officers, 388 civil employees, 940 military cadets, and 54,445 rank and file, with 390 pieces of field artillery and 11,723 horses. The territorial army numbered 70,270 men, with 7,200 horses. The total war effective is 3,948 officers and 168,000 men, with 52,604 horses.

The naval force comprises a deck-protected cruiser of 1,400 tons, a school-ship, an aviso, 5 gun-

boats, 3 sloop gunboats, 3 first-class and 2 second-class torpedo boats, a vessel for the service of the mines, and 4 torpedo launches. The *personnel* numbers 120 officers and engineers and 1,600 men.

Commerce.—The value of the importations in 1896 was 337,922,929 lei, and of the exportations 324,056,652 lei. The imports of cereals were 4,600,000, and exports 276,500,000 lei in value; imports of fruits, vegetables, and colonial products were 23,400,000, and exports 14,700,000 lei; imports of drinks 1,000,000, and exports 2,400,000 lei; imports of animals and animal alimentary products 9,200,000, and exports 10,300,000 lei; imports of combustible materials 9,400,000, and exports 1,900,000 lei; imports of mineral products, glass, and crockery, 8,100,000, and exports 200,000 lei; imports of metals and metal manufactures 61,200,000, and exports 2,500,000 lei; imports of hides, skins, leather, and leather manufactures 15,100,000, and exports 1,200,000 lei; imports of timber and wood manufactures 6,400,000, and exports 7,400,000 lei; imports of textile materials and manufactures 150,900,000, and exports 2,800,000 lei; imports of paper 6,100,000, and exports 200,000 lei; imports of drugs, etc., 15,400,000, and exports 400,000 lei; imports of fats and oils 6,300,000, and exports 100,000 lei; imports of all other articles 20,800,000, and exports 3,500,000 lei. The capital and energy of the Roumanians have been applied hitherto to the raising of grain, while the mineral and forest resources have been neglected. Crude petroleum is found along the foot of the Carpathians toward Bukovina and Galicia, and in the plains below down to the Danube. Although wells have been worked for a quarter of a century, the industry is yet in its infancy, and suffers from lack of capital and technical knowledge. The chief aim is to supply the home market, and only 15 per cent. of the product crosses the frontier. The crude oil is to be found in enormous quantities, but well-sinking, boring, working, and transport are all defective. The recent agricultural crisis has directed the attention of the Roumanians more to their mineral wealth, and Hungarian, French, and German syndicates and the American Standard Oil Company have also obtained concessions for working oil wells.

The imports and exports were divided, in 1896, among various countries as follows, values being given in lei:

COUNTRIES.	Imports.	Exports.
Great Britain	73,367,000	111,931,000
Austria-Hungary	92,853,000	32,697,000
Belgium	9,889,000	113,849,000
Germany	95,807,600	17,003,000
France	25,883,000	8,788,000
Turkey and Bulgaria	15,471,000	15,494,000
Italy	7,835,000	10,340,000
Russia	8,121,000	6,159,000
Switzerland	4,647,000	474,000
Greece	2,383,000	383,000
All other countries	1,667,000	6,939,000
Total	337,923,000	324,057,000

The economic situation in Roumania has recently improved much. With a favorable harvest in 1896, and better prices for grain, the purchasing power of the country increased, and railroad receipts and Government revenue reflected the improvement, as well as the savings-bank returns.

Navigation.—There were 28,232 vessels, of 7,489,154 tons, entered at Roumanian ports during 1896, and 29,028, of 7,500,711 tons, cleared.

The merchant marine in 1896 comprised 271 sailing vessels, of 60,024 tons, and 28 steamers, of 1,054 tons. The Government has had 5 large steamers built in Glasgow and Kiel, with the object of transporting in Roumanian bottoms to Mediter-

anean, English, and German ports a part at least of the cereal exports.

Communications.—The state railroads in operation in 1897 had a total length of 1,790 miles, while 189 miles were under construction and 578 miles were surveyed.

The post office in 1896 forwarded 12,209,901 letters, 8,286,827 postal cards, and 25,010,636 newspapers, circulars, etc. The receipts amounted to 5,579,760 lei; the expenses, including the telegraph department, were 8,598,607 lei. The telegraph lines had a length of 4,268 miles, with 10,150 miles of wire. The number of internal telegrams was 1,706,535, external telegrams 488,944, telegrams of service 96,070, telegrams in transit 81,572; total, 2,373,121.

European Commission of the Danube.—Austria-Hungary, France, Germany, Great Britain, Italy, Roumania, Russia, and Turkey are represented on the International Commission that exercises police and other sovereign rights on the Danube below Braila and is authorized to collect tolls and dues to meet its expenses. It was created by the Treaty of Paris in 1856 for the purpose of removing the banks of sand and other obstructions at the mouths of the river and keeping them in the best navigable condition. Its powers, enlarged by the Treaty of Berlin in 1878, were prolonged till April 24, 1904, by the London treaty of March 10, 1883. The receipts in 1896 were 3,768,560 francs, of which 2,599,426 francs came from dues collected during the year and the remainder was a surplus carried over. The expenditures were 846,688 francs for administration, 569,740 for technical services, 196,113 for various charges, 589,848 for special expenditure during the year, and 311,271 for purchase of material and payment of accounts; total, 2,513,660 francs, leaving a surplus of 1,254,900 francs. There are besides a reserve fund and funds for pensioning employees and pilots, amounting to 1,583,849 francs. The number of vessels cleared at the Sulina mouth in 1896 was 1,713, of 1,794,934 tons, comprising 1,317 steamers, of 1,723,549 tons, and 396 sailing vessels, of 71,385 tons. Of the total number 699, of 1,097,737 tons, were British; 252, of 254,739 tons, were Greek; 103, of 113,113 tons, were Austrian; 77, of 79,682 tons, were Italian; 341, of 7,646 tons, were Turkish; 35, of 45,166 tons, were French; 117, of 44,785 tons, were Russian; 19, of 21,338 tons, were German; 12, of 19,117 tons, were Spanish; 34, of 18,587 tons, were Roumanian; 4, of 10,724 tons, were Belgian; and 15, of 19,400 tons, of other nationalities. The cargoes included 7,434,000 quarters of wheat, 1,395,000 of rye, 2,354,000 of maize, and 1,899,000 of barley.

Political Affairs.—The entire Cabinet tendered its resignation to the King on April 7. The National Liberal party had still a great majority in the Chamber and in the country, and the absence of its leader, Demeter Sturdza, from the Cabinet was a source of weakness to it. He had been compelled to resign the premiership four months before in consequence of the arbitrary manner in which he had dealt with the case of the Metropolitan Primate Gennadius, and now his party wanted his services again at the helm. The new Cabinet was constituted on April 12, as follows: President of the Council and Minister of Foreign Affairs, Demeter Sturdza; Minister of Finance, G. Cantacuzino; Minister of the Interior, M. Pherekyde; Minister of Agriculture, Commerce, Industry, and Domains, A. Stolojan; Minister of Public Worship and Instruction, Spiro Karet; Minister of Public Works, I. I. C. Bratiano; Minister of Justice, Alexander G. Djuvara; Minister of War, Gen. A. Berendei.

The question of the right of foreigners to inherit or of foreign heirs to hold landed property in Rou-

mania came up during the ministry of M. Aurelian. In 1878 the Roumanian Constitution was revised, subsequent to the Treaty of Berlin, in order to admit Jews to citizenship. There was inserted a clause precluding foreigners, without distinction of religion, from acquiring property rights in real estate in Roumania. It was not supposed at that time that foreigners already owning such property in Roumania, which they did to the extent of 10,000,000 lei, could not bequeath the same to their children. J. C. Bratiano, then Premier, assured the Italian Government in a diplomatic note that such was not the intent of the law. However, when the clause came to be construed later by the Roumanian judges few of them were of the opinion that foreigners could inherit land in Roumania, many held that they could dispose of it by sale and keep the proceeds, and some considered that they were not even entitled to the value of the property thus inherited, and that it ought simply to be appropriated by the state. Foreigners of various nationalities affected by this law asserted the full right to possess inherited property, basing it on the Bratiano note, which they regarded as a condition of the subsequent recognition of Roumanian independence by Italy and other powers. The Aurelian Cabinet, wishing to establish the principle that foreign heirs, while not entitled to hold real estate, were entitled to the full value of their inheritances, introduced a bill into the Senate stipulating that such heirs should sell the property descending to them within three years. It was proposed to the foreign representatives that the new agricultural bank should purchase such property for the benefit of the peasantry. The diplomatic representatives at Bucharest in an identical memorandum rejected this suggestion, and consequently the bill was abandoned. A project to allow foreign heirs to take possession of property was drawn up in March and subsequently came before the new Cabinet. While M. Sturdza was considering this question the Court of Cassation gave a final interpretation of the existing law in two decisions awarding to foreign heirs the value of the property inherited, but denying their right to hold the property. A treaty between Roumania and Turkey was said to have been signed July 12 by which Roumania, in return for advantages already conceded, bound herself to support Turkey in the event of the military aggression of Bulgaria. A difficulty arose between the Roumanian and the Greek governments because stringent measures were adopted by the former to prevent the return of Greek volunteers to Roumania. When King Carol visited Buda-Pesth to return the visit of the Emperor Franz Josef the Roumanian Irridentists organized a demonstration as a protest against the idea that the vindication of Roumanian claims to Transylvania had been abandoned. Speeches made while in opposition by Demeter Sturdza himself against the dual monarchy and in behalf of the oppressed Roumanians of Hungary were placarded by agents of the present Opposition on the walls of Bucharest. The Premier was once at the head of the agitation against the triple alliance and in behalf of unredeemed Roumania, and when he took office in October, 1895, he was obliged to give a reassuring explanation. A joint note addressed to the Balkan states by Count Goluchowski and Count Muravieff, praising their correct attitude during the Greco-Turkish war, was an official promulgation of the new Austro-Russian accord in the Eastern question, and the *entente* existing between Roumania and Austria-Hungary received fresh confirmation by the royal meeting at Buda-Pesth in September and the visit of King Carol to the Czar at St. Petersburg in November. M. Sturdza declared that Roumania had become a factor in the action of the

great powers and had acquired an influential position, as was shown by the interchange of visits with foreign sovereigns; that she was in sympathy with the triple alliance, which guaranteed universal peace, and also with the Russo-French alliance, which pursued the same object; that she was not one of the Balkan states, and had no part in their fermentations, but she assisted the powers in their efforts to preserve peace and upheld the understanding at which Germany, Russia, and Austria-Hungary had arrived for the maintenance of the *status quo* in the Balkans and of the independence of the Balkan states.

The Government introduced in the autumn two bills that savored strongly of anti-Semitism. According to one of them the Jews were only to be allowed to enter the secondary or intermediate schools on condition that there was room for them after all the Roumanian applicants had obtained admission. This practically amounted to their exclusion. The second bill exempted Jews from military service, calling upon them to pay a progressive tax instead. Most Jews were satisfied with this, but the younger generation, hoping through military service to obtain naturalization, began to hold public meetings against the Government proposal, to which the Opposition also objected as being unfair to the Roumanians themselves, who alone would be called upon to discharge military duties. At some of these meetings an angry tone prevailed. One of them was broken up by Roumanian students, who were in no way restrained by the police. The newspapers that usually reflect the views of the Government condemned not the rioters, but the Jews, who had exasperated the Roumanians. The mob of Bucharest was stirred up by the controversy, and on Dec. 5 a serious riot occurred. The authorities had taken no precautions, although inflammatory placards had been printed, and when riotous processions passed through the streets smashing windows the detachments of gendarmes that followed, ostensibly to preserve order, remained entirely passive. The mob attacked Jewish shops with iron bars and sticks and pillaged more than a dozen. Many persons were wounded. In the course of the night 100 arrests were made. Disturbances took place simultaneously in several places in Moldavia, and in Galatz more than 100 shops were sacked and the synagogue was damaged.

RUSSIA, an empire in northern Europe and Asia. The throne is hereditary in the order of primogeniture in the dynasty of Romanoff-Holstein-Gottorp. The Government is an absolute monarchy in which the legislative, judicial, and executive powers are united in the Emperor. The Emperor, otherwise called the Czar, is assisted by a Cabinet of ministers, each of whom has charge of an executive department; by a Council of State that examines and passes upon projects of law submitted by the ministers; by a Ruling Senate that watches over the general administration and superintends the judiciary; and by a Holy Synod that directs religious affairs. The Czar is the head of the national Russian Church, which follows the Orthodox Greek Catholic rite and maintains the relations of a sister Church with the Patriarchates of Constantinople, Jerusalem, Antioch, and Alexandria. The reigning Emperor of the Russias is Nicholas II, born May 18, 1868, who succeeded his father, Alexander III, on Nov. 1, 1894. The Committee of Ministers at the beginning of 1897 was made up as follows: Minister of the Imperial House and Appanages, Gen. Count J. J. Vorontzoff-Dashkoff; Minister of War, Gen. P. S. Vannovsky; Minister of Marine, Vice-Admiral P. P. Tyrtoff; Minister of the Interior, J. L. Goremykin; Minister of Public Instruction, Count J. D. Delianoff; Min-

ister of Finance, S. J. Witte; Minister of Justice, N. V. Muravieff; Minister of Agriculture and State Domains, A. S. Yermoloff; Minister of Railroads and Communications, Prince Hilkoff; Minister of Finland, Lieut.-Gen. von Daehn; Controller General, T. J. Filippoff; Procurator General of the Holy Synod, K. P. Pobedonostseff; without portfolios, D. M. Solsky and N. J. Stoyanovsky. The last named was acting Minister of Foreign Affairs from the time of the death of Prince Lobanoff, in August, 1896, until the appointment on Jan. 11, 1897, of Count Michael Muravieff. The Grand Dukes George (heir apparent), Vladimir, Alexis, and Michael were also members of the Cabinet, and J. N. Durnovo, Secretary of State, was its president. On May 24 Count Vorontzoff-Dashkoff retired from the office of Minister of the Imperial Court and Director of the Imperial Stud, which he had filled for sixteen years.

Area and Population.—European Russia has an area of 1,902,092 square miles, with a population, according to the provisional results of the census of Feb. 9, 1897, of 94,188,750, consisting of 46,433,636 males and 47,755,114 females. Poland has an area of 49,157 square miles and a population of 9,442,590, comprising 4,753,879 males and 4,688,711 females. The area of the Grand Duchy of Finland is 144,255 square miles, with an estimated population of 2,563,000. The area of the Caucasus is 180,843 square miles and the population is 9,723,553, comprising 5,129,931 males and 4,593,622 females. Siberia has an area of 4,833,496 square miles and a population of 5,731,732, comprising 2,959,557 males and 2,772,175 females. The area of Russian Central Asia is 1,548,825 square miles and the population is 7,590,275, divided into 4,084,900 males and 3,505,375 females. The aggregate area of the Russian Empire is 8,660,282 square miles, including internal waters, and the total population is 129,839,900. The cities having in 1897 more than 100,000 inhabitants were the following: St. Petersburg, 1,267,023; Moscow, 988,610; Warsaw, 614,752; Odessa, 404,651; Lodz, 314,780; Riga, 282,943; Kieff, 248,750; Kharkoff, 170,682; Vilna, 159,568; Saratoff, 133,116; Kazan, 131,508; Ekaterinoslav, 121,216; Rostov, 119,889; Astrakhan, 113,075; Tula, 111,048; Kichineff, 108,506.

Finances.—The receipts of the treasury in 1895 were 1,255,819,000 rubles from ordinary and 162,275,000 rubles from extraordinary sources; total, 1,418,094,000 rubles. The expenditures were 1,137,810,000 rubles for ordinary and 383,009,000 rubles for extraordinary purposes; total, 1,520,819,000 rubles. The budget estimate of ordinary revenue for the financial year 1897 was 1,318,366,495 rubles, and of the total receipts, including 3,808,627 rubles from extraordinary sources and 91,795,936 rubles from the loan of 1891, 1,413,971,058 rubles. Of the ordinary receipts 39,921,328 rubles came from land and personal taxes, 44,047,800 rubles from trade licenses, and 13,854,500 rubles from the 5-per-cent. tax on incomes from invested capital, making the total receipts from direct taxation 97,823,628 rubles; 159,687,100 rubles came from customhouse duties, 284,900,000 rubles from the tax on drink, 34,917,000 rubles from the tobacco tax, 21,061,000 rubles from naphtha oils, 47,526,000 rubles from beet-root sugar, 7,015,500 rubles from matches, 39,169,696 rubles from stamps, 17,355,000 rubles from succession duties, 4,200,000 rubles from passports, 9,000,000 rubles from the tax on railroad and express passengers, 3,000,000 rubles from the fire insurance tax, and 7,086,815 rubles from various duties, making the total receipts from indirect taxation 625,918,111 rubles; 3,781,430 rubles came from the mines, 1,303,750 rubles from the mint, 26,363,700 rubles from the post office, and 15,696,000 rubles from the

telegraphs, making the total from state monopolies 47,144,880 rubles; the receipts from rent of domains, etc., were 14,533,969 rubles, from sales of domain lands 598,429 rubles, from the produce of state movable property 8,861,471 rubles, from forests 32,490,340 rubles, from state mines, factories, technical institutions, and stores 74,956,351 rubles, from state railroads 259,998,944 rubles, the Government's share in receipts of private companies' lines 1,821,000 rubles, making the total from state domains and property 393,260,504 rubles; the payments for the redemption of land by peasants amounted to 87,678,000 rubles, and various other receipts to 66,541,372 rubles, including 27,981,528 rubles from the recovery of loans, 14,848,837 rubles repaid by railroad companies, 16,830,629 rubles of interest on various funds, and 1,650,000 rubles of war indemnity.

The total expenditure for 1897 was estimated at 1,413,971,058 rubles, of which 1,284,858,862 rubles were ordinary disbursements and 129,112,196 rubles extraordinary outlay for the construction of railroads. Of the ordinary expenditures 269,116,694 rubles were for the service of the debt, 2,590,328 rubles for the superior Government bodies, 19,652,264 rubles for the Holy Synod, 12,810,667 rubles for the Ministry of the Imperial House, 4,762,138 rubles for the Ministry of Foreign Affairs, 284,379,994 rubles for the Ministry of War, 59,902,175 rubles for the Ministry of Marine, 204,135,429 rubles for the Ministry of Finance, 33,431,000 rubles for the Ministry of Domains, 25,495,487 rubles for the Ministry of Public Instruction, 226,910,346 rubles for the Ministry of Roads and Communications, 78,502,825 rubles for the Ministry of the Interior, 42,815,053 rubles for the Ministry of Justice, 6,810,644 rubles for the Controller General's office, 1,543,818 rubles for the imperial stud, and 12,000,000 rubles for unforeseen expenses. The extraordinary expenditure comprises 64,500,000 rubles for the Siberian Railroad, over 33,500,000 rubles for other railroads, and nearly 31,000,000 rubles for rolling stock.

The public debt on Jan. 1, 1897, amounted to 2,028,826,100 metallic rubles and 2,857,530,942 rubles payable in currency, making the total, reduced to credit rubles, 6,050,770,092 rubles, reckoning a metallic ruble equal to 1½ credit ruble. The financial accounts for the year 1897 showed a deficit of 80,000,000 rubles, occasioned by the purchase of 50,000,000 rubles in gold for the conversion fund and 26,000,000 rubles for gold transactions at the state bank. The ordinary revenue for the year amounted to 1,369,000,000 rubles, and the ordinary expenditure to 1,238,000,000 rubles; the extraordinary revenue to 43,000,000 rubles, and extraordinary expenditure to 253,000,000 rubles. The excess of expenditure over revenue was covered by drawing bullion from the treasury. The chief feature of the ordinary revenue returns was an increase of 61,000,000 rubles in the receipts of the Government railroads.

M. Witte announced at the beginning of 1897 his determination to carry out his scheme of monetary reform by the fixation of the ruble in gold. He had studied for years a plan for putting an end to the fluctuations of exchange. When he found that German speculators were making a profit out of dealings in paper rubles he prevented the exportation and importation of these by collecting a duty on them at the frontier. In preparation for his plan of fixing the gold value of the ruble he obtained gold abroad in such quantities that Russia had the largest gold reserve in the world. M. Vishnegradsky, when Minister of Finance between 1887 and 1892, added gold to the amount of 309,000,000 rubles to the stock in the treasury and the state bank, and M. Witte added 200,000,000 rubles more,

making the stock of gold, independent of 25,000,000 rubles that had passed into circulation, 804,000,000 rubles, equal to 1,206,000,000 paper rubles, which was 85,000,000 rubles more than the amount of notes issued. The paper rubles were current for only two thirds of the mint value of the silver ruble that they were supposed to represent, and the minister was not disposed to redeem them at their nominal value. He therefore took the current rate and made it the fixed legal rate. The first step toward the resumption of specie payments was announced in an imperial ukase on Jan. 15, 1897, ordering the minting of imperials of the same weight and fineness as the old ones, with an inscription designating their value as 15 rubles, instead of 10 as formerly. The fixing of the exchange on a gold basis was provisionally ordered in November, 1895, and since early in 1896 the state bank had been practically charged with the duty of cashing paper currency at the rate of 1 ruble 50 kopecks for 1 ruble in gold. The obligations of Russia which stipulate payment in metallic rubles are not affected by the new currency laws, being still payable in gold rubles at the old rate of 10 to the imperial. The total amount of paper notes in circulation on Jan. 1, 1897, was 1,121,282,000 rubles, protected by 500,000,000 rubles in gold. A ukase issued on Sept. 10, 1897, provides that the future issue of paper rubles by the state bank shall be strictly limited in extent by the demands for the circulating medium, and must be secured by a gold reserve equal to half the amount issued up to 600,000,000 rubles and covering the whole issue in excess of that sum. The gold reserve at that date amounted to 750,000,000 rubles, while the paper in actual circulation was 1,068,000,000 rubles. The 1- and 3-ruble paper notes were withdrawn from circulation so as to enforce the currency of the new silver ruble pieces, which the public did not willingly accept on account of their inconvenient weight and bulk. As the new gold currency was not readily taken the banks were ordered in September to give 20 per cent. in gold in cashing all checks.

The Army.—Military service lasts in European Russia five years in the active army, thirteen years in the reserve, and five years in the first ban of the territorial army. The conscripts of Turkestan and the Amur territories, as well as the marine troops, serve seven years in the active army. Recruits who are excused from service in the active army as being below the physical standard are enrolled in the second ban of the territorial army. The Cossack cavalry after three years of preliminary instruction in their native villages serve four years in the first ban, four years in the second, and five years in the reserve. The contingent of recruits for the permanent army in 1896 was 274,650 men, not including 2,750 Caucasians. In 1895, out of 982,227 young men who reached the age of twenty-one, among whom were 46,846 Jews and 28,167 Mussulmans, 30,498, including 7,524 Jews, failed to present themselves, 154,237 were rejected by the surgeons, 220,163 were inscribed in the first ban of the Opolchenie, or militia, and 272,992, including 14,118 Jews, were taken into the active army. The number of men called to the colors in 1897 was 283,900, besides 4,500 natives of the Caucasus to serve in local regiments. The empire is divided into 13 military circumscriptions, forming as many independent armies, besides the Transcasian region and that of the Don Cossacks. The 6 circumscriptions embracing European Russia and the Caucasus are occupied by 22 army corps. The effective strength of the Russian army in time of war is estimated at 61,100 officers and 3,400,000 men. The field army has 18,000 infantry officers and 960,000 men, 3,500 cavalry officers and 110,000

men, 2,600 artillery officers and 90,000 men, and 800 engineer officers and 40,000 men; total, 24,900 officers and 1,200,000 men. The reserve troops have 12,000 infantry officers and 750,000 men, 2,500 cavalry officers and 90,000 men, 800 artillery officers and 26,000 men, and 200 engineer officers and 9,000 men; total, 15,500 officers and 875,000 men. The fortress troops number 2,300 infantry officers and 170,000 men, 1,400 artillery officers and 80,000 men, and 300 engineer officers and 10,000 men; total, 4,000 officers and 260,000 men. The replacement reserves consist of 4,000 infantry officers and 230,000 men, 800 cavalry officers and 40,000 men, 600 artillery officers and 30,000 men, and 100 engineer officers and 6,000 men; total, 5,500 officers and 306,000 men. The strength of the Opolchenie is 9,500 infantry officers and 686,000 men, 350 cavalry officers and 12,000 men, 450 artillery officers and 28,000 men, and 100 engineer officers and 4,000 men; total, 10,400 officers and 730,000 men. The customhouse guards on the frontier number 800 officers and 29,000 men. The Russian infantry is still armed for the most part with the Berdan rifle of 1870, having a caliber of 10·7 millimetres. Several corps stationed on the European frontiers have the three-line repeating rifle of 1891, of 7·62 millimetres caliber, with 5 cartridges in the magazine. The cavalry have Berdan carbines and sabers, and some of the Cossacks carry lances also. The artillery armament consists of 1,790 field guns, mostly of the model of 1877, and 224 mortars. Finland has its own army, numbering on the peace footing 236 officers and 6,020 men.

The Navy.—Russia maintains four independent fleets, of which the largest is the Baltic fleet, comprising 10 first-class battle ships, 2 of which are not yet finished, 3 powerful cruisers, of which only the "Rurik," of 10,933 tons, is completed, 7 other first-class armored and 2 deck-protected cruisers, 11 second-class cruisers, 4 torpedo cruisers, 4 armor-clad gunboats, 1 deck-armored gunboat, 10 coast guards, 3 school-ships, 39 torpedo boats of the first class, 81 of the second class, 6 armed yachts, and 7 armed transports, besides 4 deck-protected cruisers of the first rank, 1 armored cruiser of the type of the "Rossiya," and 19 torpedo-boat destroyers building. The improved armored cruisers, of which several are in contemplation, will have a displacement of 14,000 tons. The new deck-protected cruisers "Pallada," "Diana," "Aurora," and "Svetlana" will displace 6,630 tons and carry an armament of 6 6-inch, 6 4·7-inch, and 35 smaller quick-firing guns. The battle ships "Peresvet" and "Osliabia," of 12,674 tons displacement, now building, will exceed in weight of fire the "Petrovsk," "Poltava," and "Sevastopol," of 10,960 tons, completed in 1894 and 1895, which have 16 inches of armor and carry 4 12-inch guns in turrets, besides powerful secondary and quick-firing armaments.

The Black Sea fleet is composed of 7 battle ships, built between 1886 and 1897, 2 Popoffki monitors, 1 first-class cruiser, 6 gunboats, 3 torpedo cruisers, 20 first-class and 10 second-class torpedo boats, 3 school-ships, 3 armed steamers, and 8 transports, besides 13 auxiliary cruisers of the volunteer fleet which are employed in the merchant service in time of peace. This fleet will soon be augmented by 2 battle ships of the type of the "Sviatiliia," of 12,480 tons, carrying 4 12-inch guns in barbets and 8 6-inch, 4 4·7-inch, and 52 smaller quick-firing guns, and by 2 destroyers.

The Siberian fleet consists of 1 second-class cruiser, 4 gunboats, 2 torpedo cruisers, 7 first-class and 8 second-class torpedo boats, 2 armed steamers, and 5 transports. There are 4 more torpedo boats under construction. The flotilla in the Caspian

Sea consists of 4 gunboats, 4 side-wheel steamers, and 1 steamer for post service.

The *personnel* of the navy in 1897 comprised 1 admiral general, the Grand-Duke Alexis, 13 admirals, 28 vice-admirals, 37 rear admirals, 90 captains, 213 commanders, 654 lieutenants, 241 lieutenant commanders, 89 naval architects, 288 mechanics, 297 surgeons, and noncommissioned officers and seamen making up a total of 38,086 men.

Commerce and Production.—The imports of merchandise into European Russia in 1896, comprising all that passed the European frontiers and those of Finland, the Black Sea, and the Caucasus, had a value of 540,267,000 rubles, in which total alimentary products made 69,805,000 rubles; live animals, 2,277,000 rubles; raw and partly manufactured materials, 306,656,000 rubles; and manufactured articles, 161,529,000 rubles. The total exports of merchandise over the European frontiers were 684,475,000 rubles in value, of which 382,919,000 rubles represented articles of food, 15,144,000 rubles live animals, 257,828,000 rubles raw and partly manufactured materials, and 12,906,000 rubles manufactured articles. The imports of cotton were 59,439,000 rubles in value; machinery and agricultural implements, 58,632,000 rubles; iron, 38,422,000 rubles; wool, 31,825,000 rubles; tea, 19,163,000 rubles; colors, 16,133,000 rubles; coal, 15,553,000 rubles; chemicals and drugs, 12,430,000 rubles; fish, 12,177,000 rubles; iron and steel manufactures, 10,908,000 rubles; hides and skins, 10,005,000 rubles; fruits, 9,069,000 rubles; wine, 7,027,000 rubles; oils, 6,909,000 rubles; paper and stationery, 6,804,000 rubles; raw silk, 6,704,000 rubles; aluminum bronze, 6,275,000 rubles; watches and clocks, 5,710,000 rubles; coffee, 5,604,000 rubles; metal plates, 5,482,000 rubles; indigo, 5,110,000 rubles; woolen goods, 4,625,000 rubles; lead, 4,551,000 rubles. Of the total value of the exports of European Russia the cereals made 323,177,000 rubles; flax, 72,364,000 rubles; seeds, 41,627,000 rubles; timber, 37,660,000 rubles; petroleum, 26,740,000 rubles; eggs, 19,775,000 rubles; hemp, 19,212,000 rubles; animals, 15,138,000 rubles; sugar, 11,830,000 rubles; legumes, 11,172,000 rubles; bread, 9,603,000 rubles; hides and skins, 8,295,000 rubles; hair and bristles, 8,132,000 rubles.

Enormous strides have been made in Russian manufactures and industry, whereby the output is now valued at 2,000,000,000 rubles, while the entire produce of agriculture does not exceed 1,500,000,000 rubles in value. Russia nevertheless exports 51 per cent. of the breadstuffs required by importing European countries, and the proportion of her exports compared with those of America increased in a marked degree between 1891 and 1896. The chief economic feature of wheat-growing in Russia is the low cost of production, lower even than on the best virgin soils of the United States, due to the existence of a belt of rich black earth extending across the southern part of European Russia and across the Ural mountains into Siberia. A prolonged drought in the summer of 1897 caused a bad harvest in Tula, Moscow, Orel, Tamboff, and Kursk and neighboring districts, where grass and trees were withered by the sun and the ground became so hard that it could with difficulty be plowed in order to sow the winter wheat. The provincial authorities and the Imperial Government made large advances of money to avert a famine.

Foreign capitalists, mostly French and Belgian, have within half a dozen years invested 85,000,000 rubles in iron and coal mines and locomotive and car shops. In 1895 there were 1,412,047 tons of pig iron, 415,443 tons of wrought iron, and 557,155 tons of steel produced, while 767,774 tons of iron

and steel were imported. Coal showed a production of 8,870,968 tons, an increase of 354,839 tons over 1894. The textile industries have made rapid progress. In the spring of 1897 there was a strike of cotton spinners in new mills established in St. Petersburg that indicated that an organized labor movement was in course of development.

The Russian merchant navy on Jan. 1, 1897, consisted of 944 steamers and 3,891 sailing vessels. By a law which goes into effect in 1900 foreign vessels are forbidden to engage in the carrying trade between Russian ports of the Baltic, the Black Sea, and the Pacific coast.

Railroads.—The length of railroads in operation at the beginning of 1897 was 22,491 miles, not counting the railroads of Finland, the Transcaspian line of 940 miles, nor 1,886 miles completed in Siberia. A railroad running from Vologda to Archangel and bringing this port on the White Sea in communication with Moscow was opened on Sept. 30, 1897. An extension of the Transcaspian Railroad from Merv to the port of Kushk, on the Afghan border, was begun in December and will be completed in three years' time, the distance being 197 miles.

Posts and Telegraphs.—The post office in 1895 forwarded 230,654,000 internal and 29,844,000 foreign letters, 41,322,000 internal and 5,683,000 foreign postal cards, 202,420,000 internal and 20,648,000 foreign newspapers and circulars, and 16,545,000 internal money letters, of the value of 22,107,669,000 francs, and 554,000 foreign ones, having a value of 461,176,000 francs. The postal receipts were 160,290,628 francs; the expenses of the postal and telegraph service were 116,595,628 francs and the receipts from telegraphs 53,534,432 francs. The imperial telegraph lines had in 1895 a total length of 76,327 miles, with 160,358 miles of wire. Including the Anglo-Indian and private lines the total length of telegraphs was 80,970 miles, with 162,553 miles of wire. The number of paid internal messages in 1895 was 11,527,162; of service dispatches, 892,433; of international messages, 961,800 sent and 978,520 received; of transit messages, 186,838; total, 14,546,753 messages.

Internal Affairs.—On July 1, 1897, the monopoly of the spirit trade in accordance with M. de Witte's scheme for increasing the public revenue and at the same time abolishing the worst evils of the drink traffic, such as the sale of adulterated and unwholesome spirits, the encouragement of drunkenness, and illegal pawnbroking, was extended over the whole empire. The main features of the scheme are the abolition of the existing excise on grain spirits, the official control of the distilleries, which are to supply to the Government rectified spirits in such quantities and at such prices as may be decided, and the establishment of central spirit stores by the Government in each province, whence the spirits will be distributed in sealed vessels to special shops in towns and rural districts, where the liquor is retailed by official agents. Hotels and restaurants may also be licensed to sell the spirits. The new scheme was first applied tentatively in the four eastern provinces of Perm, Ufa, Orenburg, and Samara, with favorable financial results to the Government. On July 1, 1896, it was extended to Bessarabia, Volhynia, Ekaterinoslav, Kieff, Podolia, Poltava, the Taurida, Kherson, and the Black Sea provinces. The new scheme applies only to *vodka*, or whisky, and not to wine or beer, which continue to be sold under ordinary licensing arrangements.

The extension of Russia's frontiers induced the Government to offer state aid and certain privileges for the purpose of colonizing new territories on the confines of the empire, and at the same time relieving the poverty of populous districts suffering from the universal agricultural depression. When Sibe-

ria began to be opened up by the great transcontinental railroad emigration to the undeveloped fertile districts of that part of the empire was also encouraged by the Government. More than 7,000,000 acres were surveyed and parceled out for colonization between 1893 and 1895. The migration of peasants to the new lands took on such dimensions that early in 1897 the Government found it necessary to stem the tide. Over 200,000 persons found their way eastward across the Ural mountains during 1896, and 25,000 of these were obliged to tramp back to their former homes in miserable plight. All the more fertile soil that was free of forest and accessible to the railroads had been disposed of, and the rough ground of the steppe that remained could only be managed by farmers having capital and employing a force of laborers. Consequently the Government stopped the grant of pecuniary aid to voluntary colonists and curtailed its assistance to pauper emigrants. During 1897 several thousands of selected emigrant families from among the Cossacks of Orenburg and the Don were transported at Government expense to the Amur district and there provided with lands and loans of capital and granted immunity from taxation and other privileges.

In July the judicial reforms instituted in European Russia in 1864 were extended to Siberia, so that the whole empire was at last endowed with a uniform modern system of public justice. The change was decided upon in 1896, and was finally announced on May 27 in a rescript of the Czar declaring that, in consequence of the construction of the railroad and other measures intended to satisfy the needs of Siberia, the development of civil life there had made such progress that the antiquated and imperfect system of justice that was in force could no longer meet the indispensable requirements of the country. When Nicholas II visited Warsaw in September he was received by the whole population with demonstrations of loyalty that were unprecedented in Poland.

Foreign Policy.—The predominance of Russia in the councils of Europe was not less apparent after the appointment of Count Muravieff than under the management of his predecessors. Germany had been gradually ousted from the position of leading European power and the French alliance had been employed for the political advantage of Russia. Without fighting a battle Russia has continued her conquests, supported by France and Germany and without objections from England or Austria, which a few years before had strenuously opposed the expansion of Russian interests. Bulgaria was completely under Russian influence, and the other Bal-

kan states had returned to their old allegiance. Japan had been deprived of the full fruits of her victories by the veto of Russia, and in the far East the Czar was slowly but surely establishing his supremacy in Peking, and even British statesmen now considered it a political and economical necessity that Russia should have an ice-free seaport. Englishmen admired the firm, humane, and consistent policy by which Russia had within a few years introduced complete order and security into the conquered provinces of Central Asia, the masterly statesmanship that had changed the warlike tribes and fanatical town population into peaceable and loyal subjects of the Great White Czar, and the steady and well-directed enterprise that was transforming the desert into a garden and extending to these wild regions all the blessings of science and civilization. Reforms in Anatolia could not be enforced by Europe because Russia would not allow the Sultan's authority to be superseded. When the Greek question came to a crisis all the European powers waited to see what Russia would do. In Constantinople M. de Nelidoff could dictate to united Europe as well as to the Sultan. By the treaty signed by Prince Lobanoff and Marshal Yamagata on May 28, 1896, Korean independence was guaranteed under the joint protection of Russia and Japan, which declared their readiness to assist the King of Korea in maintaining order and to guarantee foreign loans for the purpose of establishing financial equilibrium, insuring the organization of the army and police, and arranged to keep detachments of troops of equal strength in the country as long as might be necessary for safeguarding their respective interests. Russian officers went to Korea in February, 1897, for the purpose of acting as military instructors and forming regiments of infantry and cavalry and batteries of artillery. The Emperor of Austria and later the German Emperor visited the Czar in August, a few weeks before President Faure arrived at Cronstadt to return the visit of the Czar. On this latter occasion the alliance between Russia and France was announced in unmistakable terms. In his meeting with the German Emperor the Czar spoke of the traditional bonds and the good relations happily established between the two neighboring empires as furnishing a guarantee for the maintenance of general peace, which formed the object of his constant efforts and fervent wishes, and in replying the German Emperor spoke of traditional and intimate relations, founded on an unshakable basis, and then promised to stand by the Czar with his whole strength in the great work of preserving the peace of nations.

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SALVADOR, a republic in Central America. The legislative body is the National Assembly, a single chamber of 42 members, elected for each annual session by direct universal male suffrage. The President, who is elected for four years by the vote of the nation, is Gen. Rafael Antonio Gutierrez, inaugurated on March 1, 1895. The Vice-President is Dr. Prudencio Alfaro. The Cabinet in the beginning of 1897 was composed as follows: Minister of Foreign Affairs, Justice, and Public Instruction, Dr. Jacinto Castellanos; Minister of the Interior, Dr. Prudencio Alfaro; Minister of Finance and Public Works, Dr. Cornelio Lemus; Minister of War and Marine, Estanislao Perez. It was reconstituted during the year, when the Diet of the Greater Republic of Central America assumed direction of foreign affairs, Dr. Juan F. Castro be-

coming Minister of War. Dr. Antonio Ruiz Minister of Public Works, Finance and Credit, and Justice, and Dr. Carlos Bonilla Minister of Charity and Public Instruction.

Area and Population.—The area of Salvador is estimated at 8,100 square miles, and the population at 803,534. Of the native inhabitants not more than 20,000 are of pure white race. The population of San Salvador, the capital, is about 50,000. The military forces are about 3,000 active troops and 18,000 militia.

Finances.—The budget for 1896 makes the total treasury receipts \$10,174,000, of which \$5,144,000 are import duties, \$273,000 export duty on coffee, \$2,524,000 the duty on spirituous liquors, \$202,000 stamp duties, and \$2,031,000 other receipts. Expenditures are set down at the total of \$9,745,000

of which \$47,000 are for the National Assembly, \$54,000 for the executive, \$77,000 for foreign affairs, \$1,487,000 for the interior, \$2,845,000 for finance, \$1,908,080 for war and marine, \$339,000 for justice, \$738,000 for public instruction, \$1,417,000 for public works, \$443,000 for public security, \$299,000 for posts and telegraphs, and \$91,000 for other charges. The internal debt in March, 1896, amounted to \$8,000,000. The payment of the external debt has been undertaken by the London Works Company, limited, in return for valuable concessions. It amounted to £254,000 sterling. In August, 1897, the National Congress, in an extraordinary session, passed a bill putting the country on a gold basis, on account of the depreciation of silver. All custom duties were declared to be payable in gold only after October, 1897. The President was authorized to negotiate a foreign loan of \$2,500,000.

Commerce.—The products of the soil are coffee, indigo, sugar, and tobacco. Gold, silver, copper, iron, and quicksilver are found. The total value of the imports in 1896 was about \$13,000,000, and of the exports \$10,000,000. The exports of coffee were valued at \$7,500,000; indigo, \$2,000,000; tobacco, \$100,000. The foreign trade in 1895 was divided among the different countries as follows:

COUNTRIES.	Imports.	Exports.
United States.....	\$714,000	\$4,392,000
Great Britain.....	1,217,000	1,624,000
France.....	467,000	3,125,000
Germany.....	319,000	2,884,000
Other countries.....	174,000	2,323,000
Total	\$2,891,000	\$13,848,000

During 1896 the arrivals at the three ports of the republic numbered 338 vessels.

Communications.—The railroad mileage is 73 miles. The telegraph lines have a length of 1,705 miles. The number of dispatches in 1896 was 60,682.

SANTO DOMINGO, a republic in the West Indies, otherwise called the Dominican Republic, occupying the eastern part of the island of Hayti, or Santo Domingo. The Congress is a single Chamber of 24 members, elected for two years by the direct suffrage of qualified voters. The Constitution was last revised on June 12, 1896. The President, who holds office for four years, is Gen. Ulisses Heureaux, first elected in 1886, and re-elected thrice in succession, the last time for the term beginning Feb. 27, 1897. The Vice-President is Gen. Wenceslao Figuereo. The Cabinet was composed in 1897 as follows: Secretary of the Interior and Police, Gen. J. D. R. Betancourt; Secretary of Foreign Affairs, Enrique Henriquez; Secretary of Justice and Public Instruction, S. E. Valverde; Secretary of Fomento and Public Works, Gen. T. Cordero; Secretary of Finance and Commerce, J. Alvarez; Secretary of War and Marine, Gen. T. D. Morales.

Area and Population.—The area is estimated at 18,045 square miles, with a population of 610,000. Santo Domingo, the capital, has about 20,000 inhabitants. The people are in part a mixed race, descended from the Spanish conquerors and the aborigines, and in part negroes and mulattoes, the descendants of former slaves.

Finances.—The revenue in 1896 was \$1,551,158 in gold, of which \$1,498,064 came from customs. The public debt on Aug. 9, 1897, amounted to £4,236,750 sterling, besides a railroad loan of £500,000. An English syndicate, in October, 1897, obtained control of customs revenue for one hundred years, and also of the railroad to Puerto Plata, with the exclusive right to build other railroads, in return

for which the syndicate undertook to pay the debt due to an American syndicate and assume all the outstanding obligations of the Government, and made a new loan to the Government of \$7,500,000, on condition that the Government should not seek to contract other loans in any quarter for the period of five years. The syndicate will receive and collect all duties on imports and exports, and pay over to the Government for its current expenses a certain percentage of the revenue thus derived.

Commerce.—The imports in 1896 were valued at \$1,703,595 in gold, and exports at \$2,198,817. The exports are tobacco, coffee, cacao, sugar, mahogany, logwood, hides, goatskins, and honey. Cotton fabrics, hardware, earthenware, and breadstuffs are the chief imports.

Communications.—The railroads in operation in 1896 had a total length of 116 miles, and have since been extended. The length of telegraph lines in 1897 was 456 miles. The post office in 1895 forwarded 685,638 internal letters and printed inclosures, and 240,950 in the international service.

SERVIA, a monarchy in southeastern Europe. The legislative body is the Skupshtina, a single Chamber of 198 members, elected by the direct suffrage of male adult citizens who pay 15 dinars in direct taxes. The King is Alexander I, born Aug. 14, 1876, who succeeded as a minor on March 6, 1889, on the abdication of his father, Milan I, and entered on his personal reign on April 13, 1893. The ministry, formed in June, 1895, was composed as follows: President of the Council and Minister of Foreign Affairs, Stoyan Novakovich; Minister of the Interior, D. Marinkovich; Minister of Justice, A. Nintshich; Minister of War, Gen. D. Franassovich; Minister of Finance, H. Popovich; Minister of Public Works, M. Petrovich; Minister of Public Instruction and Worship, L. Kovachevich; Minister of Commerce, Agriculture, and Industry, W. Stoyanovich.

Area and Population.—Servia has an area of 19,050 square miles. The population on Jan. 1, 1897, was 2,345,837, of whom 1,204,197 were males and 1,141,640 females. The number of marriages in 1896 was 20,841; of births, 96,752; deaths, 63,399; excess of births, 33,353.

Finances.—The budget for 1897 makes the total revenue 63,659,720 dinars, or francs, of which 20,803,720 dinars came from direct taxes, 5,000,000 dinars from customs, 2,927,000 dinars from excise, 2,500,000 dinars from law courts, 17,159,000 dinars from monopolies, 3,428,000 dinars from domains, posts, and telegraphs, etc., 852,000 dinars from instruction and sanitary service funds, 5,700,000 dinars from the state railroad, and 5,290,000 dinars from other sources. The total expenditures were fixed at 63,355,607 dinars, of which 1,200,000 dinars were for the civil list, 360,000 dinars for ex-King Milan's allowance, 28,640 dinars for court employees, 17,747,506 dinars for the service of the debt, 120,000 dinars for the Skupshtina, 234,000 dinars for general credits, 2,251,858 dinars for pensions and subventions, 1,616,128 dinars for justice, 4,822,180 dinars for public instruction and worship, 1,231,985 dinars for foreign affairs, 2,765,765 dinars for the interior, 8,202,475 dinars for finance, 14,115,393 dinars for war, 3,948,633 dinars for public works, 3,001,229 dinars for agriculture and commerce, 348,453 dinars for miscellaneous expenses, and 1,205,052 dinars for the Board of Audit.

The public debt on Jan. 1, 1897, amounted to 408,237,000 dinars, of which 354,420,000 dinars consisted of the 4-per-cent. conversion loan of 1895.

The Army.—Obligatory service for two years in the active army was enacted by the law of Jan. 6, 1896. The effective strength provided for in the budget of 1896 was 661 infantry officers and 14,000

men, 101 cavalry officers and 1,400 men, 270 artillery officers and 4,000 men, 65 engineer officers and 1,000 men, 10 officers and 300 men in the train, 49 sanitary officers and 500 men, 68 administrative officers and 24 officers on the staff; total, 1,248 officers and 21,200 men, with 4,846 horses and 192 field guns. The war effective is 160,751 men of all arms in the regular army, 126,610 in the first ban of the militia, and 66,005 in the second ban; total, 353,366 officers and men.

Commerce.—The total value of the imports in 1896 was 33,448,000 dinars, of which 19,234,000 dinars came from Austria-Hungary, 4,122,000 dinars from Great Britain, 3,550,000 dinars from Germany, 1,609,000 dinars from Turkey, 1,428,000 dinars from the United States, and the remainder mainly from Roumania, France, Switzerland, Italy, and Russia. The exports were valued at 53,386,000 dinars, of which 47,035,000 dinars went to Austria-Hungary, 2,508,000 dinars to Germany, 1,989,000 dinars to Turkey, and the remainder mainly to Roumania, Bulgaria, and France. Of the exports 23,427,000 dinars were horticultural and agricultural products and 22,333,000 animals and animal products. The transit trade was 16,844,000 dinars.

Communications.—There were 377 miles of railroad in operation at the beginning of 1897. The telegraphs in 1896 had a total length of 1,980 miles, with 4,170 miles of wire. The number of messages in 1896 was 803,480, of which 672,100 were internal, 120,060 international, and 11,320 in transit. The post office in 1895 carried 8,124,000 internal, 116,000 international, and 1,934,000 transit letters.

The Simich Ministry.—The Radicals, who had abstained from political activity since the suspension of the Constitution in 1894, became active again in 1896, and at the close of the year carried a large number of the Progressists with them in a demand for a more vigorous prosecution of the Servian claims to Macedonian bishoprics, secured the passage of a resolution in the Skupshtina in favor of an amendment of the Constitution, and produced a Cabinet crisis. M. Novakovich and his colleagues offered their resignations on Dec. 27, 1896, and M. Simich, who was summoned from Vienna, where he represented the Servian Government, formed a new ministry on Dec. 30, which was composed of Moderate Radicals, the Progressists and the Liberals having declined to take part in a coalition Cabinet. The new ministry was composed as follows: President of the Council and Minister of Foreign Affairs, Georg Simich; Minister of Finance, Dr. M. Vuich; Minister of the Interior, Mirka Georgevich; Minister of War, Gen. Miskovich; Minister of Public Works, M. Velimirovich; Minister of Public Instruction and Worship, Andrea Nikolich; Minister of Justice, M. Milanovich. The Government in a circular letter to its representatives abroad said that the change was due to home affairs alone, and that it intended to maintain the traditional relations of Servia with Russia, and with Austria-Hungary. The Servian Government, while urging on the Porte the claims of the Macedonian Servians to have bishops of their own nationality, preserved a pacific course during the Greco-Turkish war, and in April received, with the Government of Bulgaria, an identical note from the Austrian and Russian Foreign Ministers expressing satisfaction at its correct attitude during the crisis. Bishop Ambrosius, the Greek ecclesiastic appointed to the see of Uskub by the Œcumenical Patriarch in spite of the protests of Servia, was removed before the close of the same month. Other concessions in regard to the Servian Church and schools were promised by the Sultan.

General elections were held in the beginning of July, and resulted in the return of 188 Radicals and 4 members of the Opposition. The Skupshtina was convened for an extraordinary session on July 13 to give its sanction to expenditures occasioned by the critical condition of affairs in the Balkans. The Chamber granted an extraordinary credit for warlike preparations. Arnauts of the sandjak of Kossovo committed many depredations on Servians on both sides of the border. The Servian Government called the attention of the Porte to the chronic disturbed state of the frontier, and declared its intention to pursue the marauding Albanian bands into Ottoman territory, if necessary. A Turco-Servian commission was appointed to inquire into the late raids. Subsequent attacks made almost simultaneously on seven frontier posts led the Servian Government to make a formal protest to the powers. The Ottoman Government subsequently posted troops on the frontier to prevent a recurrence of disorders. The dispute with the Œcumenical Patriarch was finally arranged by confirming Ambrosius as titular bishop, but appointing the Servian Archimandrite Firmilianos to direct the see.

The Georgevich Cabinet.—A fresh ministerial crisis was provoked by the return of ex-King Milan to Belgrade after Premier Simich had striven to prevent his coming. The father of Alexander I regarded the Radicals as his enemies because they had espoused the cause of Queen Nathalie in his divorce proceedings and also as inimical to his son. During the King's absence abroad with his father serious differences of opinion on questions of a financial, military, and political nature had arisen between him and his ministerial advisers. The King was specially averse to raising the constitutional question, which the ministers regarded as urgent and which they were pledged to settle at the earliest possible moment. On Oct. 19, the day of ex-King Milan's arrival with the King, M. Simich tendered the resignation of the whole Cabinet, which was at once accepted. M. Georgevich, the Servian minister at Constantinople, was intrusted with the task of forming a new ministry, which was completed on Oct. 23, as follows: President of the Council and Minister of Foreign Affairs, Dr. Vladan Georgevich; Minister of Finance, Steva D. Pryovich; Minister of Commerce, Agriculture, and Industry, Simon Lozanich; Minister of the Interior, Jefram Andonovich; Minister of Public Instruction and Worship, Andrea Georgevich; Minister of Justice, Costa Cristich; Minister of War, Col. Vukovich; Minister of Public Works, Col. Atanatskovich.

SIAM, an absolute monarchy in southeastern Asia. The reigning King is Chulalongkorn, born Sept. 21, 1853, who succeeded his father, Mongkut, on Oct. 1, 1868. The King is assisted by the Sabha Senabodi or Cabinet of Ministers, composed mostly of half-brothers of the King. The ministers are aided by European advisers in their several departments, and the whole administration has been organized under the direction of M. Rolin-Jacquemyns, formerly a Belgian Cabinet Minister. A Legislative Council, composed of active and retired ministers of state and at least 12 members appointed by the King, was instituted by the decree of Jan. 10, 1895, for the preparation and deliberation of laws. The reorganization and modernization of the administration was seriously begun after the French victories over Siam in 1893, which severed from the kingdom 110,000 square miles of territory and 3,000,000 people formerly subject to Siam. The treaty concluded with France on Oct. 3, 1893, made the Mekong the boundary between Siam and the French possessions in Indo-China,

and reserved a strip of 25 kilometres along the west bank of the river within which Siam must not station any military force, while the French are allowed to erect stations there. In January, 1896, the French and British governments made an arrangement guaranteeing the integrity and neutrality of the diminished Kingdom of Siam, embracing the basin of the Menam river and the Meklong, Pechaburi, and Bangpakong basins, with the coast from Muong Bang Tapan to Muong Pase, and including also the territory north of the Menam basin, between the Burmese frontier, as delimited in 1891, the Mekong river, and the eastern watershed of the Me Ing. The present area of Siam is about 245,000 square miles, with a population estimated at 10,000,000, not half of whom are Siamese, the rest being Laotians, Malays, Chinese, and immigrants from Cambodia, Burmah, and India. The immigration of Chinese coolies in 1896 was 37,475. Bangkok, the capital, has about 200,000 inhabitants, nearly half of whom are Chinese. The official and prevailing religion is Buddhism. Siamese is legally established as the official language. The King's revenue is approximately estimated at \$9,650,000, of which \$1,800,000 is collected from customs duties, \$3,450,000 from property and monopolies, \$600,000 from land taxes, and \$3,800,000 from various duties. All the taxes are farmed except the customs duties. There is no public debt.

The imports in 1896 were valued at \$14,747,000, against \$19,384,000 in 1895, and the exports at \$27,505,000, against \$25,280,000. The exports of rice in 1896 were valued at \$21,209,000; cattle, \$463,000; fish, \$427,000; pepper, \$278,000. There were 468 vessels, of which 333 were British, entered at the port of Bangkok in 1896, and 475 cleared, of which 336 were British. Over 85 per cent. of the tonnage was British, compared with 71 per cent. in 1886, 50 per cent. in 1876, and 25 per cent. in 1866. Not more than 5 per cent. of the fertile soil in the Menam valley has yet been brought under cultivation. Recently irrigation canals have been dug to extend the area of rice cultivation. Nearly all the skilled and the unskilled labor in the populous valleys is performed by Chinese, and most of the trade is in their hands. In the teak forests of the north Khamus, who are French subjects, and Burmese and Karens, who are British subjects, are the only workers.

The length of railroads in operation in 1897 was 179 miles, including the new line from Bangkok to Korat, which was opened on March 27. Concessions for other railroads have been granted. The telegraphs had a total length of 1,780 miles. There are numerous schools, in some of which English is taught. Progress has been made in judicial as well as in administrative reform. Domestic slavery is being gradually abolished. In the course of 30 years both the import and the export trade of Siam has nearly trebled. The export of teak has increased twentyfold.

The military forces have recently been augmented, and now consist of about 10,000 men, half of whom are in Bangkok. They are being armed with Mannlicher rifles. Ordnance has also been purchased recently. There is a corps of 800 elephants protected by bullet-proof armor. The army is commanded by Italian, Danish, and other European officers.

After the war of 1893 the French retained the city of Chentabun as a pledge for the fulfillment of the engagements entered into under the treaty of peace. Constant friction has ensued between the two governments. The French, instead of gaining in influence by their victory over Siam, have been systematically excluded from the Government posts and the profitable commercial concessions that have

been conferred on Europeans. The influence of the English over the King became, on the other hand, more pronounced than ever, and the French in Indo-China attributed to this the continued unfriendliness of the Siamese Government. One of the stipulations of the treaty was that the old inhabitants of the left bank of the Mekong should be permitted by the Siamese authorities to return to their former homes. It was also provided that all French subjects detained on any pretext whatever should be delivered over to the French authorities. When the Siamese Government gave no effect to these engagements, the French colonial officials, acting on the theory that all Annamites, Cambodians, and Laotians in Siam were French subjects, even though their families had been domiciled in Siam for centuries, granted certificates of consular protection to any person belonging to these races and to Chinamen who applied for them, declaring that they had come from the other side of the Mekong. Persons provided with such certificates were exempt from forced labor and from the jurisdiction of the Siamese courts. The wholesale adoption as French subjects of the people of Siam consequently caused much annoyance to the Siamese Government, which was irritated also by the continued French occupation of Chentabun.

During 1897 King Chulalongkorn visited all the European capitals to study improvements that he might introduce into his country. While in Paris he discussed the differences between the two countries with French statesmen, and these conferences paved the way to a better understanding. M. Hanotaux consented to the abrogation of the clause in the treaty of 1893 by which the Siamese Government undertook to hand over all French Annamite and Laos subjects of the left bank of the Mekong as well as the Cambodians detained on any pretext. In January, 1897, the German minister was arrested by the police because his horse injured a Chinaman. For the violation of diplomatic immunity the Siamese Government made a suitable apology. About the same time Vice-Consul-General E. V. Kellett, while investigating a claim of an American citizen in the teak forests of northern Siam, was arrested because he was assaulted by soldiers when he demanded the release of his servant from police custody. At the request of the minister, J. Barrett, the American gunboat "Machias" was sent to Bangkok. The claim that Mr. Kellett was inquiring into was that of the estate of Dr. Cheek, to whom the Siamese Government had made a concession, and had loaned him implements and elephants for the purpose of getting teak wood out of the forests. Believing that he had violated his contract, the Siamese authorities seized the wood, and also the elephants, and abrogated the concession. For this a claim of \$200,000 was made through the American minister. The Siamese Government agreed to the arbitration of this claim, and to the investigation by a mixed commission of the case of Mr. Kellett. This investigation showed that the American consular officer was right in his assertion of extraterritorial jurisdiction, and consequently the Siamese Government apologized for the act of its officers and soldiers, and subjected them to punishment. The Cheek claim, together with the counterclaim of the Siamese Government against the estate, was referred to the decision of Sir N. J. Hannen, the British chief judge in China.

SIGNALS, NIGHT. Night signals have been used in a very crude form for hundreds of years; but no system for international use, for communication on land or sea, ever has been established, though several nations have adopted and used night-signal codes arranged to a given chart. The merchant

marine of the world has no established code. Night signals are used for many purposes—for communication between vessels at sea, between vessels and the shore, on railways as danger and headway signals, and by the army and navy. Each nation has its own secret plan and chart, the code book of which is protected in every way possible, and a piece of lead is attached to the cover, so that,



METHOD OF IGNITING
THE CARTRIDGE.

when in use on a war vessel it can be thrown overboard to prevent its falling into the hands of an enemy. In the army other means are provided for its destruction.

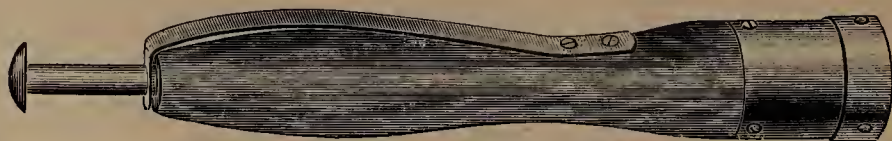
A simple, comprehensive night-signal code, as an auxiliary to the international commercial day-signal code, is still wanted. This would add much to the protection of life and property. Innumerable attempts have been made to establish a simple night-signal system. The latest was when President Cleveland made this the first subject to be acted upon by the International Maritime Conference of 1889. Signaling by day is easy, because there are many established means by which it may be done. Most of the day systems are operative only at short distances, depending on flags, disks, and semaphores. Flash signals by means of mirrors form the only day system now in use for signaling at a great distance.

It was not until after the loss of the White Star steamship "Atlantic," in 1873, that distinguishing signals were brought into use, and a special distress signal and signal to call a pilot for use on United States lake and sea coasts were adopted. On that occasion rockets and blue lights were displayed, and were mistaken for a salutation to a passing steamer, instead of distress signals, for which they were intended. The need of a distinguishing night-signal system was never fully realized until this disaster occurred. Now most of the steamship lines have adopted distinguishing night signals. These are registered in the Government bureau, and the list is published in several nautical almanacs. Some lines use a simultaneous display of pyrotechnic fires as a distinguishing signal—three lights, one forward, one amidships, and one aft. This is objectionable for these reasons: If a vessel is abreast, these lights at a long distance merge, and they are still more liable to be thus seen when approached head on. Should any one or two of these signals fail to ignite, the display would not be perfect, and if on a second trial the display were complete, it would not be understood by the party signaled, as they would not know that the first display was imperfect. Successive displays are the most desirable and are more readily understood. Signals of one or more colors in the same cartridge burning in succession do away with any chance of failure or misunderstanding.

The night signals in use prior to 1860 were torches, rockets, Roman candles, and red, white, and blue lights, besides lanterns with colored glass. In 1840 Benjamin Franklin Coston, an American, at

the age of nineteen, invented what are now known as the "Coston night signals," but he did not complete this invention. It was patented in 1859, several years after his death, by his widow, Martha J. Coston. This idea was first given to him by his conversations with Commodore Stockton and Commodore Stewart of the United States navy, on signals used in the maritime world. Marryat's numeral code of flags was then in use for day signaling, and Mr. Coston arranged a system of night signals applicable to this code, which is represented on the colored chart accompanying this article. The first complete signals made by Benjamin F. Coston were made in the Washington Navy Yard, where he was stationed as a master in 1845, one year before he retired from the navy and two years before his death. The ordnance square of the navy yard is named for him on account of this invention, and it is the only square in the yard named for a master, all others being named for officers of high rank. The Coston night signals were adopted by the United States navy, and the colors chosen were green, red, and white. All the distinguishing signals are given in "Bliss's Nautical Almanac."

Since these signals were first constructed many improvements have been made. In 1840 the composition fires were put up in waterproof boxes. When one was to be used the cover was removed and the box placed upon a board; port fire was then used to ignite it. The display was made from the surface or deck. The colors used were red, white, and blue in combination. Under the 1859 patent, as used by the United States navy during the civil war, compounds for producing red, white, and green were put up in cartridge cases made of tinfoil and Manilla paper, and a quick match attached, the color green being substituted for blue, because it was not possible at that stage of the arts to produce a distinct, durable, and safe blue-light composition. The visibility of the colors should be the same at all distances. William F. Coston has overcome this, after trials covering several years. The so-called blue light made by the general fireworks manufacturers, and in use by the maritime world, is not a blue—it is a poor white light. The cartridge was so constructed as to be placed on a wooden handle, by which it was held while the display was made. In 1863 the cartridge was so constructed as to be placed in the socket of a peculiarly made pistol and to ignite by a percussion cap. This was the apparatus supplied to the United States army. In 1877 the United States navy adopted the Coston aerial night signal, invented by H. H. Coston, late captain in the United States Marine Corps. It now also uses search lights and the Adolphe system, which is operated by a keyboard turning on and off incandescent red and white lights. The Coston aerial system was invented by H. H. Coston in 1863. Mrs. Martha J. Coston took out the first patent for friction-igniting signals in 1871. William F. Coston, the second son of Benjamin F. Coston, further improved the



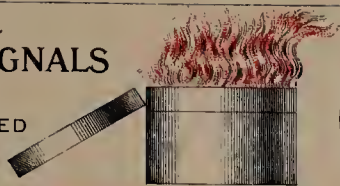
IMPROVED HOLDER.

Coston signals by igniting them by means of a percussion cap, and made a signal combining aerial and surface display, thereby enlarging the scope of its utility. The patent was granted in 1881.

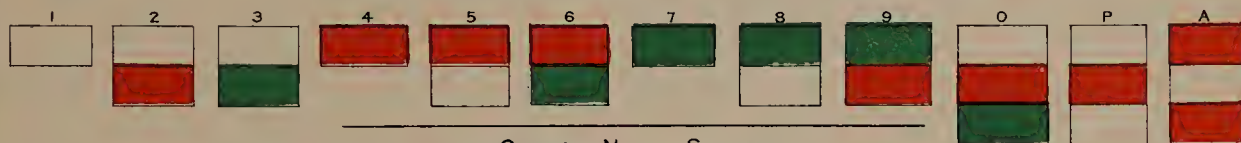
The signals were adopted by the governments of the United States, France, Italy, Denmark, Hol-

ORIGINAL COSTON NIGHT SIGNALS

1840
PATENTED
1859



COSTON'S TELEGRAPHIC NIGHT SIGNALS-CHART OF 1859.



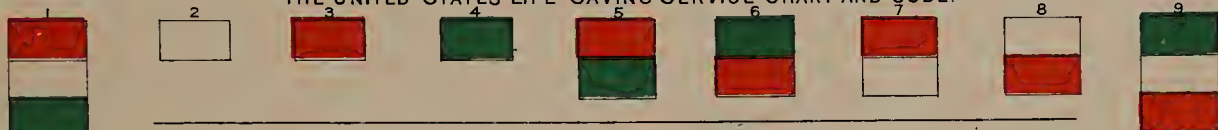
COSTON NIGHT SIGNAL.

ESTABLISHED FOR U.S. LAKE AND SEA COASTS.



ESTABLISHED FOR CALLING ALL U.S. PILOTS

THE UNITED STATES LIFE-SAVING SERVICE CHART AND CODE.



COSTON'S TELEGRAPHIC NIGHT SIGNALS.

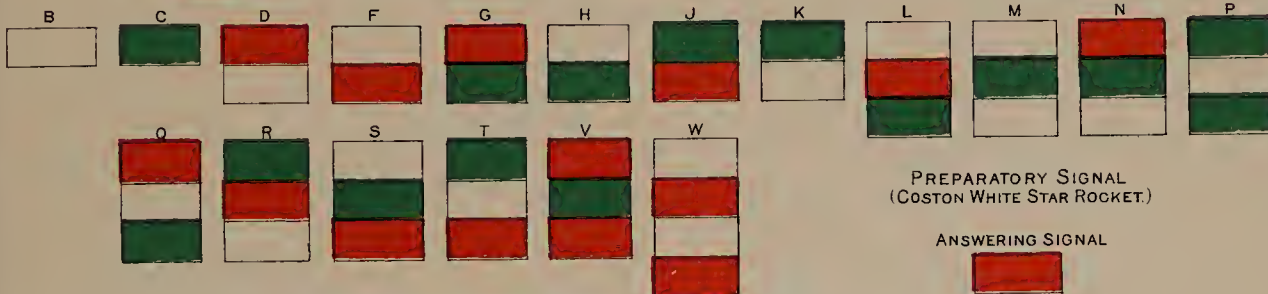
YACHTING CHART NEW YORK CLUB SIGNAL.



BROOKLYN CLUB SIGNAL



EASTERN CLUB SIGNAL

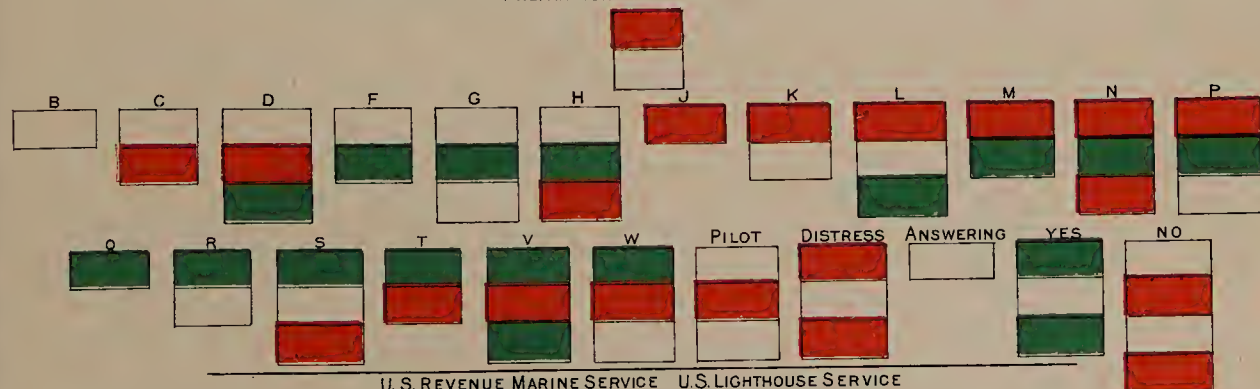


PREPARATORY SIGNAL
(COSTON WHITE STAR ROCKET.)

ANSWERING SIGNAL



COSTON'S TELEGRAPHIC NIGHT SIGNALS-INTERNATIONAL CODE CHART. "PREPARATORY" AND "CODE SIGNAL"



U.S. REVENUE MARINE SERVICE
DISTINGUISHING SIGNAL.



U.S. LIGHTHOUSE SERVICE
DISTINGUISHING SIGNAL.



land, and Brazil. The first saving of life by the use of these signals was in 1863, when the "Monitor" foundered off Cape Hatteras, but the entire crew, numbering 26, were saved. The Coston signals were put into use in the United States Life-Saving Service when it was organized in 1873, and they have been in use in that service ever since. Many hundred vessels have been warned, and thousands of lives and millions of property saved, by their use in the hands of the patrolmen of this service. The highest awards, medals, and diplomas have been granted them at all the international exhibitions—in Vienna (1873), Chili (1875), United States Centennial (1876), Liverpool, England (1886), and the World's Columbian Exposition (1893). The value and use of signals in time of war can best be understood when it is known that 1,200,000 signal cartridges were furnished during the civil war. Hon. Gideon Welles, Secretary of the Navy, in his report to Congress, declared that the signals were of incalculable value to the navy throughout the war. Most of the blockade runners that were captured were detected by their use. The New York Yacht Club, the Brooklyn Yacht Club, and the Eastern Yacht Club jointly were the first to adopt a night-signal system, using a letter chart applicable to the international commercial day-signal code, and also a distinguishing signal. Other yacht clubs have since adopted the Coston signal as their distinguishing night signal.

The Coston signal can be used in any kind of weather and displayed from any place. They can be distinctly seen at a distance of fifteen to twenty miles.

The Coston pilot-call signal, as established for use on the United States coast, shows the colors white, red, white in succession, the whole being one signal. The Coston distress signal, as adopted and in use in United States waters, displays the colors red, white, red in succession.

The cipher and signal code used by the army and navy during the war of the rebellion was a numeral system. The page of the book was just signaled, and then the number of message on the page.

The Coston signal is now employed by the Government in the following branches: The navy uses the aerial signal, patent of 1877. The Life-Saving Service, Lighthouse Service, Revenue-Cutter Service, Weather Bureau, and Army Signal-Corps use the 1881 patent. The National Guard of the State of New York also uses the 1881 patent, and have arranged a signal code and chart of four elements. The requirements to be taken into consideration with regard to effective and reliable signals of this nature are many. The colors must be pure and brilliant, and must burn evenly, with very little smoke. The compounds must not be liable to deterioration from long storage or dampness or to spontaneous combustion. Simplicity in arrangement of chart and code is also to be taken into consideration, and compactness of apparatus is desirable.

The last patent taken out on Coston signals was in November, 1896, by William F. Coston.

SOUTH CAROLINA, a Southern State, one of the original thirteen, ratified the Constitution May 23, 1788; area, 3,750 square miles. The population, according to each decennial census, was 249,073 in 1790; 345,591 in 1800; 415,115 in 1810; 502,741 in 1820; 581,185 in 1830; 594,398 in 1840; 668,507 in 1850; 703,708 in 1860; 705,606 in 1870; 995,577 in 1880; and 1,151,149 in 1890. Capital, Columbia.

Government.—The following were the State officers during the year: Governor, W. H. Ellerbe; Lieutenant Governor, M. B. McSweeney; Secretary of State, D. H. Tompkins; Treasurer, W. H. Timmerman; Comptroller, James Norton, who was

elected to Congress and succeeded, about Nov. 1, by L. P. Epton, appointed by the Governor; Attorney-General, W. A. Barber; Adjutant General, J. G. Watts; Superintendent of Education, W. D. May-



W. H. ELLERBE, GOVERNOR OF SOUTH CAROLINA.

field; Chief Justice of the Supreme Court, Henry Melver; Associate Justices, Eugene B. Gary, Ira B. Jones, and Y. J. Pope; Clerk, U. R. Brooks. All are Democrats.

Finances.—The state of the finances at the close of 1897 is described in the Governor's message to the Legislature of 1898 as follows:

"During the session of the General Assembly for 1896 a levy of $4\frac{1}{2}$ mills was laid to meet the current expenses of the fiscal year ending Dec. 31, 1897. The sum raised by this levy proved insufficient, and we have a deficit of \$100,000. By using every dollar from every available source and by overdrawing small amounts upon banks in which large sums of the State's funds have been deposited, we have met all current obligations without borrowing. The books were opened for the collection of taxes Oct. 15, and since that time we have used money thus collected to pay current expenses."

The taxable property amounted to \$173,724,382.

By the report of the Sinking Fund Commission it appears that since the commission was established in 1878 it has brought into the treasury about \$292,765, which otherwise would have been lost to the State. The commission has charge of land-commission lands, abandoned lands, and unpaid taxes. It has sold the past year 783 acres of land-commission land.

Abandoned land under South Carolina law is land that has been for ten immediately preceding years upon neither the forfeited land list nor tax duplicates. Ten years' absence from all tax books, therefore, and not actual abandonment, is the legal definition of "abandoned land."

At a meeting of the Sinking Fund Commission of Jan. 17, 1896, it was found that of the hundreds of thousands of acres of abandoned lands up to that time placed upon the tax books and offered for sale, there remained unsold only about 13,000 acres, which were bid in for the Sinking Fund Commission for want of bidders at the tax sale.

Education.—The school enrollment in 1897 was 258,183, of whom 139,156 were colored. The total shows an increase of 25,846 over that of the preceding year. The expenditures were \$697,068.06, an increase of \$124,430.82. During the year 153 school-houses were built, at a cost of \$22,728.93. The standard of examination for applicants for teachers' positions has been raised, and the increased number of those holding the higher grades of certificates shows increasingly better preparation. There are 98 high schools and academies and 60 graded schools.

There are 4 State colleges for the education of the white race, 1 for the colored, and the Institution for the Deaf and the Blind, with separate buildings for the races. The white colleges show an enrollment of 1,112 pupils, 81 teachers, 81 buildings (buildings and grounds, valued at \$692,600, exclusive of Clemson's buildings and grounds), 5 libraries, containing 40,500 volumes, valued at \$60,750, and an average session of 9.4 months, the Institute for the Deaf and the Blind being included in these figures. The colored college shows an enrollment of 1,033 pupils, 32 teachers, 10 buildings (buildings and grounds valued at \$84,000), and an eight months' session.

There are 20 private colleges for whites. The reports of these show an enrollment of 2,703 pupils, 186 teachers, 88 buildings (buildings and grounds valued at \$836,500), large and valuable libraries, and an average session of nine months.

There are 3 private colored colleges. The reports of these are not full, but they show an enrollment of 1,191 pupils, 28 buildings, valued at \$224,000, and libraries containing 4,300 volumes, valued at \$4,000.

The School for the Deaf and Dumb had an enrollment of 179, with an average attendance of 142. The cost of support, which includes all running expenses, was \$130.77.

The Penitentiary.—The number of convicts at the close of the year was 723, showing a decrease of 95 during the year. The institution has not only been self-supporting, but has paid \$9,649 on one of the farms, and turned \$10,000 into the State treasury. The report says the sanitary condition of the building is bad. During the year 26 have died; the death rate, it is explained, is increased yearly from disabled and sick prisoners sent to the institution from the county chain gangs, some of whom live only a few days.

The Hospital for the Insane.—The receipts of this institution during the year were \$106,066.39, of which \$100,000 was from the State treasury; the expenses were \$102,290.49. The whole number under treatment during the year was 1,257, and the daily average 875; the number of deaths was 142. A new building for colored men, for which the Legislature appropriated \$7,500, is in process of construction.

A fire occurred, June 2, destroying the laundry, electric plant, carpenter shop and mill, and injuring the boilers and engine. The laundry has been rebuilt with insurance money.

Militia.—There are five regiments of infantry, three of cavalry, the Fourth Battalion, and some independent companies. The appropriation was cut this year to \$8,000.

A court of inquiry was ordered to investigate the conduct of the Adjutant General in a difficulty, May 28, between the militia and the students of the South Carolina College, at Columbia. The troops had permission to use the college grounds for parade on the 26th, but by some mistake went on the 28th. A game of ball was in progress. The acting president told the Adjutant General that the students had permission to use the grounds,

but there was room for all if the troops remained on one side. The officer during some part of the parade ordered the students away, and directed the police to move them back. They resisted, and the troops were ordered to press upon them. The result was a riot. The court of inquiry found that the order to clear the field was an assumption of authority on the part of the officer that was "unwise, unnecessary, and unwarranted," and recommended that he be reprimanded by the Governor. As the Adjutant-General is a constitutional officer, he can be removed only on impeachment by the General Assembly.

Railroads.—The report of the Railroad Commissioners at the end of the year says that, with but few exceptions, the physical condition of the railroads of the State has been improved. The Carolina, Knoxville and Western Railroad is still in the courts, and is not operated. A year ago the Carolina Midland had been consolidated with the Greenwood, Anderson and Western Railroad, and ten miles of new road built, but some financial trouble with the contractor arising, a receiver was appointed.

Improvements have been made in the Charleston and Western Carolina, the Plant system, the Lancaster and Chester, the South Carolina and Georgia, the Atlantic Coast Line, the Ohio River and Charleston, and the Columbia, Newberry and Laurens.

Products.—The phosphate miners have paid only 25 cents a ton royalty to the State since April 1; the former rate was 50 cents. The State has received \$40,700 this year from that source; a company that failed in October still owes the State \$10,384. A large company, the Coosaw, went out of business June 1. The rock mined during the year is estimated at 76,313 tons, and the amount shipped at 95,237 tons.

The value of the gold product of this State in 1896 was given as \$63,300.

The number of spindles in operation in 1897 was 1,151,174, and of looms 34,528, of which 1,061,304 spindles and 30,736 looms are on the Southern Railway.

There are more than 300 lumber mills in the State, with a combined capital of about \$4,000,000.

Crime.—The annual report of the Attorney-General says there has been a gradual increase of homicide cases disposed of in the State each year since 1888. The year 1888 began with 107 cases, and the year 1897 ends with 225 cases. There were 2,485 criminal cases disposed of in 1897. The per cent. of convictions in all the cases disposed of is 37, and of the cases actually tried about 65. The per cent. of convictions in homicide cases is about 27.

There were two lynchings in January, one near Sumter and one near Orangeburg. The Episcopal clergy, under instructions from the bishop, preached, Dec. 19, on the increase of crime in the State.

Attack on Mormons.—About three years ago some Mormon missionaries came to the State and made 50 or more converts in Kershaw and Fairfield Counties. No opposition appears to have been made at that time, but in July of this year their place of worship was burned by so-called regulators, and visits were made to houses of members of the Church, who were warned not to harbor any of the elders, most of whom are from Utah. Two of these were taken out and whipped. Other demonstrations appear to have been confined to threats and the flourishing of guns and pistols. On complaint of the Mormons 24 persons were arrested and tried and acquitted.

Charleston.—A law of 1894 gave power to the Governor, the Secretary of State, and the Comptroller General to appoint a Board of Police Commissioners for any city or incorporated town, when they should deem it advisable and for the interest

of good government, their tenure of office to be co-terminal with that of the appointing board; but the State board was authorized to discontinue the Board of Police Commissioners when, in their judgment, it was no longer needed. Nothing was done under the law for a year after its passage; then Gov. Evans made such appointments for Charleston, on the ground that it was necessary for the enforcement of the dispensary law. The board continued to exist until Oct. 1, when it was abolished by proclamation of the present Governor.

The city now has rapid transit, an electric railway having gone into operation in July.

A trade and commercial issue of the "News and Courier" in September makes a good showing for the business progress of the city. The amount transacted during the year was given as more than \$75,000,000, an increase for the year of \$8,000,000. There are now 24½ feet of water from the city to the sea. The completion of the jetties "has made Charleston the most accessible and finest deep-water port on the South Atlantic coast."

The Dispensary.—The report of the Board of Control of the Dispensary for 1897 shows the receipts to have been \$1,196,068.45, including a balance of \$78,265.04 from 1896, and the disbursements \$1,134,167.19, leaving a balance of \$61,901.26. The amount placed to the credit of the school fund during the year was \$146,443.

The dispensary has again this year occupied much of the public attention. Decisions given in the Federal courts have interfered with its success. In January the Supreme Court decided that those provisions of the law that forbid citizens of the State from importing liquors into the State for their own use are in contravention of the interstate commerce clause of the national Constitution, and therefore invalid.

This was a confirmation of the decision of the circuit court.

On Oct. 1 the Governor dismissed the entire force of constables, leaving the local authorities to enforce the law in the towns and cities, retaining only a few detectives to suppress "blind tigers" in the country.

The dispensary act makes it the duty of the State Board of Control to withhold their share of profits of the dispensary from any town or city in which the authorities do not enforce the law. So far the profits have been withheld from one town.

Legislative Session.—The General Assembly met Jan. 12 and adjourned March 3. There were no Republicans in the Senate, and there was but one in the House. All the other 158 legislators were Democrats. Daniel K. Norris was president of the Senate, and Frank B. Gary Speaker of the House. The Governor and Lieutenant Governor were inaugurated Jan. 18.

Joseph H. Earle, who was chosen as the candidate for United States Senator at the Democratic primaries, was formally elected by the Legislature with but one opposing vote to succeed Senator Irby. James C. Klugh was elected judge of the circuit court to succeed Judge Earle.

First in importance, probably, of the measures passed was the income-tax bill. It provides that from and after Jan. 1, 1898, an annual tax shall be levied on the gains, gross products, and income received during the preceding year by every citizen, from any source whatever, where such income amounts to \$2,500 or more. The tax is 1 per cent. on incomes from \$2,500 to \$5,000; 1½ per cent. on those from \$5,000 to \$7,500; 2 per cent. from \$7,500 to \$10,000; 2½ from \$10,000 to \$15,000; and 3 per cent. for all above \$15,000. A like tax is to be collected from the profits of any business carried on in the State by persons residing outside of the

State, except such corporations as are specially exempted, provided that in estimating gains, profits, and income there shall not be included interest upon such bonds or securities of this State or of the United States the principal and interest of which are by the law of their issue exempt from taxation. The assessments are to be made by county officers.

The Governor sent a special message on the finances, Feb. 4, showing a deficiency in the general fund of \$34,061.66 unprovided for. He suggested that the deficiency might be made up by increasing the levy or by providing for a graduated income tax and a graduated license tax. The income tax was decided upon as above, and by another act additional license fees were required from foreign insurance companies doing business in the State.

An act to prohibit trusts and combinations was passed.

Among bills affecting railroads were: Requiring common carriers to pay or refuse to pay all claims for loss, breakage, or other damage within sixty days from the time the claim is made; authorizing the Railroad Commissioners to require all railroads to erect depots, and to impose a penalty for their failure to do so when required; to limit the hours of labor of certain employees of horse-railway companies and electric-railway companies and other street-railway companies; to provide for the collection of due railroad taxes; amending and re-enacting the act to incorporate the South Carolina and Augusta Railroad; to make corporations liable for damages resulting to landowners from the wrongful obstruction of water courses; to provide a penalty on railroad companies owning, leasing, or operating competing railroad lines within the State, and to provide for recovery thereof; repealing the act of 1887 entitled "An Act to validate and confirm the consolidation of the Augusta, Edgefield and Newberry Railroad Company with the Northwestern Railroad Company"; to provide for the forfeiture of abandoned railway property; to incorporate the Atlantic Coast Line Railroad Company of South Carolina and to authorize the consolidation of certain railroads under that name; to provide for the transportation by common carriers of bicycles.

The dispensary laws were amended so as to provide for the licensing and restricting of distilleries in the State, and to regulate the importing of liquors for personal use.

The free-school law of the State was amended. It was made a misdemeanor for any State or county officer to receive any rebate on schoolbooks or supplies or advertising; and pupils of the public schools are to be provided with text-books at actual cost.

Four new counties were established—Greenwood, Cherokee, Bamberg, and Dorchester—the propositions for creating them having received the required vote in the territory covered. Four others that were proposed—Dillon, Edisto, Salem, and Calhoun—had failed at the popular election. The laws on county government were amended by several acts.

One of the measures passed has for its object the keeping of actions out of the Federal courts and in the State courts as far as possible.

Other acts were:

To prevent the employment of other than convict labor on any State farm, and the prevention of the employment of convict labor on any private farm.

To exempt soldiers and sailors in the service of the State of South Carolina or of the Confederate States in the war between the States from taking out license as hawkers and peddlers required by statute.

To prescribe punishment for laborers who violate either written or verbal contracts after having received supplies.

To protect the Mongolian pheasant.

To authorize and empower the sheriffs to purchase and keep at the courthouse a pair of bloodhounds, for the purpose of tracking convicts and fugitive lawbreakers.

Prohibiting the carrying of concealed weapons.

Authorizing the Phosphate Commission to reduce and regulate the royalty on phosphate rock.

Requiring any insurance company or association to be possessed of \$100,000 surplus, or in lieu thereof to have \$100,000 on deposit with some State for the benefit of all policyholders, or in lieu thereof to deposit with the Treasurer of this State valid securities aggregating \$10,000, said securities to be subject to any judgment against said companies, and such judgments shall operate as a lien on such securities.

To protect terrapin and oysters.

To regulate the appointment of receivers by the courts, restricting them in the exercise of their discretion, requiring due notice to be given, and providing that the costs of unnecessary receiverships be charged upon the persons asking for the appointment.

To provide for the election of the State Board of Medical Examiners by the State Medical Association.

To provide for a laborers' lien.

To prohibit secret Greek-letter fraternities or any organizations of like nature in State institutions.

Among resolutions adopted by the House was one declaring that the United States should acknowledge the independence of the republic of Cuba.

Bills to repeal the free-pass law, and to require separate railway coaches for colored passengers, also an anti-cigarette act, were defeated in the Senate.

United States Senator.—Joseph H. Earle, who was elected to succeed Senator Irby, died May 20. The Governor appointed John L. McLaurin to fill the vacancy till a successor should be chosen. Primaries were ordered for Aug. 31 to ascertain the choice of the people. The Democratic State Committee marked out a plan of campaign for two months, and the candidates made speeches in every county. They were J. L. McLaurin, Ex-Gov. Evans, Ex-Senator Irby, S. G. Mayfield, and J. T. Duncan, but the two last named withdrew after a short time. The canvass was most excited, and the speeches sometimes were bitterly personal. McLaurin was assailed as being a protectionist, having voted in favor of protective amendments to the Dingley tariff bill. The vote stood: McLaurin, 29,326; Evans, 11,375; Irby, 5,159.

SOUTH DAKOTA, a Western State, admitted to the Union Nov. 3, 1889; area, 77,650 square miles; population, according to the census of 1890, 328,808. Capital, Pierre.

Government.—The following were the State officers during the year: Governor, Andrew E. Lee, Populist; Lieutenant Governor, Daniel T. Hindman, Republican; Secretary of State, William H. Roddle; Auditor, Henry E. Mayhew; Treasurer, Kirk G. Phillips; Attorney-General, Melvin Grigsby; Superintendent of Public Instruction, Frank Crane; Commissioner of School and Public Lands, John L. Lockhart; Railroad Commissioners, W. T. La Follette, Alexander Kirkpatrick, William H. Tompkins; Chief Justice of the Supreme Court, Dighton Corson; Associate Justices, Howard G. Fuller and Dick Haney; Clerk of the Supreme Court, Jessie Fuller.

Finances.—The balance in the State treasury, July 1, 1896, was \$412,159.99. The receipts during the fiscal year, including balance of previous year,

were \$1,001,283.24; the disbursements, \$593,338.38; and the balance remaining July 1, 1897, was \$407,744.86.

The receipts of the general fund from all sources during the fiscal year, including sale of revenue



ANDREW E. LEE, GOVERNOR OF SOUTH DAKOTA.

warrants and transfer from the deficiency fund, were \$800,072.55. The disbursements for the same period were \$670,724.96, leaving a balance of \$129,347.59.

The bonded indebtedness was reduced \$126,600, leaving a total bonded indebtedness of \$1,011,600, of which \$99,000 bears interest at the rate of 5 per cent. per annum, \$322,600 at 4½ per cent., \$362,500 at 4 per cent., and \$227,500 at 3½ per cent.

The assessment of the 2,798 miles of railroads, as equalized by the State board, was \$9,124,700. The assessment on lands, as equalized, was \$74,363,869; on town lots, \$15,982,527; on personal property, \$20,455,227. The total valuation of the telegraph companies operating in the State is \$127,202; of express companies, \$57,500; of telephone companies, \$53,406. The total valuation of all assessable property is \$120,175,431. The amount of taxes paid by railroads in 1896 was \$239,366.69. The amount of taxes due the State from the counties on July 1, 1897, was \$411,220.18.

Banks.—An abstract of the condition of the 29 banks doing business in the State on Dec. 17, 1896, shows a much stronger reserve on that date than on Oct. 6, the date of the last report, the increase being from 40.02 to 47.66 per cent. The principal items are as follow: Loans and discounts, \$2,893,845; value of stocks, securities, banking houses, and other real estate, \$1,229,260; due from other banks, \$316,563; reserve on hand and deposited with reserve agents, \$1,882,959, of which \$347,850 was gold; total resources, \$7,208,290. Liabilities: Capital stock, \$1,835,000; surplus fund and undivided profits, \$474,504; due to other banks, \$315,054; deposits, \$4,068,568; borrowed money, \$46,500.

A later statement, issued in June, says that the 27 national banks show total resources of \$6,712,537, the loans and discounts being \$2,919,716, and the reserve \$1,484,486, of which the gold amounted to \$326,045. The deposits were \$3,841,916, and the average reserve held was 38.01 per cent.

Insurance.—The business of outside fire insurance companies in South Dakota for 1896 amounted to \$360,436 in premiums, against \$163,445 in losses. Total risks taken, \$13,421,835. The life losses paid during the year were about \$141,000, with a total line of \$1,200,000.

Education.—The number of persons of school age June 30, 1896, was 87,991, of whom 74,602 were enrolled in the public schools. The number of schoolhouses provided for them was 3,633, and the number of teachers, 4,288. The total amount received from all sources for the support of the schools during the year was \$1,688,433.33, of which \$290,261.27 was balance remaining on hand July 1, 1895. The sum of \$877,286.40 was received from district tax; \$60,600.84 from sale of bonds within the year; \$337,640.71 by apportionment; \$122,644.11 from all other sources, including money in the county treasuries. The principal expenditures for the year were: For salaries of teachers, \$749,087; for redemption of bonds, \$82,004.42; for interest on outstanding bonds, \$86,423.85. The cash in hands of district treasurers July 1, 1896, was \$333,507.91; in the hands of the county treasurers, \$76,655.32.

Judicial.—A recent decision of the Supreme Court declares that the homestead is exempt from mechanics' liens under any conditions or circumstances. The same court declared that the actual cost of the construction of railroads had nothing to do with their value as assessable property, but that their power to earn income must be considered.

Mineral Wealth.—The first bulletin of the State Geological Survey was issued by the State Geologist, giving a comprehensive review of the topography and geological formations in South Dakota. The location and nature are described of the ores, earths, building stone, fuels, and water supplies.

Practically, all the gold comes from the Black Hills, and the yield per ton of ore is given at values ranging from \$2.03 to \$3.87. Placer mining has nearly ceased. The production of gold in the Black Hills for 1893 was \$4,000,000; of silver, \$181,527. The yield of gold in 1896 was \$8,235,000, which was an increase of \$3,325,000 over the output of the preceding year. The valuation of the silver and copper mined with the gold was placed at \$1,000,000.

Extensive deposits of iron ore, which have not been developed, occur in the Black Hills. Copper deposits are extensive and numerous, and, like the iron, have not been developed. The average per cent. of these ores, as assayed by the School of Mines, is 35 per cent. copper, equal to 700 pounds of metal copper per ton, worth, at present rates, \$112. Lead, manganese, nickel, and tin are also found in varying quantities.

Political.—James H. Kyle was elected by joint ballot to succeed himself in the United States Senate. Local elections were held through the State on April 7, 1897.

SPAIN, a constitutional monarchy in southwestern Europe. The legislative power is vested in the Cortes, consisting of a Senate of 360 members and a Congress of 432 members. The Senate is composed half of life and official members—namely, princes of the blood royal, grandees of Spain having an income of 60,000 pesetas, and the superior functionaries of state—and half of members elected for five years by corporate bodies and the highest taxpayers. The members of the Congress, or Chamber of Deputies, are elected for five years in the proportion of 1 deputy to 50,000 inhabitants by electoral colleges, the delegates to which are elected by all male Spaniards who have attained the age of twenty-five years.

The King is Alfonso XIII, born May 17, 1886, who succeeded his father, Alfonso XII. His mother, Maria Christina, daughter of Karl Ferdinand, Archduke of Austria, acts as Queen Regent during his minority. The ministry constituted on March 24, 1895, was composed in the beginning of 1897 of the following members: President of the Council, A. Canovas del Castillo; Minister of Foreign Affairs, the Duke of Tetuan; Minister of Justice, Count Tejada de Valdesera; Minister of Finance, Juan Navarro de Reverter; Minister of War, Lieut.-Gen. de Azcarraga; Minister of Marine, Rear-Admiral José M. Beranger; Minister of the Interior, Fernando Cos-Gayon; Minister of Agriculture, Commerce, and Public Works, Aureliano Linares Rivas; Minister of the Colonies, Tomas Castellano.

Area and Population.—The area of Spain is 197,670 square miles. The population was estimated in 1892 at 17,974,323. Madrid, the capital, has about 500,000 inhabitants; Barcelona, 275,000; Valencia, 175,000; Sevilla, 145,000; Malaga, 135,000; Murcia, 100,000. The net emigration, which is mainly to Brazil, Uruguay, and the Argentine Republic, was 8,258 in 1892.

Finances.—There was a deficit of 21,969,007 pesetas, or francs, in 1896, one of 25,249,340 pesetas in 1895, one of 74,732,686 pesetas in 1894, and in previous years the accounts were also closed with large deficits. The budget for 1897 made the receipts 773,766,261 pesetas, and the expenditure 757,765,658, showing a surplus of 16,001,604 pesetas. To attain this funds were raised for expenditures classed as extraordinary by means of loans. The revenue is derived from direct taxes on lands, houses, live stock, industry, commerce, registration, titles of nobility, mortgages, and mineral products: from indirect taxes on imports, articles of consumption, and tolls on bridges, ferries, etc.; from the Government monopoly of tobacco, the mint, the lottery, etc.; and from income from Government property. For 1898 the ordinary revenue was estimated at 883,278,771 pesetas, and expenditure at 873,865,877 pesetas. The extraordinary budget for 1897 gave an expenditure of 236,106,000 pesetas, largely intended for naval development. In order to meet increased expenditures and 92,000,000 pesetas required for interest and redemption of the late loans guaranteed on the customs, Minister J. Navarro Reverter proposed a temporary surtax of 10 per cent. on all taxes and duties, with the exception of the land tax, which was estimated to produce 20,000,000 pesetas; additional taxation in the colonies to the extent of 32,000,000 pesetas; and a loan of 40,000,000 pesetas guaranteed by a projected petroleum monopoly, whereby the exclusive privilege of dealing in this commodity would be granted for twenty years. In case the colonies should fail to raise their quota, the deficiency would be made good out of the proceeds of another loan secured on a similar monopoly of gunpowder and explosives. In order to meet the extraordinary expenditure, the minister proposed another loan guaranteed by the lease of the Almaden quicksilver mines and an increase in navigation dues to the extent of 12,000,000 pesetas a year. The extraordinary expenditure for 1898 was placed at 227,000,000 pesetas, more than half of which was for naval and military expenditure. A Philippine loan of 140,000,000 pesetas, guaranteed by the Philippine customs and also by the customs of the Peninsula and paying 6 per cent. interest, was issued at 92 in July, 1897.

The external debt was on June 20, 1896, stated to be 1,971,151,000 pesetas; the perpetual internal debt, 2,350,808,300 pesetas; redeemable internal loans, 1,619,500,000 pesetas; total, 5,941,459,300

pesetas, not including a floating debt of 450,000,000 pesetas nor the Cuban debt. In 1897 the total public debt was stated to be 8,911,000,000 pesetas, including the Cuban debt of upward of 1,750,000,000 pesetas. An internal loan of 400,000,000 pesetas was obtained in November, 1896, for the purpose of paying off pressing obligations to the Bank of Spain and providing for the continuance of the war in Cuba.

The Army.—All able-bodied Spaniards are liable to serve in the army. The annual contingent was fixed by the law of Dec. 16, 1891, at 80,000 men. The period of active service is three years, beginning at the age of nineteen. After their term of active service has expired the soldiers are inscribed in the first reserve for three years, and then for six years in the second reserve. The effective strength of the regular army on the peace footing in 1896 was 128,183 men, divided into 64,190 infantry, 14,376 cavalry, 11,744 artillery, 5,294 engineers, 1,500 administrative troops, 900 in the medical service, 1,296 royal guards, 14,697 gendarmes, and 14,186 customhouse guards. By the royal decree of May 20, 1897, the strength of the army in Spain was fixed for the year ending June 30, 1898, at 100,140 men, while the forces in Cuba and the Philippines would be maintained at a strength to be determined by the eventualities of war. The war strength of the regular army in 1897 was stated to be 132,000 infantry, 17,156 cavalry, 12,166 artillery, 11,027 engineers, 11,140 administrative troops, and 483 surgeons; total, 183,972 men, with 14,250 horses and mules and 590 field guns. Between November, 1895, and May, 1897, there were sent to Cuba 13 expeditions, comprising 181,738 men, 6,261 officers, 40 generals, 212,542 rifles, 91 field guns, 12 quick-firing guns, 92,088,670 cartridges, and 29,500 shells; to the Philippines were sent 27,768 soldiers, 881 officers, 9 generals, 43,100 rifles, 24 guns, 21,726,585 cartridges, and 30,604 shells.

The Navy.—The Spanish navy in 1897 possessed two battle ships. The "Cristobal Colon," launched in 1896, has a displacement of 6,840 tons, engines of 14,000 horse power, and an armament of 40 guns, with 4 torpedo-ejectors. The "Pedro d'Aragon," of the same model, was under construction. The "Pelayo," launched at La Seyne in 1887, of 9,900 tons displacement, with 6,800 horse power and a speed of 15.8 knots, with a belt of armor 18 inches thick over the vital parts and 11 inches on the barbettes, carries 2 12½-inch guns in turrets fore and aft, 1 11-inch gun in a barbette on either side, a 6½-inch gun in the bow, and a battery of 6 4½-inch guns on each broadside. There are 6 first-class armored cruisers, launched between 1890 and 1893, but not all ready for service. Five of these, the "Almirante Oquendo," "Cardenal Cisneros," "Infanta Maria Teresa," "Princesa de Asturias," and "Vizcaya," have each a displacement of 7,000 tons, 13,000 horse power, and 20 knots nominal speed, a belt of 12-inch steel armor and 8-inch armor over the gun implacements, and an armament of 2 11-inch guns mounted in barbette turrets fore and aft, and a battery of 5 5½-inch guns on each side. A more powerful cruiser is the "Emperador Carlos V," resembling the Russian "Rurik," and having a displacement of 9,235 tons, engines of 15,000 horse power, and a more complete secondary armament. The first-class cruisers "Numancia" and "Vitoria" are old vessels fitted with new boilers and modern armaments. The second-class deck-armored cruisers "Alfonso XIII" and "Lepanto," of 4,800 tons displacement, with engines of 12,000 horse power, designed for a speed of 20 knots, have their armament disposed in a model manner. The unfinished armored cruiser "Cataluña," of 6,648 tons and engines of 15,000 horse power, will carry 23

guns and 18 torpedo-ejectors. Of smaller cruisers and gunboats Spain has 28 that are capable of making 12 knots or better, and 71 of less speed. Of the former there are five of the "Infanta Isabel" class, of 1,130 tons displacement, and a speed of 14 knots. Next after these in importance are three torpedo gunboats, not yet completed, of the type of the English "Sharpshooter." Of gunboats there were 10 fitted with torpedo tubes, besides 3 that were unfinished, of 600 tons on the average, 4 of 500 tons, 7 of the first class under 250 tons, 28 of the second class, and 41 of the third class. The torpedo fleet included 2 torpedo-boat chasers, 20 torpedo boats of the first class, 3 of the second class, 4 vedette boats, 1 torpedo school-ship, and 4 not yet completed destroyers, besides 2 more ordered in England.

The *personnel* of the navy in 1896 comprised 1 admiral, 6 vice-admirals, 15 rear admirals, 20 captains of first-class and 41 captains of second-class vessels, 87 commanders, 100 lieutenants of first-class and 258 of second-class vessels, 224 ensigns, 658 employees, 64 pilots, 14,000 sailors, and 9,000 marines. The navy is recruited by conscription among the seafaring population.

Communications.—The railroads open to traffic in 1896 had a total length of 7,628 miles.

The length of telegraph lines in 1894 was 23,636 miles, with 59,247 miles of wire. The number of messages was 5,962,339, including 3,812,544 internal, 1,988,300 international, and 161,495 service dispatches. The receipts were 8,090,296 pesetas. The post office in 1895 forwarded in the internal service 82,543,000 letters, 669,000 postal cards, 48,801,000 newspapers, circulars, and parcels, and 137,000 money letters of the value of 169,834,000 pesetas; in the international service 20,439,000 letters, 408,000 postal cards, 20,144,000 newspapers, etc., and 48,000 money letters of the value of 32,059,000 pesetas; and in transit 184,000 letters and 50,000 newspapers and parcels. The receipts were 23,900,627 pesetas; expenses, 11,132,144 pesetas.

Commerce.—The total value of the imports in 1895 was 838,500,000 pesetas, and of the exports 804,942,000 pesetas. The imports of cotton were 78,568,000 pesetas in value; coal, 46,580,000 pesetas; timber, 44,281,000 pesetas; tobacco, 40,914,000 pesetas; wheat, 32,428,000 pesetas; salt fish, 27,518,000 pesetas; animals, 24,803,000 pesetas; machinery, 24,510,000 pesetas; chemicals, 22,945,000 pesetas; sugar, 19,003,000 pesetas; iron, 18,513,000 pesetas; ships, 16,180,000 pesetas; coffee, 15,293,000 pesetas; wool, 14,291,000 pesetas; silks, 14,124,000 pesetas; woollens, 14,014,000 pesetas; cacao, 13,309,000 pesetas; linen yarn, 12,188,000 pesetas; petroleum, 8,576,000 pesetas; silk, 8,024,000 pesetas; cotton goods, 6,668,000 pesetas. The exports of wine were valued at 122,235,000 pesetas; iron, 46,577,000 pesetas; lead, 44,128,000 pesetas; cotton goods, 43,384,000 pesetas; copper, 43,341,000 pesetas; oranges, 42,240,000 pesetas; boots and shoes, 25,695,000 pesetas; animals, 23,977,000 pesetas; cork, 22,085,000 pesetas; olive oil, 17,771,000 pesetas; raisins, 15,996,000 pesetas; wool, 14,278,000 pesetas; wheat flour, 12,937,000 pesetas; almonds, 11,807,000 pesetas; hides and skins, 10,595,000 pesetas; grapes, 10,271,000 pesetas; paper, 7,982,000 pesetas; quick-silver, 7,446,000 pesetas; esparto, 6,269,000 pesetas. Spanish industry was disastrously affected by the rebellions in Cuba and the Philippines. Half the mills in Catalonia were closed in 1897, causing much misery, which would have been more apparent had there not been such a drain on the working population to supply recruits for the armies in the field. In the country villages, too, the farm work was to a great extent left for the women and old men to do. The stoppage of work and scarcity of food caused

riots in Barcelona, Malaga, and other places. The value, in pesetas, of the commerce with the different countries and colonies in 1895 is shown in the following table:

COUNTRIES.	Imports.	Exports.
France.....	235,500,000	238,200,000
Great Britain.....	160,200,000	205,700,000
Germany.....	34,300,000	6,500,000
Belgium.....	26,800,000	23,100,000
Portugal.....	40,200,000	34,400,000
Sweden and Norway.....	30,900,000	1,300,000
Russia.....	31,600,000	.....
Roumania.....	2,300,000	.....
Italy.....	24,300,000	9,000,000
Turkey.....	5,900,000	.....
Netherlands.....	4,000,000	14,000,000
United States.....	85,000,000	12,800,000
Cuba and Puerto Rico.....	64,700,000	180,700,000
Argentine Republic.....	14,400,000	10,000,000
Philippine Islands.....	25,000,000	25,800,000
Morocco.....	9,400,000	1,000,000
Other countries.....	41,300,000	42,400,000
Total.....	838,500,000	804,900,000

Navigation.—During 1896 there were 10,669 Spanish vessels, of 6,532,320 registered tons, and 9,788 foreign vessels, of 7,425,666 tons, entered at Spanish ports, and 8,402 Spanish vessels, of 6,233,551 tons, and 9,498 foreign vessels, of 7,829,255 tons, cleared.

The merchant navy in 1895 numbered 1,041 sailing vessels, of 172,729 tons, and 427 steamers, of 313,178 net tons.

Political Affairs.—During the two troubled years of the Canovas ministry the dynastic Liberals had loyally refrained from embarrassing attacks on the Conservatives. At last, on May 19, 1897, Señor Sagasta declared the truce between his party and the Conservatives at an end, and that the Government, which had sent 200,000 men to the islands and was not yet master of the ground trodden by the soldiers and had borrowed 400,000,000 pesetas, and yet still owed the officers and men in Cuba 200,000,000 pesetas of back pay, and which had permitted the Carlists to arm in the Peninsula and Separatist agitation to become rife in certain provinces, having existed hitherto only by the good will of the Liberals, must henceforth bear alone all responsibility for its policy. This arraignment of the Government aroused high party feeling. Two days later the Duke of Tetuan struck Prof. Augusto Comas, one of the leading Liberal Senators, in the lobby of the Cortes. In consequence of this affray he offered his resignation as Minister of Foreign Affairs, but withdrew it at the request of Señor Canovas. The Premier told the Chamber that Spain had refused the proffered intervention of the United States and had declared that she would not admit foreign interference; also that in an unofficial exchange of opinions the European powers had by their attitude of great reserve in defining their views led the Government to believe that they would offer no effective intervention between Spain and the United States. The Liberals called for the retirement of the Duke of Tetuan, but the Premier considered his services necessary for the conclusion of the negotiations relative to the controversy with the United States. His treatment of the Tetuan incident as purely personal and not a political affront displeased the Liberals and the dissident Conservatives who follow Señor Silvela, who demanded the dismissal of the Minister of Foreign Affairs and refused to enter the Cortes until satisfaction had been given them. After vainly appealing to the Liberals to return and unite with the Government in an energetic stand against the interference of the United States in Cuba, Señor Canovas decided to adjourn the Cortes

and carry on affairs without the aid of Parliament. This course was considered by public opinion as unconstitutional and a long step toward a dictatorship, and consequently had to be abandoned. The parliamentary deadlock led to the resignation of the Cabinet on June 2.

The sessions of the Cortes were suspended during the crisis after financial supplies had been voted indefinitely, and authority given to issue treasury bonds and contract loans secured on the revenues of Spain for the prosecution of the Cuban and Philippine wars. After consulting Gens. Martinez Campos, Lopez Dominguez, and Blanco, the Queen Regent on June 6 invited the Conservative ministers to resume their portfolios. The Cortes were not reconvened. The Cabinet on returning to office considered the means of raising 50,000,000 pesetas in order to strengthen the navy in view of the critical relations with the United States. In the beginning of August there were riotous demonstrations in Madrid against the *octroi* tax. Meanwhile the anarchists, who have been numerous in Spain since the time when the disciples of Bakunin introduced his doctrines among the workmen of Barcelona after the conflict between them and the Marxist Collectivists which split the International Association of Laborers in 1868, were plotting vengeance for the inhuman torments that their brothers had been made to undergo in the fortress of Montjuich, at Barcelona. There were 258 men and women imprisoned in Montjuich in consequence of the anarchist outrage at Barcelona on June 7, 1896, when a bomb was exploded in the midst of a religious procession. Of these, 5 were immediately shot; 26 were condemned to death on May 1, 1897; 20 were sentenced to terms of imprisonment, some of them for life; the rest were ordered to be expelled from Spanish territory. Of these, 28 embarked for Liverpool in July, but 120, having no money, were still detained in prison. The British Government protested against the sending of anarchists to England, and the Spanish Government promised not to do it again. Of the Barcelona prisoners, 59 were in France. In December, 1896, rumors of horrible tortures inflicted on some of the prisoners in order to extract confessions from them began to be circulated throughout Europe. The prisoners succeeded in conveying information to their friends outside regarding the tortures and the foul dungeons in which they were incarcerated without air or light. Of 20 or 30 men who were subjected to actual torture 2 were subsequently set free, and these made depositions recounting what they had suffered. Some of the prisoners were deported to the fever-stricken, uninhabited West African island of Rio d'Oro. Among the persons imprisoned were Freemasons, Republicans, trades-unionists, and Radicals, for the explosion was made a pretext for crushing all anti-monarchical parties. On Aug. 8 an anarchist fired three shots from a revolver at Señor Canovas in the hotel of the baths of Santa Agueda at Guesalibar, in the Basque Provinces. The Premier, shot in the forehead and the breast, expired within an hour. The assassin, a Neapolitan, declared he killed Señor Canovas in the accomplishment of a just retribution, and that the deed was the outcome of a vast conspiracy to avenge the Barcelona anarchists and Dr. Rizal, the organizer of the Philippine insurrection. The Queen Regent appointed Gen. Marcelo de Azcarraga, the Minister of War, Prime Minister *ad interim*. The assassin was sentenced to death by a special military court, and was garroted on Aug. 20. The Spanish Government revived the proposal that international measures be adopted against anarchists, which was favorably received by Italy, Austria, Russia, and Germany, but not by England, Switzerland, the United States, and

France. The main feature of Spain's proposal was to found a penal colony where dangerous anarchists, to whom no country will any longer afford right of asylum, shall be detained for life.

Gen. Azcarraga announced that the Government would continue the policy of Señor Canovas, and reposed full confidence in the conduct of Gen. Weyler in Cuba, both civil and military. After the arrival of Stewart L. Woodford, the new American minister, who presented his credentials to the Queen Regent on Sept. 13, Señor Silvela and some other politicians proposed that Spain should abandon Cuba. Señor Sagasta foresaw in the divisions in the Cabinet his own speedy advent to power and the application of his scheme of Cuban autonomy. A Cabinet crisis was precipitated by the act of the Bishop of Majorca in excommunicating Señor Reverter, the Minister of Finance, for having taken possession of the treasury of the church of Luch, although the archbishop had forbidden the excommunication. The other members of the Cabinet upheld their colleague and appealed to the Pope, although the bishop had acted in accordance with the canon law and within his rights. Gen. Azcarraga made a final attempt to concentrate all sections of the Conservatives, but he could not induce Señor Silvela to co-operate with Romero Robledo, whom he had denounced as a corruptionist, nor to countenance Gen. Weyler's proceedings. Exchange had risen to over 30 per cent., and the steady rise in the price of food stuffs, owing to the growing depreciation of the silver and paper currency, further increased the popular feeling against the ministry. Commercial circles were alarmed at the position of the Bank of Spain, which had now an enormous note circulation. The instructions of the new American minister and the financial and military straits of the Government rendered a change in the Cuban policy advisable, but the ministers could not agree on any new policy. The ministry had a meeting on Sept. 29 to discuss the removal of Weyler as a possible means of prolonging its existence. The conference having resulted in no decision on this point, and no other solution having been presented, the ministers found it necessary to resign. The Queen Regent accepted their resignations at once, and on Oct. 4 Señor Sagasta formed a Liberal ministry as follows: President of the Council, P. M. Sagasta; Minister of Foreign Affairs, Pio Gullon; Minister of Justice, C. Groizard; Minister of the Colonies, S. Moret y Prendergast; Minister of the Interior, F. R. Capdepon; Minister of War, Gen. M. Correa; Minister of Marine, Rear-Admiral Bermejo; Minister of Finance, Lopez Puigcerver; Minister of Public Works, Commerce, and Agriculture, Count Xiquena. At the first meeting of the Cabinet a scheme of Cuban reforms drawn up by Señor Moret on the basis of autonomy was accepted in principle, and on Oct. 9 an order for the recall of Gen. Weyler was adopted and was immediately signed by the Queen Regent. Marshal Ramon Blanco was chosen as Weyler's successor. It was decided to send out another 20,000 men in order to prosecute the campaign against the insurgents as long as it might be necessary, but there was to be a complete alteration in the system of warfare. To prevent complications growing out of the abuse of American citizenship by Cubans who use it as a shield for revolutionary activity, the Government of Señor Canovas had submitted to the Government at Washington soon after the advent of the McKinley administration a draft of a naturalization convention that was the outcome of a discussion previously carried on with Secretary Olney, and was in general scope almost identical with the treaty subsisting between the United States and Ecuador. It was proposed that if a

naturalized citizen renews his residence in the country of his birth without the intention of returning to the country where he was naturalized, he shall be held as having resumed the obligations of his original citizenship, and that a residence of two years in his native country shall, in the absence of rebutting evidence, be construed as an in-



PRAXEDES MATEO SAGASTA, PRIME MINISTER OF SPAIN.

tention to stay there and shall annul his naturalization. The United States Government was not prepared to settle the question of naturalization at this inopportune moment, when the Cuban question called for a speedy settlement. The note presented by Gen. Woodford before the resignation of the Conservative Government was couched in courteous and friendly terms, giving repeated assurances that the President of the United States desired only peace and amity between the two nations; but, on the other hand, it gave a distinct warning that American interests were suffering severely from the insurrection, that the attitude of neutrality could not be indefinitely prolonged, and that, if tranquility was not very soon re-established, the insurgents would be formally recognized as belligerents. It even went further than this, and in the form of amiable expressions of good will toward Spain suggested that the time had come for a compromise between the contending parties, and made on the part of the President a tender of good offices with a view to bringing about this result, hinting ominously that if Spain should decline this offer of amicable intervention the President will have to consider how American interests are to be protected. The note, which was presented on Sept. 23, called upon the Spanish Government to formulate before the end of October definite proposals by which the tender of mediation could be made effective, or to give satisfactory assurances that the war would be brought to a speedy end.

The Sagasta Government before answering the American note published its programme of Cuban reforms, and then asked that time be given to test the effect of the system of autonomy in pacifying Cuba. The suggestion of foreign intervention contained in the Woodford note produced a fierce out-

burst of national indignation in Spain. The Spanish Government failed to fulfill either of the conditions on which Gen. Woodford was instructed to insist as indispensable unless the United States was to be compelled to see to the means of protecting American interests in Cuba. Not within the month, nor yet at the end of the year, were peace and order restored in Cuba by the armed force of Spain, nor were any facilities given for bringing about a compromise through the good offices of the United States. The project of autonomy as first formulated was a great advance on the Aburza and Maura schemes, granting identity of civil rights for the inhabitants of the colony with those of Spaniards, and giving them an executive government responsible to a chamber elected by popular vote, which would control the estimates, vote the supplies, and fix the customs tariff, the authorities at home reserving for themselves only the regulation of foreign affairs, of the army and navy, and of the judiciary. Under pressure of the protected manufacturers of Catalonia and the official and mercantile elements who regard Cuba only as a fiscal preserve for their own enrichment, the Cabinet curtailed the proffered rights or so hampered them with reservations as to deprive them of all value even in the eyes of the former autonomists of Cuba, taking back the promised financial independence and control of the customs duties and giving to the Spanish Governor General an absolute veto over the acts of the Legislature.

STREET RAILROADS. Among the most marvelous of modern enterprises are the street railroads—marvelous because of their phenomenally rapid growth and the innumerable changes in power and speed from year to year. These changes, owing largely to electrical developments, have followed one another very rapidly since 1890, when the number and condition of street railroads was first systematically investigated and reported upon by the Federal Government at the taking of the eleventh census. As the "Annual" goes to press, every reliable indication points to the "underground electric" system as the best adapted and most likely to become generally used for urban passenger traffic.

Development of the Underground System.—One of the oldest successful underground electric surface railroads is that of Buda-Pesth, Hungary. "So far as the street surface is concerned," said the "Railway World," when the practicability and general utility of the plan had been thoroughly demonstrated, "they [the electric lines] do not show any striking difference from ordinary street tramways operated by horses. There are no poles, or span wires across the streets, . . . nor is there a third rail, or a third grooved slot.

"There are simply two rails on each track, upon which run the car wheels as on ordinary lines, and these are not employed in any way as part of the electric circuit for conveying current. The latter travels to and from the motor cars along conductors in an underground conduit or channel made of concrete, and carried underneath the whole length of one rail of the track."

In September, 1891, the Minneapolis and St. Paul electric railway announced the perfect working of their latest innovation—i. e., the burying of their feed wires, thus removing from sight and danger the most obtrusive portion of the overhead structure. For comparison with the most approved methods of 1898, the following statement regarding the conduit on the Minneapolis-St. Paul Railway is worthy of mention: "The conduit is located between the tracks, and is built as follows: two-inch plank, first treated by boiling in feruoline, is used for constructing a long trough of the desired size. This trough is so nailed together as to be continu-

ous, and without joints from manhole to manhole, a distance of 408 feet. The trough is placed below the surface at such a depth that the top is 6 inches below the pairing blocks."

Mr. C. J. Field, in an address before the American Society of Mechanical Engineers, at the close of 1894, came nearer the mark than any of his predecessors in dealing with the probable outcome of the movement for installation of electric passenger cars in cities. "Underground conduits," said he, "or the placing of the trolley wire, with all its feeders, under the surface of the street, is the ultimate and desirable result to be obtained in our large city lines of electric traction. . . . The conduit to be most used will be one similar to a cable conduit, with the trolley conductors placed at the sides in the shape of a channel or angle bar or rod of iron or copper, which will be divided into sections and fed by underground feeders laid along the line of the road. Shoes or brushes will convey the current from the trolley wire to the motors on the car."

One of the most important events to be recorded in noting the rapid progress of the surface-railroad movement was the offer made by the Metropolitan Traction Company, of New York city, in November, 1893, through the Board of Railroad Commissioners, of a \$50,000 prize for the invention of a system of street-railroad propulsion superior to the cable and the trolley.

The offer has resulted in the working out of numerous schemes aiming at the desired end, although the original offer only held good until March 1, 1894. The general idea of the company in making the offer was "to encourage the invention of some sort of underground trolley system which would be free from the disadvantage of liability to kill horses and men in the streets above it." At this writing the lines operating through a large portion of the area controlled by the company have been adjusted to a safe and reliable underground trolley system, described below, and likely to meet all ordinary requirements for a lengthy period.

The Approved Underground Trolley System.—Until the Metropolitan Traction Company of New York city adopted this system on their Lenox Avenue line, only two underground trolley lines existed in the world, one at Buda-Pesth, already mentioned in this article, the other on the Port Rush road, near the Giant's Causeway, Ireland. The illustration giving an end view of a car, such as has now been put in use on the Fourth Avenue, Ninth Avenue, 59th Street, and other lines of the Traction Company, enables the reader to see and quickly understand the principal details of the approved system, now likely to supersede all others.

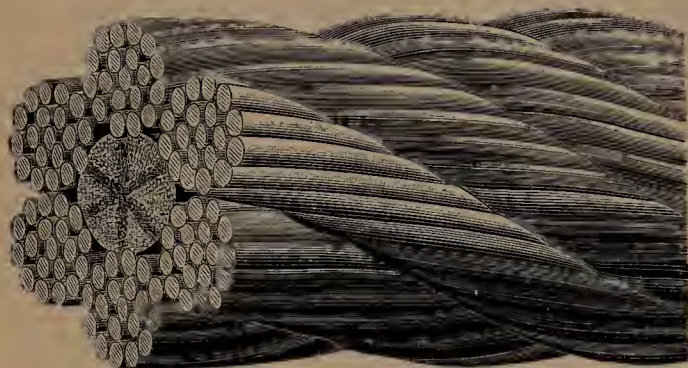
"Through the conduit on each side," says the "Scientific American," "the contact bars are carried by hangers. These bars are connected laterally with feeder wires placed just under the outer shoulder of the iron casting. The feeder bar is a wrought-iron pipe, 1½ inch interior diameter and 2 inches exterior diameter. The pipe is inserted in 30-foot lengths and bonded at the ends with copper-wire connections, bolted into the hanger slots. The pipes are easily discernible in the illustration.

"The hangers, also plainly to be seen on the immediate right and left of the pipes in the picture, depend upon a porcelain cup for their insulation, which cup is corrugated inside and out, and sets into a correspondingly corrugated cast-iron cup, receiving in its central aperture the iron hanger rod, all being secured together by cement.

"To the lower end of the hanger rod a socket is bolted, and to this the pipe, in its turn, is bolted, the end of the bolt in the pipe passing through a slot 1½ inch long in order to provide for expansion

and contraction by heat and cold. The head of the bolt is so shaped that it can be introduced into the slot, when by a revolution of 90° the bolt is secured to the pipe.

"That vital portion, the electrical contact apparatus, termed the 'plow,' is attached to the car body, and is built up of sheet steel, with wood and fiber insulation, its form generally being a parallelo-



BROADWAY CABLE, FULL SIZE.
(By permission, from the "Scientific American.")

gram. When it is remembered that the slot itself is only $\frac{3}{4}$ of an inch wide, it will be seen how accurately the plow has to be constructed to correspond thereto in size.

"Its shank is $\frac{7}{16}$ inch in thickness, giving a clearance of a little over $\frac{1}{8}$ of an inch on each side. To construct the shank, 2 sheets of steel $\frac{1}{4}$ of an inch thick are bolted together, and in the center and at the ends a central shoulder and end pieces are inserted for keeping them $\frac{1}{2}$ of an inch apart, thus providing 2 passages between them of this width and 3 inches long, going all the way down. This shank is 9 $\frac{1}{2}$ inches wide, and descends well into the conduit.

"On each side of the lower portion of the shank are carried the contact shoes. These are castings, each being 4 $\frac{1}{2}$ inches by 2 $\frac{1}{2}$ inches, and $\frac{3}{4}$ inch thick. A single shoe is used on each side. In the picture these shoes are similar in appearance to spoon or ladle bowls, the convex surface being in contact with the pipe on either side of the central shank. The shoes are carried by sheet-steel springs 2 $\frac{1}{2}$ inches wide, which press themselves outward from the plow frame. Under the influence of these springs they are pressed against the conductors with a pressure of about 7 pounds."

In the experimental stage, as noted elsewhere, it was found that the conduits do not accumulate dirt, that the loss of current is not worse than on an overhead trolley, and the conduit has proved to be practically self-cleaning, requiring to be swept out perhaps two or three times in a year, the natural flushing of the rain doing the greater portion of the cleaning. The conduits are so constructed as to be self-draining.

Each car is provided with two 25-horse-power motors, with electric heaters and electric lamps, including headlight.

Mr. C. B. Fairchild, one of the speakers at a meeting of the Electrical Society, 1894, said he thought it was a question "whether there is any extraordinary demand for an underground electric system," and he quoted from an authority who stated that "a successful underground system would be a great calamity for the street-railway interests of this country, from the fact that if one were adopted every little city throughout the country would demand that all the wires be put underground, and it would ruin nine tenths of the street

railways of this country if they were compelled to operate under such a system." The indications are now, after three years and a half, that the time when such a calamity as he predicted must happen has arrived, or at any rate is rapidly arriving.

Development of the Overhead Trolley System.—In June, 1891, an electric surface road was in full operation between St. Paul and Minneapolis, Minn. So successful and economical was its working that in the first six months it practically drove the steam railroads out of competition. One reason was the lower rates on electric roads. The railroads charged 30 cents single and 50 cents return fare, whereas the surface-road rate is only 10 and 20 cents respectively. This was not by any means the first successful road, but is a notable example of progressive work.

At a meeting of the American Street Railway Association in November, 1891, Mr. Pearson, connected with surface-railroad interests in Boston, stated that his road had at that time equipped 350 cars with electric motors. He announced that whereas the expense of operating horse cars had been practically 25 cents per mile the electric system cost but 20 cents, and would, he expected, get as low as 16 or 17 cents.

He estimated the total saving by use of electricity as equal to 25 per cent.

Useful facts and figures to show the rapid growth of the electric system on surface roads were quoted at length. For purposes of comparison with information given as for 1897-'98, they will be found of great service: "Three years ago [1888]," said President Watson, "there were only 13 electrical roads in the United States, now [November, 1891] there are over 400. . . .

"The capital now invested in American electric railways exceeds \$75,000,000. 'Horse sense' counts for but little in this age of rapid transit. We old dogs have been obliged to learn new tricks, and without the usual privilege of serving an apprenticeship. Our stables are being converted into power houses; the electrician has taken the place of the veterinary surgeon; our drivers are being educated as motormen, and most of us have horse cars for sale."

Engineering Difficulties in the Northwest.

—One of the earliest and most difficult electric surface-road enterprises on record in connection with the rapidly developed movement forming the subject of this article was that undertaken and carried to a successful issue in 1891-'92 by the Tacoma and Steilacoom Railway Company, of Washington. The country between the two towns, a distance of 13 miles, is very rough and covered with a dense growth of giant fir and cedar trees, which had to be cut down for the right of way, and the immense stumps blown out with giant powder. Hills were cut through in places to a depth of 17 feet, and corresponding gullies filled up, and creeks crossed on long trestles.

The engineering difficulties of the route and, incidentally, the scenery on this road is thus graphically described in the "Street Railway Review": "Leaving the power house, the road runs one mile west through an immense cut 17 feet deep and 1,200 feet long, descending an 8-per-cent. grade 1,500 feet long, then turns to the south, and runs several miles through a dense forest of immense fir trees until, after descending a horseshoe curve or a 6-per-cent. grade for half a mile, the country opens out to a beautiful prairie dotted with dwarf firs and scrub oaks and covered with flowers and vines.

"Crossing this prairie for a mile, the road sud-

denly plunges down into an immense cañon, following the contour of the side on a 5-per-cent. grade for over a mile. . . . At many points it was necessary to blast a roadway out of the mountain side, and as the car glides along its narrow path, winding around the jutting points of rock, the tree-covered mountains above afford a striking contrast to the dashing water 100 feet below. The cañon ride is one never to be forgotten. Reaching the bottom of the cañon, the river is crossed on a trestle 300 feet long." Yet, in the face of so many obstacles as were constantly present throughout the entire route, a line of over 11 miles was opened within ten months of the date when the first ground was broken.

Improvements in Trolley Cars and Motors.—The progress of electric railways noticeable in the spring of 1893 was very marked. Mr. Bonnett, an expert, in a current report on the subject, said: "We are now using much larger and heavier cars and more powerful motors, and the improvements due to the great advance of the electric-power industry tend to increase the efficiency of the motors and gearing employed." What follows is worthy of especial note when viewed in the light of present conditions: "The development of the low-speed motor will lead to one in which, for ordinary speed of street traffic, the armature can be placed directly on the driving wheel, thus dispensing with all outside losses.

"When this result is arrived at, which time is not far off, and either a light-storage battery or a practical system of power transmission to do away with overhead wires and their attendant damages is developed, the electric street car will stand at the head of methods of surface rapid transit." Mr. Bonnett quotes as an illustration the St. Louis suburban electric roads, "where, with modern cars and equipments, a run of eight miles out from the city is made in thirty minutes." This rate has been considerably increased since 1893. It is safe to say that under favorable conditions the same length of line in many cities is now traversed in from sixteen to twenty minutes.

Suburban and Rural Traffic.—Referring to the vast strides being taken in and near various cities in the matter of local passenger transportation, a New York scientific writer, in the summer of 1893, said: "While this and other cities have been progressing, the country has not been idle. The centralization of power and its distribution by the trolley system have inaugurated a cheap and rapid transportation system for suburban, and even rural districts.

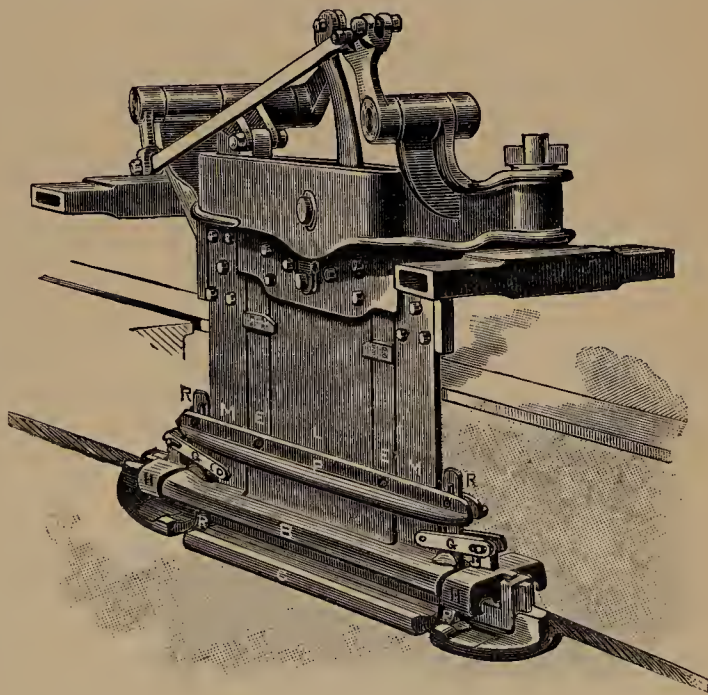
"The country roads have been invaded by the trolley. The vigor of the movement of the day in favor of cheap transportation is here emphasized. In spite of the effects upon horses in frightening them, the country roads on all sides are presented to electric traction companies if they will only put down electric roads. . . . Already local steam roads have been most seriously affected by the competition with trolley roads."

Trolley Cars on Country Roads.—The agitation now in progress for an electric-car system on country roads was begun in 1893, when the Wheelmen's League advocated a plan whereby \$10,000,000 would be required for New York State alone.

Influence of the Trolley-Car System on Railroad Traffic.—The influence of the trolley cars on steam-railroad traffic in and near cities began to be

severely felt four years ago, and the decrease has been so great in numerous instances that local steam service has been practically suspended. An influential railroad man in Philadelphia, at the time when steam-railroad receipts began to show a heavy falling off in the city and suburban traffic, said: "There is no use in our trying to compete with the trolley lines. We have to give too much to our patrons. We provide handsome terminals, fine suburban stations, heat, water, light, and a seat for every passenger, while the trolley cars furnish almost nothing but transportation. They furnish no stations; crowd the passengers in so that many have no seat, and in that way manage to make money. We can't do things that way, and so I see no money for us in trying to compete with the trolleys. Of course they can't touch us on long-distance traveling, but in the near future I expect to see them absorb a large amount of our suburban travel." Since that time trolley service has gone to great lengths literally, and is an active competitor to-day in some districts not at all within the limits of what might reasonably be called "suburban."

Emergency Trolley Device.—A curious incident illustrative of the convenience of electrical appliances ingeniously applied during an emergency happened on the Lake Roland Elevated Railroad. The trolley on one of the large electric cars was caught in a wire, and the entire trolley apparatus was torn off, falling to the street. The accident happened at a time when the traffic was heavy, and it was necessary to prevent a block. A linesman was equal to the occasion. He procured a piece of insulated wire, and, after stripping each end of the insulating material, connected one end through the car roof and, standing on the top of the car, held the other end, against the wire. A connection being thus made the car was run over

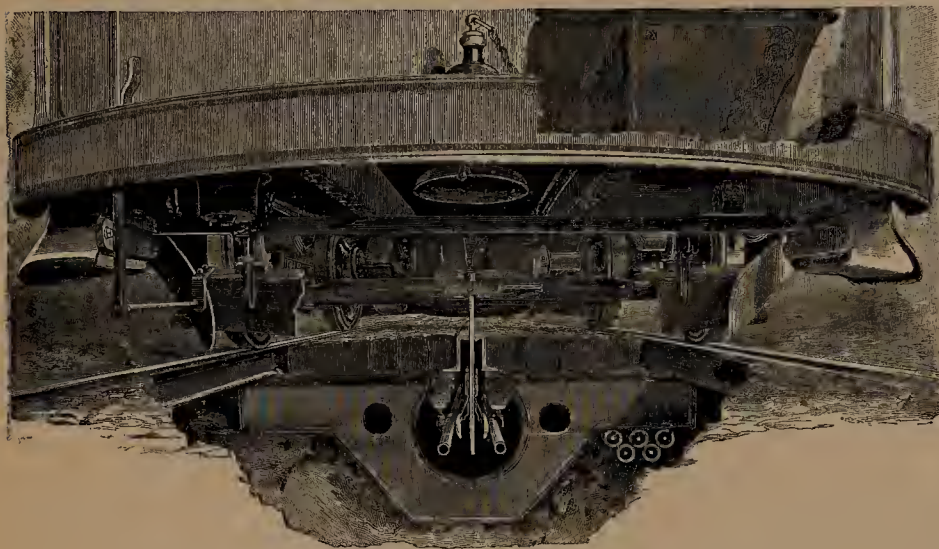


BROADWAY GRIP MECHANISM.
(By permission, from the "Scientific American.")

the elevated structure to the car shed without accident or delay to the other cars.

Trolley Cars for Mail-Carrying Service.—Early in 1894 attention was drawn to the new uses to which trolley cars were being put in connection with mail carrying. Satisfactory mail-car-

rying service of this character was introduced in Ottawa, Canada, and other cities, and has proved entirely satisfactory, the overhead trolley system being utilized for the purpose. For more than two years post-office cars, especially equipped, have been run as cable-car attachments on the Third Avenue road, New York city, and the idea of thus simplifying the delivery of mail at substations is likely to be developed until at last every important city route will be covered.



CROSS SECTION OF ELECTRICAL SUBWAY, SHOWING TROLLEY MECHANISM.
(By permission, from the "Scientific American.")

Trolley Cars for Pleasure Parties, Church Parties, etc.—The successful use of electric trolley cars for rapid conveyance of urban and suburban residents to and from their places of business has led to ingenious applications of the idea for purposes of pleasure. Palace trolley cars are now in use for theater and excursion parties. In Brooklyn, within the past two years, these cars at night are decorated with variegated lights of every hue and present a decidedly pleasing effect when seen at a distance in sparsely settled localities. In Boston cars for recreation purposes are painted in black and gold, with crimson panels. The trucks and running gear are of dark green.

The interior woodwork of these palace cars is of polished mahogany, and the upholstery is of peacock-blue brocade plush. Each car has twenty chairs, and each chair is provided with a wire hat-holder under the seat. Not only do people charter these cars for parties, but for churchgoing on Sundays and other routine events. Their provision in several cities has been large appreciated.

Trolley Parcel-Delivery System.—At St. Louis the convenience of the electric cars were further illustrated some time ago by the establishment of a parcel-delivery system. As early as 1895, on one of the St. Louis trolley lines, a regular delivery system was in operation, involving the collection and house-to-house delivery of ordinary express packages. This particular line starts in the heart of the city and runs for seven miles through a thickly settled district. A delivery car used for the work makes three trips per day, running on schedule time. The car is especially equipped for the purpose, and is mounted on motors of its own.

The foregoing text reviews briefly the development of surface-road facilities from 1891 to 1895. From that date to the present much has been done to perfect the cable and electric systems. Improvements have taken place in almost every depart-

ment, especially those connected with car lighting, ventilation, ease of motion, and a score of other details, each contributing in a greater or less degree to the comfort and help of passengers anxious to reach their respective destinations at a maximum of speed and comfort with a minimum of expense and personal risk.

The Cincinnati Viaduct.—Various methods have been adopted in cities for carrying and connecting surface city lines across cuts, ravines, and other open spaces. One of the most substantial and at the same time most artistic so far constructed is that now in use at Cincinnati. The business portion of the city occupies a plateau nearly three miles wide, rising abruptly about 80 feet on the north side of the Ohio river, and beyond this is an irregular line of bluffs some 400 feet high, over and beyond which the city has spread. One of these hills is known as Mount Adams, and the illustration on page 746 represents a view on the Mount Adams and Eden Park Railway, forming

part of the street-railway system, the park being on a hill in the eastern part of the city.

Decision concerning Trolley Patents.—About the same time, the Patent Office announced the validity of the administrator's claim in the matter of Van Depoele and others who contested the right to use and profit by the overhead trolley system. After a delay of six years, a patent was granted to the estate of Dr. Charles J. Van Depoele, recognized as the inventor. The Van Depoele rights were purchased by the Thomson-Houston Electric Company, and the Patent Office decision just referred to gave this corporation a monopoly for seventeen years, covering all the electric railways in the country and their plants. When the decision was given, over 6,000 miles of these railways were actually in operation.

The Van Depoele Patent.—The principal clause in the patent granted reads thus: "In an electric railway the combination of a car, a conductor suspended above the line of travel of the car, a rearwardly extending arm pivotally supported on top of the car so as to swing laterally, and provided at its outer end with a contact device engaging the underside of the suspended conductor, and a tension spring for maintaining an upward-pressure contact with the conductor."

"Overhead" Electrical Railway.—On Nov. 9, 1892, the first train on the Overhead Electrical Railway—a distinct advance on current British methods of conveying city passengers to various points within city limits—was run successfully at Liverpool, England. The trip was reported as "very satisfactory, the behavior of the main engines and dynamos being all that was anticipated. . . . The construction of this railway resembles in general appearance that of the Sixth Avenue Elevated Railway, New York city."

Steam Elevated Roads—their Disadvantages.—The passing of the elevated steam railroad

as a desirable means of transportation for passengers is foreshadowed in a few timely remarks by the editor of the "Scientific American," in March, 1893: "The elevated steam street railways," said he, "are great conveniences to the public, but they are sources of dirt, din, and danger to many a passing victim on the streets below. Chunks of coal, bolts of iron, hot and cold water, fiery coals—these are only a part of the droppings that fall from the rattling trains." He notes also the occasional fall of a man. One, in particular, was fortunate enough—for his own salvation—to fall on a passerby. That they were "both considerably hurt" goes without saying.

Storage-Battery System.—The storage-battery system has had many trials and has met with many adversities, but its advocates are not by any means discouraged. Evidence of this was seen recently in New York when a number of large, perfectly equipped storage-battery cars were introduced on an important crosstown line. The perfecting of the system is looked for at an early date, and with it will quickly come its adoption for all short lines, to the obvious disadvantage of the old horse-car system, which, in all large cities, has practically run its course. This system has been advantageously put into operation at several points during the past seven or eight years. The "Julian" system was introduced on Fourth Avenue, New York, prior to 1890, but work was suspended owing to disputes as to patent rights.

In February, 1891, announcement was made that a contract had been signed for the equipment of a branch of surface railroad at Washington, D. C., with 6 storage-battery cars. The local company introducing this innovation was one of the first in the country to adopt electrical devices for car propulsion. About this time municipal authorities were being aroused to the fact that trolley poles within city limits were undesirable. Hence the introduction of a storage-battery system, which has met with varying success.

These six cars were made for the "Edes" system, and equipped with the Electric Dynamic Company's motors and gearing, the gearing running in oil, with dust-tight covers for motors, and with a number of "23 M" type accumulators, with average speed of eight hours, the maximum speed being 15 miles.

The next recorded success of storage-battery cars was at Dubuque, Iowa. In June, 1891, 9 cars were in operation, equipped with the Edes system. It is interesting in this connection to note the effect on the public mind of the new system introduced so successfully in numerous cities some seven or eight years ago. The unsightliness of appliances necessary for the working of the overhead trolley system had been a subject for much unfavorable comment. The opportunity to compare it with the storage system brought forth a more vigorous volley of objections to overhead appliances.

A local daily, the Dubuque "Times," is quoted as saying, in connection with the introduction of the storage system: "There is no tangle of overhead wires to spoil the view. But down the street, swiftly and silently, save for the loud ringing of the warning gong, comes a beautiful car, skimming over the rails like a thing of life, yet so perfectly under the control of the 'motorneer' that it can be brought to a standstill in half a car length. There is no rocky motion, no jarring. The cars run as smoothly and with apparently as little friction as a bird flies through the air."

At Oneida, N. Y., in the fall of 1893, a street car in actual use was propelled by storage batteries. The total run on one charge of the batteries was 125 miles. The car made daily from 64 to 90 miles

without a break in the service. The 125-mile run was made on a seven-hour charge. There were 96 cells used in the car. The motor was a single 30-horse-power Rae type. The motor winding was for 190 volts. The voltage of the 96 cells at the start of the 117-mile trip was 204; at the end 192 volts, a loss of only 12 volts in a day's trip. The car was lighted from a bank of 24 cells with 48-volt incandescent lamps.

Development and Decay of the Cable System.

—In the autumn of 1891 the original cable road, operated by the Clay Street Hill Railroad Company, San Francisco, became obsolete. The record of this line, extending from 1873, when the cable road was constructed to overcome the grades of from 10 to 16 feet existing on that thoroughfare, shows that the original grip car consisted of a low platform on small car wheels and supporting the grip. A rough railing surrounded it. The brakes consisted of steel levers, which were pressed against the four wheels.

Five men were necessary to run the dummy, one operating the grip and each of the remaining four standing with a steel lever in his hand ready to lock the wheels should the grip break. The trailer was a common "bobtail" horse car. The history of the cable is intensely interesting in the light of passing events. It dates back about twenty-eight years.

"Early in the '70's," says the "Scientific American," "A. S. Hallidie, now President of the California Wire Works, of San Francisco, conceived the idea of propelling street cars by means of an endless, traveling, underground cable. The scheme was at first considered chimerical, but finally three men of means—Joseph Britton, H. L. Davis, and James Moffitt—took the matter up. Then came the almost interminable task of working out the mechanical details of the idea, but it was finally completed, and on Aug. 18, 1873, hundreds of San Franciscans climbed up Clay Street hill to watch the trial trip.

"As the gripman who was to take the car over the road looked down the steep decline his courage failed, and Mr. Hallidie took the grip. At a given signal the car started off smoothly, amid shouts from thousands of throats. The trip was made without a hitch, and the innovation was pronounced a success."

Electric cars have taken the place of cable cars on Clay Street hill, and Mr. S. L. Foster, discussing surface-railroad topics in 1896, said, in this connection: "When we consider the daily spectacle of electric cars, unaided, climbing 14½-per-cent. grades in San Francisco and 15-per-cent. grades in Oakland, and by means of a simple auxiliary device ascending a 25-per-cent. grade in San Francisco, where no cable grip could be made to hold, the impracticability of any cable proposition is open to question."

Another significant event happened in 1891. The cable surface-railroad equipment was replaced by an electric system at Grand Rapids. Nearly all of the expensive machinery, etc., was broken up and sold for old iron. The engines are utilized, however, to drive the dynamos that furnish the current. The grip slots and rails are retained on hill lines, and an auxiliary brake has been fitted on the cars to catch on these rails in case of emergency.

The Cable Lines on New York Thoroughfares.—With evident satisfaction, announcement was made from time to time in the public prints of New York city during the latter part of 1891 of the preparations then in progress for opening the "Broadway and Seventh Avenue cable road." Neither the projectors of that important enterprise nor the expectant public of the period anticipated

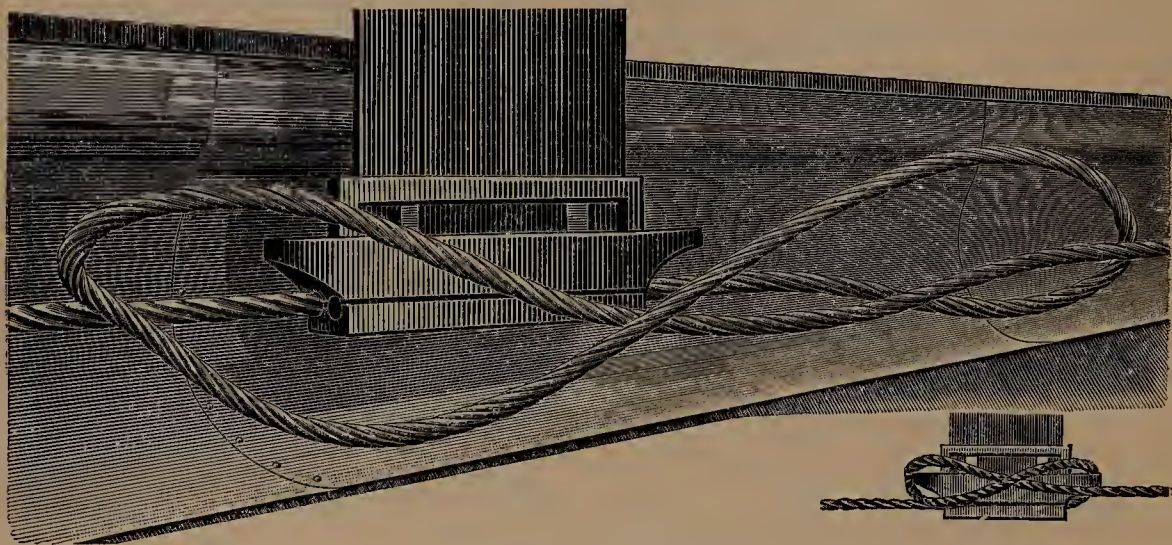
so rapid an advancement of appropriate electrical inventions for underground propulsion of surface cars as has been witnessed within the marvelously short space of time since elapsed. Already the entire cable system is under condemnation as ancient and unreliable compared with the underground trolley system, now accepted as apparently the very best possible method obtainable.

The engineering difficulties connected with the construction of the Broadway cable road were far greater than have been encountered in the majority of steam-railroad enterprises since the days of Stephenson and Brunel. To cross rivers or to cut tunnels through rock as hard as adamant is mere child's play in comparison with the task undertaken

incident indicative of the then rapidly approaching triumph of electricity over other methods—not only in regard to speed, but also with a view to greater economy in working expenses.

The cable was abandoned, because its operation was too costly. As at Grand Rapids, curves were frequent and sharp, and there were other large items of extraordinary expenditure from wear and tear. The opportunity, too, for avoiding the handling and placing of unwieldy masses of cable was welcomed.

Completion of Two New York City Cable Roads.—The beginning of 1893 found the New York cable roads well advanced. On the Broadway and Seventh Avenue line the line between the



DANGER OF A SLACK CABLE.
(By permission, from the "Scientific American.")

by the men who accepted contracts for cable-line construction along Broadway. Naturally they expected many obstructions, but the obstacles met with were far more frequent and of a much more aggravating character than was anticipated at the start.

These obstacles included gas and water mains and valves; sewers, with their manholes, basins, and connections; Edison electric conduits, manholes, and subways with vaults; service boxes and air pipes; commercial cable conduits and vaults; pneumatic tubes; steam pipes with expansion joints, return pipes, valves, and valve stems; and the adjustment and readjustment of the tracks for temporary and permanent tracks. All difficulties, as will be seen in a subsequent paragraph, were eventually overcome and passenger traffic duly established. How little was known less than a decade ago of the cable's future may be understood from the following extract:

The "Scientific American" of May 16, 1891, referring to the commencement of contract work on the Broadway cable, said: "It marks the first step in making this a city of cable roads. . . . The street-car horse may, within a few years, be almost banished from our streets." This latter forecast was, if anything, too conservative. As for the former, the rapid strides of electrical science and invention since its publication have placed the suggested transformation among the impossibilities.

Valuable Cable Road abandoned at St. Louis.—In April and May, 1892, the St. Louis Cable and Western Railway—which cost for wrought iron alone \$150,000—was demolished, and the plant sold for a trifling sum. This is mentioned as one

Battery and Central Park had reached completion. The Third Avenue line was also complete except two very short uptown stretches and one at the southern end of the line. A franchise was granted for a Lexington Avenue cable line, and bids were being made for a similar privilege on Ninth Avenue.

The Broadway cable road, New York city, began actual passenger-carrying operations on May 11, 1893. The cable between the Battery and Thirty-sixth Street were started by the seven-year-old daughter of Mr. John D. Crimmins, who built the road. Miss Crimmins opened the steam valve of the 2,000-horse-power engine in the basement of the great power house of the company at the Houston Street station. In less than five years this vast subterranean power-house chamber, over 100 feet in length, under Broadway, and 40 feet in depth, has passed the highest point in its career of usefulness, and, the days of the cable being numbered, this structure must ere long be abandoned for cable purposes as unnecessary.

The Third Avenue line was practically completed during the first week in December, 1893. Although this is a cable line, there are many variations in mode of working, these variations extending to engines, cars, grips and grip-operating devices, and differing from the Broadway plan in many other important particulars.

Signal Systems on Cable Roads.—Accidents on cable roads, whereby much vexatious delay to passengers was occasioned owing to the inability of road inspectors and other officials at a distance from power houses to communicate with engineers, brought about the installation of a useful signal system, placed in operation on the Third Avenue

road in the spring of 1894. The plan is at once complicated and simple. By a series of strokes on a gong, controlled from the manholes along the route, notice is instantly given to engineers of accidents, delays, and other occurrences calling for prompt changes in cable service.

Lighting Cars with Gas.—The problem of lighting the Broadway cable cars adequately and conveniently was solved by the adoption of the Pintsch system. By this plan a very rich gas of more than 70 candle power is obtained from crude petroleum. It will stand a very high degree of compression without materially affecting its illuminating qualities. Coal gas, it has been proved, will not stand high compression, as it is a low-candle-power gas, and loses 50 per cent. under compression, whereas oil gas only loses about 10 per cent.

Length and Weight of Cables.—Some idea of this part of the work connected with operation of cable roads may be gained from the contemporary statement that a cable manufactured for use at Denver, Col., was 32,145 feet in length, weighing 86,867 pounds; another, for Portland, Ore., measured 33,000 feet, weighing 76,350 pounds; a third, for Kansas City, Mo., extended 32,300 feet, its weight being 95,200 pounds. It can be easily understood how acceptable any practical method for propulsion by electric power must have been, even at this period, to surface-railroad corporations, officers, and employees.

The autumn of 1892 found a complete cable equipment on many of the surface roads of Washington, D. C. The plant for the Pennsylvania Avenue and Fourteenth Street branches alone cost \$3,000,000. This, together with the Seventh Street road, made the most complete and one of the largest cable systems in the country.

Cable-Road Accidents.—The practical workings of the newly laid cable road in New York brought to light several frequent causes of traffic interruption. The "Scientific American," when public interest had been aroused owing to many delays and other annoyances, published a very interesting and instructive illustrated article on the

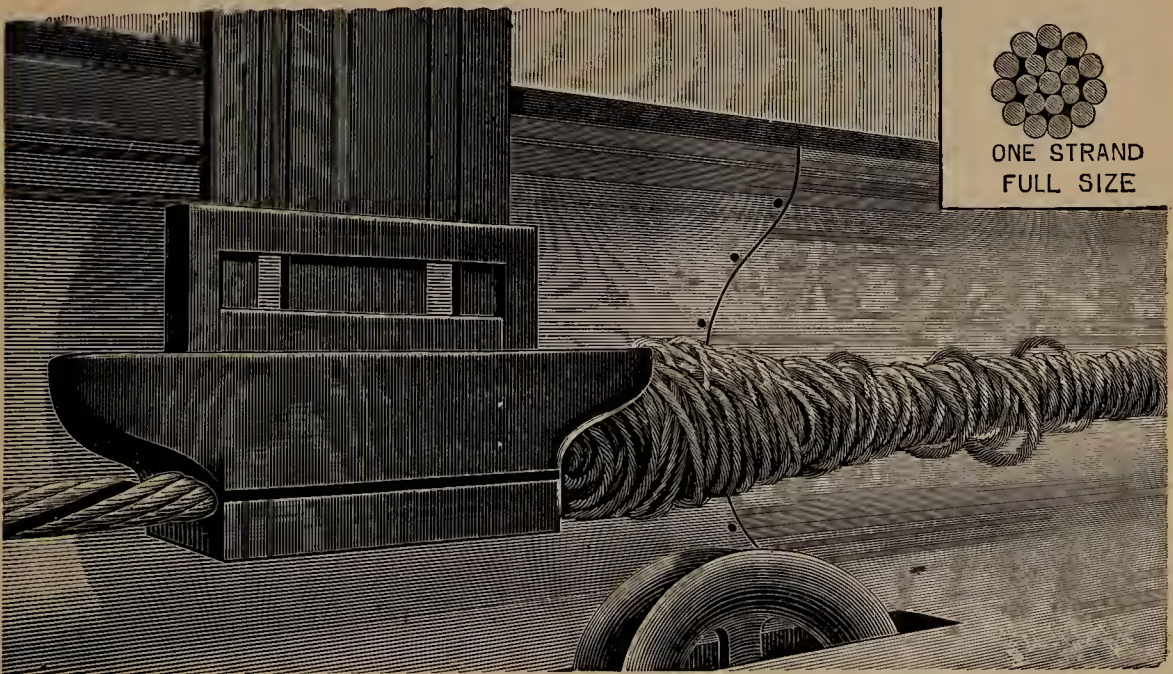
subject. Several of the most notable causes of accidents are explained in detail.

"Not long since," says the writer, "one of the cable cars in lower Broadway, after a brief stop of the cable, started, and when an attempt was made by the gripman to stop the car, it was found impossible to release the grip, and the car moved down Broadway toward Bowling Green, clearing everything before it, having a propelling force behind of not far from 1,200 horse power, with no immediate prospect of being stopped. As the cable railway has no telegraph [there is a complete signal system now, 1898] the telephone was brought into use, and in due course of time communication was had with the engineer at the power house, and the cable was stopped.

"On examination of the grip it was found that a certain amount of slack in front of the car allowed of the formation of a loop which, singularly enough, took the form of a hitch around the projecting horns of the grip. The only way to release the grip from the cable in this case was to break the grip and remove it from the cable conduit, the car being towed back to the car house by coupling it to another car. Although the cable is sufficiently flexible to permit of passing around the huge drums at the power station and over the guiding sheaves in the street, it was far too rigid to permit of releasing the grip by any manipulation of the cable itself."

This is evident from an examination of the cable, the detailed construction of which is shown in this article. The center of the cable is flexible enough, being of hemp. The wire portion is formed of 6 strands, the exterior layer of each strand consisting of 11 wires, Nos. 9 and 11 alternating, the inner layer being formed of 7 No. 9 wires, while the center wire of the strand is also No. 9, making 19 rigid steel wires in each strand. A certain amount of slack is required in the running wire to relieve the immense strain and tension. The loop found in the instance given above was caused by the allowance of slack being in excess of actual requirements.

The illustration of a broken strand in this article shows the condition in which the cable was found



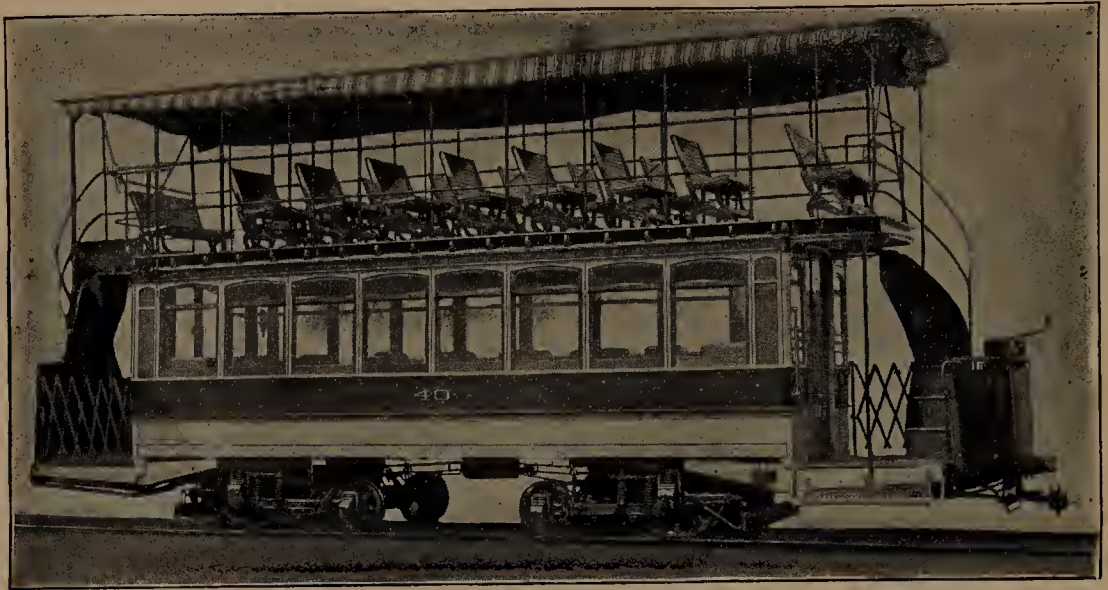
RESULT OF A BROKEN STRAND.

(By permission, from the "Scientific American.")

after another adventurous trip of a runaway car on Broadway. "In this accident," says the "Scientific American," "the car behaved as in the other case—that is to say, it was carried along the track irresistibly, and the gripman was unable to release the grip so as to stop the car. After the power house had been signaled and the engine stopped, an examination of the cable in the conduit showed that one of the strands of the cable had been broken, and the cable, in sliding through the grip, pushed back the strand until 1,500 feet of it had been piled

rigidly attached to a crosshead on the track frame by means of two vertical shanks of plate steel, M M, and is always carried at a fixed level. The upper jaw, B, is carried by a shank, L, which is raised or depressed by the action of levers attached to the crosshead and operated by the gripman.

"The jaws are each provided with two longitudinal grooves, so that the cable may be taken up on either side of the grip. When the car is stationary the cable runs in the groove in the lower jaw, and the car is started by depressing the upper jaw and



A DOUBLE-DECKED CAR.

(By permission, from the "Scientific American.")

up upon the cable, the strand thus shoved back upon the cable occupying a space of 200 feet behind the grip.

"This accident caused a delay of several hours. There was no remedy for the delay, as the spare cable had not been laid in the conduit. Traffic had to be suspended until the cable could be put into running condition, which was done by removing the loosened strand."

Slow-Speed Cable-Car Grip.—The adoption of the device shown in this article for permitting the reduction of cable-car speed on curves is the outcome of popular agitation in New York city demanding an adequate remedy for existing dangers at several places along the Broadway route, notably at the curve, corner of Broadway and Fourteenth Street, where the cars turn into Union Square. The suggested remedies were numerous, some practical, many impracticable for one or more reasons.

The remedy ultimately chosen meets every requirement, and can be applied at will. "The construction of the ordinary form of cable-car grip is such that if a stop is made in the middle of a curve and the cable is released it will leave the grip and spring toward the center of the curve. Hence, in order to traverse a curve the gripman takes a firm hold on the cable and swings around on to the next tangent at full speed. This full speed is much greater than is allowed for cars within the city limits, and is so rapid as to be extremely dangerous to pedestrians at the crossings."

In the illustration showing perspective of grip, with retaining hooks attached, "the parts marked H H are loose hooks, which keep the cable in the grip when the upper jaw, B, is raised to release the cable. The grip consists of a lower fixed jaw, C, and an upper movable jaw, B. The lower jaw is

gripping the cable, the speed of the car being regulated by the pressure of the grip. At full speed the cable is held perfectly stationary in the grip, and at slower speed it is allowed to slip somewhat, the car being carried along by the friction between the jaws and the cable.

"The cable is thrown out of the grip altogether, or 'tripped,' by raising a couple of wedges which are carried by links, R, bracket, P, and the two plates, E E, and are operated by a separate lever on the car. The plates, E E, are provided with stops, which, as the plates are lifted, engage the shank, L, and raise the top jaw, B.

"The trouble with the old form of grip was that when the upper movable jaw, B, was raised when traveling a curve the cable would spring out to the inside of the curve and be 'lost.' To remedy this the hooks, H H, whose cross section conforms to that of the upper jaw, B, are hung by links, G, to the jaw near its ends, and have a slightly larger vertical movement than the jaw. When the latter is raised sufficiently to release the cable, the hooks, H H, remain down in place and keep the cable from springing sideways out of the grooves."

Compressed Air as a Motive Power.—The use of compressed air as a motive power for city surface roads was brought prominently to notice in the early part of 1894 by use of that system for propulsion on the Nantes tramways and on the line from Paris to Nogent-sur-Marne. On the latter line each car is fitted with 9 steel storage reservoirs fixed underneath the car body, containing air at a pressure of 100 pounds to 176 pounds per square inch. Three of the reservoirs form a reserve in cases of emergency. The air is heated on its passage to the motor by hot water, which at starting has a temperature of 300° F.

The cars seat 50 passengers, and weigh upward of 14 tons. They will run 12 miles with a single charge on the level, but owing to the heavy grades one charge suffices for but $8\frac{2}{3}$ miles, the consumption of air being 35 pounds per mile on the grades and about 24 pounds on the level. The objection to this system of traction has been the great weight of the reservoirs. These the engineer has succeeded in reducing. The feeding points are at intervals of about $1\frac{1}{2}$ mile, and the car, as it runs over the points, automatically makes connection with mains supplied from a central station, a stop of a few seconds only being required to fill the reservoirs.

Gas-Motor Cars.—In 1893 much progress was made in European cities with gas-motor surface cars. Coal gas was chosen in preference to horse power, electricity, and compressed air, as being more economical for a train line between Neuchâtel and St. Blaise, a distance of $3\frac{1}{2}$ miles. The gas motors use cylinders of gas compressed to 10 atmospheres, and containing enough gas to do the run out and home.

The motors are reported as being strong, simple, practical, and safe, and free from noise and smoke; they only require a weekly cleaning. The starting and stopping are instant and free from shock. The weight of the car, with 20 passengers, a driver, and a conductor, is about 6 tons. The highest ground on the journey is halfway, 40 feet higher than at the starting point, Neuchâtel. To get up a speed of $11\frac{1}{2}$ miles an hour, 7.9 horse power is necessary. If another car is hitched on, also fully loaded, the journey takes 27.4 minutes. The cost of gas, with one car, is \$1.12 per thousand cubic feet, $\frac{1}{2}$ cent per passenger per journey.

Experience in Europe has proved that gas can run a small traffic. A gas car can go anywhere, and there may be few or many in use. "Electric cars," says an authority, at this time, "are a good deal dependent on one another, and upon the arrangement of the track for them." In a report to the municipal authorities at Nordhausen, numerous advantages of gas cars over electric cars were noted. Among them were: Much less first cost; less current cost; independent action of cars, thus doing away with breakdowns; ease of beginning in a small way and gradually developing; and, lastly, ease of replacing gas motors by electric motors, while the inverse change can not be made in an electric car.

Statistics published in the fall of 1894 concerning the working of gas-motor cars, such as was referred to in previous paragraphs, show that in Europe the cost of a gas-motor car weighing $7\frac{1}{2}$ tons empty, to carry 29 persons, and fitted with two 7-horse-power gas engines, is \$4,500, and the gas consumption, with 10 to 12 persons on board, is from 34.7 to 37 cubic feet per car mile. The cost of construction, 5 miles with cars running every five minutes, requiring 20 cars and working fourteen hours per day, is put at \$5,200 per mile, including everything, while in Germany, at the same period, an electric tramway costs \$37,240 per mile and a horse tramway \$28,180. Working expense for gas-motor cars are given as from $8\frac{1}{2}$ cents to 10 cents per car mile with a 10-horse-power gas motor, as compared, in Germany, with 7 cents per car mile for the electric system. "The conclusion arrived at is," says the writer, "that with similar traffic conditions a gas tram might be expected to give a return of $6\frac{1}{2}$ per cent. on the capital invested, while an electric tram would barely cover cost of working."

Oil Vapor as a Motive Power.—Oil vapor as a power for propulsion of surface cars was introduced early in 1893 on the London and Greenwich tramway system, England, and proved successful. The

Connelly motor, previously used in the United States, furnished the power. The engine is fixed in a small car, and is capable of developing 12 horse power on the brake. In 350 trips, covering 507.85 miles and carrying 4,182 passengers, the total consumption of oil was 70 gallons. The engine worked satisfactorily, taking gradients and sharp curves without difficulty, and the legal speed of 8 miles could easily be increased.

Wire-Rope Tramways.—This article is chiefly intended to exhibit the progress and present condition of surface city railroads, yet occasional details outside of these limits will aid the reader in forming an adequate idea of progress made in other directions toward the desired end, i. e., the rapid conveyance of passengers, in and near cities, to and from all destinations within easy reach for business or pleasure.

Four years ago a wire-rope tramway for passenger-car service over the Tennessee river at Knoxville was put in operation and worked successfully. The tramway was suspended at a height of 350 feet above the water. The cables were $1\frac{3}{8}$ inch in diameter and the length of the span 1,060 feet. The car, when empty, weighed 1,200 pounds. It had a 14-foot body, was $6 \times 6\frac{1}{2}$ feet, and carried 16 passengers.

In Foreign Countries.—Shortly before the close of 1891 the first overhead electric "tram line" was opened at Leeds, Yorkshire. Previous electrical appliances in England were on the conduit central rail or storage-battery system, owing to the unsightliness of the overhead trolley equipment. The trolleys were on 21-foot standards, "the current being drawn off to the motors on the cars through a small grooved wheel, which is pressed against the under side of this bar, and runs along it as the car progresses. The return current from the car passes through the wheels to the rails and the return wire."

Many odd developments have appeared as the electrical system gained in strength and patronage. At Chemnitz, Saxony, in 1894, horses were declared obsolete for street-car service; the trolley was substituted. At the same time the trolley pole was pronounced undesirable and superfluous. The method of stringing wires at Chemnitz is by means of ornamental rosettes fastened into the woodwork or walls of houses, having projecting hooks to which the wires are attached. These hooks are firmly fastened and are tested with seven times the weight they are called upon to bear. The plan works satisfactorily. A similar plan is now in use on the Brooklyn Bridge for trolley-car service.

Another novel feature on this line is that there are no car conductors. Fare boxes are attached to each end of the cars, and there are very few evasions of fare-paying. The fare is 10 pfennigs, a trifle less than $2\frac{1}{2}$ cents, including transfers. If 150,000 persons evade payment of fare, the total loss would be 15,000 marks. The number of delinquents would have to be trebled before the company would begin to lose, the saving of conductors' salaries amounting to more than 45,000 marks. In Saxony the people pay for food and drink in restaurants, saloons, and gardens on honor alone. Later on it is hoped the same condition may exist in the United States.

Double-Deck Cars.—The limited use of "double-deckers" for relief of congested morning and evening traffic on surface lines, such as the Broadway and Columbus Avenue routes in New York city, has frequently been advocated and will probably be instituted in due course. The picture of a double-deck car given in this article is a representation of the series constructed for and now in use on the new electric railway in Cape Town, South Africa. These cars have a seating capacity of sixty-four pas-

sengers—thirty-two above and a similar number below. The seats on both decks are arranged transversely, with a central aisle.

The increase of 100 per cent. costs comparatively little extra dead weight. "The increased accommodation is obtained by the addition of a roof carried on light iron rods, two end stairways, and the seats, together with such increase in the strength of the car body and frame as may be necessary. The platforms are specially commodious, and accommodation is provided for the motorman, controller, and brake apparatus on the outside of the step landing. The cars are mounted on Eureka maximum-traction pivotal trucks, and are equipped with Westinghouse No. 38 50-horse-power motors."

Mileage of Street Railways, also Number of Cars, 1893.—In reviewing the progress of surface roads, the New York "Sun," especially reliable in statistical matters, announced, in July, 1893, that "three years ago the mileage of horse roads was 5,173; of electric roads, 1,641; of steam roads, 554; and of cable roads, 527. Now the electric roads lead all others. . . . At the beginning of 1890, when

appliances for propulsion, etc. The total amount given, with interest, was \$1,246,000.

Cost of Electric and Cable Road Construction.—Some interesting facts and figures concerning surface-car systems were presented at a meeting of the New York Electrical Society in November, 1894. During the meeting it was announced that the cost of the New York city cable roads, single track, was not less than \$150,000 per mile; in Washington, D. C., about \$30,000; average cost of cable roads in cities per mile, \$60,000 to \$75,000.

Electric traction, it was stated, is very much harder on the rails than cable traction, when the headway is under three minutes. Cars for electric and cable roads are about equal in cost, but the motor costs from ten to twelve times as much as the grips, or a difference of about \$1,000 per car.

Advantages of Electric System as to Cost, etc.—Mr. S. L. Foster, writing to the "Street Railway Journal" in 1896 under this heading, said that, from comparisons made in San Francisco, people prefer to ride in electric cars. It was also ascer-



VIADUCT, CINCINNATI, OHIO.

(By permission, from the "Scientific American.")

electric-railroad building first began to be popular, there were 200 companies in operation, covering 1,641 miles of track and using 2,346 cars. To-day so great has been the multiplication of lines that there are more than 7,000 miles of electric street railroads."

Franchises.—As time progressed companies interested in the development of electrical street-railway facilities began to make arrangements far ahead for securing franchise and other municipal privileges. Just before the close of 1893 the New Orleans and Lake Railroad Company purchased from the municipal authorities of New Orleans, for \$700,000 cash down, a renewal of privileges already held. This renewal extends from 1906 until 1956. This security was needed and obtained by the company to justify a heavy investment in electrical

tained beyond any doubt that electric cars carry the people more cheaply. "These results were not obtained from a few electric cars run on level lines and at high rates of speed, but from the operation of upward of 150 cars at from one and a half to two and a half minutes headway at times, and on lines having grades as high as 14.5 per cent." Mr. Foster, in conclusion, said:

"Every time a cable power house can be dispensed with and the lines operated by electricity, that power house's item 'labor' is wiped out, and the item 'fuel' is reduced both on account of the less fuel required per car mile for an electric road as against a cable road, and because the cable houses are usually run noncondensing, whereas in the electric power house the engines are run condensing."

Use and Waste of Electrical Energy.—Consequent on the evident general acceptability of the electric system for surface roads in cities, it is important to know something of the use and waste of electrical energy as applied or misapplied by motormen. Prof. Herman S. Hering, of Johns Hopkins University, in a paper on "The Use and Waste of Electrical Energy" read in 1896, said: "By far the largest part of the electrical energy used by the cars is expended in accelerating and lifting them"—that is to say, in starting and in hill climbing. If a car be driven to the top of a hill, it represents, by the time it reaches the summit, an amount of energy which an intelligent motorman will carefully husband on the down grade, using only as much current as will start it and utilizing the "drifting" capacity of the car when it reaches the level for as great a distance as possible. Motormen frequently use current on a down grade when it is totally unnecessary, and then jam down their brakes when reaching the foot of the grade, which results in a total loss of this energy.

"The tests show that 74 per cent. of the total energy expended per car mile in city work is used up in lifting and accelerating, and only 26 per cent. for horizontal traction.

"When a special motorman made a test he showed an economy of 15 per cent. on the up grade and 26 per cent. on the down grade, over the ordinary motorman. The saving per year on a ten-mile road, with 100 cars making 15 trips *per diem*, represents \$7,000. It was ascertained by the tests that on the same road, under similar conditions, one unnecessary stop per car per trip cost \$46.7 per year."

General Progress during the Past Three Years.—Most notable, perhaps, among the developments, improvements, etc., at home and abroad during the past three years have been the lighting of cable cars by electricity, as illustrated in the Brooklyn-Bridge system now in vogue; the introduction of a steam tramway along the banks of the Suez Canal, joining Port Said with Ismalia; the change of the Philadelphia street-car system from cable to trolley; the introduction of fenders for public safety in many cities; the adoption of the trolley system as a means of transporting funeral parties in cities; the determination of the Metropolitan Street Railway Company, New York city, to adopt the underground trolley as rapidly as possible on all its main lines, after ascertaining, by means of the Lenox Avenue experiment, that the efficiency of the system is not impaired, if proper appliances are used, by snow, rain, or other rough weather; the introduction of the overhead trolley system in Japan; the completion of the Boston subway; the installation of the overhead trolley system in Vienna, Austria; and the adoption, completion, and opening up of the underground trolley system on Fourth and other avenues in New York city.

Statistics.—In 1880 the street-railway mileage of road in the United States, as reported in the tenth census, was 2,050. In 1890 the mileage of track was 8,123 miles. In 1897 the total track mileage of the country was 15,718, an increase of 93.5 per cent. over 1890. The larger part of this increase

occurred in small cities and in suburban and rural districts.

Mileage.—The changes in distribution of mileage by motive powers between 1890 and 1897 are shown in the following statement, published in the "Street Railway Journal":

MOTORS.	1890.	1897.	Per cent. increase or decrease.
Animal.....	5,661	947	83.3 decrease.
Electric.....	1,262	13,765	990.7 increase.
Cable.....	488	539	10.5 "
Miscellaneous.....	711	467	34.3 decrease.
Total.....	8,123	15,718	93.5 increase.

The miscellaneous mileage is largely in elevated railroads in the Eastern and Central States, and in steam dummy lines in the Southern and Western States, Alabama particularly having a number of dummy roads.

By the same authority, the distribution by sections is given as follows:

SECTIONS.	1890.	1897.	Per cent. increase.
New England States.....	916	2,151	134.8
Eastern States.....	2,393	5,220	118.1
Central States.....	2,554	4,960	95.0
Southern States.....	823	1,088	32.2
Western States.....	1,437	2,279	58.6
Total.....	8,123	15,718	93.5

The number of passenger cars in operation on American street railways has grown from 32,505 in 1890 to 51,532 in 1897, an increase of 58.5 per cent.

Capital, Debt, etc.—Concerning capitalization, the following comparison can be made: The total earning power given in the census of 1890 for all the street railways then in existence was \$91,721,845; the total operating expenses were \$62,011,185; the total fixed charges were \$13,978,903; and the net income was \$15,731,757, from which was paid \$10,180,726 in dividends and \$1,217,193 for miscellaneous purposes; leaving a net surplus of \$4,333,838. "It is nearly certain," says the writer, "that our street railways to-day [1897] are earning at least \$150,000,000 gross, and it is probable that the net earnings applicable to return on investments, as figured by the companies themselves, would be between \$40,000,000 and \$50,000,000."

The order of States, taking the first five, or, rather, the five highest, in several classes of facts, 1897, is as under: Number of roads—New York, 111; Pennsylvania, 110; Massachusetts, 76; Ohio, 58; Illinois, 57. Track mileage, electric—Pennsylvania, 1,658; New York, 1,559; Massachusetts, 1,325; Ohio, 1,174; Illinois, 1,113. There are electric roads in every State and Territory. Track mileage, cable—California, 117; Missouri, 101; Illinois, 82; New York, 55; Ohio, 45. There are no cable roads in New England, and one mile of track in the Southern States. Track mileage, horse—New York, 298; California, 127; Texas, 54; District of Columbia, 44; Kentucky, 40. There are no horse cars in Vermont, Rhode Island, Connecticut, Delaware, Michigan, Montana, Utah, and Washington.

CAPITALIZATION.	1890.	1897.	Per cent. of increase.
Capital stock.....	\$211,277,798	\$846,131,691	300.5
Funded debt.....	151,872,289	633,079,178	316.8
Total capitalization.....	\$363,150,087	\$1,479,210,869	307.3
Capital stock per mile of track.....	\$26,010	\$53.800	106.8
Funded debt per mile of track.....	18.696	40.300	115.6
Total capitalization per mile of track.....	\$44.706	\$94.100	110.5

Cities.—Reference is made throughout the foregoing text to progress recorded during the past seven years in large cities. In order to secure, if possible, accurate official data concerning the present condition of transportation facilities for passengers in the largest municipalities, letters of inquiry were recently addressed to the mayors of all cities of 100,000 population and over in 1890. In very few instances have complete returns been rendered. But official figures have been secured from available data to enable a fair showing and comparison to be made. As there is a difference in the plan of statement between the official figures for 1890 and the returns secured for 1897, it will be most convenient for general reference to give separate tabular exhibits. The footnotes to each will explain the plan.

CITIES.	MOTIVE POWER,* 1890.				Length of all tracks.
	Animal.	Electric.	Cable.	Steam.	
New York.....	137	..	7	37	377
Chicago.....	159	..	34	..	390
Philadelphia.....	250	3	20	4	351
Brooklyn, N. Y.....	139	6	..	28	352
St. Louis.....	79	2	19	16	192
Boston†.....	175	63	..	..	366
Baltimore.....	99	2	..	..	157
San Francisco.....	30	..	46	14	156
Cincinnati.....	50	6	13	..	122
Cleveland, Ohio.....	35	44	9	..	159
Buffalo.....	42	2	..	..	66
New Orleans.....	100	..	..	13	153
Pittsburg, Pa.‡.....	30	21	15	..	111
Washington, D. C.....	33	9	4	..	83
Detroit.....	47	13	..	..	80
Milwaukee.....	32	15	..	5	97
Newark, N. J.#.....	63	..	..	..	76
Minneapolis.....	40	..	..	18	103
Jersey City.....	43	..	1	3	78
Louisville.....	80	5	..	..	128
Omaha.....	21	26	5	..	99
Rochester.....	31	5	..	..	62
St. Paul.....	15	6	5	..	51
Kansas City, Mo.....	10	11	36	12	127
Providence, R. I.....	42	..	3	..	59

* These figures represent length of main line only.
† With Lynn and Cambridge. ‡ With Allegheny.
With Elizabeth. ¶ With Hoboken.

CITIES.	MOTIVE POWER,* 1897.				Length of all tracks.
	Animal.	Electric.	Cable.	Steam.	
New York.....	226 †	65 ‡	54	100	445
Chicago.....	12	830	82	29	953
Philadelphia.....	..	500	..	..	500
Brooklyn, N. Y.....	3	430	1	65	499
St. Louis.....	..	266#	34#	..	300#
Boston.....	7	493	..	..	500
Baltimore.....	32	326	22	..	380
San Francisco.....	30	120	99	22	271
Cincinnati.....	..	268	15	..	283
Cleveland, Ohio.....	..	307	12	..	319
Buffalo.....	..	218	..	..	218
New Orleans.....	8	163	..	6	177
Pittsburg, Pa.....	18	315	..	..	333
Washington, D. C.....	42#	141#	6#	..	169#
Detroit.....	..	238	..	..	238
Milwaukee.....	..	143	..	..	143
Newark, N. J.....	..	35	..	..	35
Minneapolis.....	..	219	6	..	225
Jersey City.....	..	189	..	..	189
Louisville.....	10#	130#	..	..	140#
Omaha.....	8	79	..	..	85
Rochester.....	..	89	..	..	89
St. Paul.....	..	11	..	..	11
Kansas City, Mo.....	..	138	62	15	215
Providence, R. I.....	..	140	..	..	140

* These figures represent entire length of single track, counting one mile of double track as two of single, and counting switches as additional length.
† Since beginning of 1898 these figures have been reduced, electric power being substituted.
‡ Since beginning of 1898 these figures have been increased. See †.
March, 1898.

In these tables, owing to the difference in plan, the only column admitting of a fair comparison is

the last, "length of all tracks." This shows for 1897 a total mileage of 6,857, against 3,995 in 1890, the increase being 2,862 miles of street-railroad track in 25 cities in seven years.

It may be noted from the tables that, whereas every city mentioned had 10 miles or more of horse-car track in 1890, 14 of the same cities in 1897 had abandoned horses as motive power. Other interesting facts may be seen from the tables. In 8 cities (1890) there were no electric cars, and in 10 other cities the electric-car mileage was less than 10. Now in 21 of the 25 cities the electric-car mileage exceeds 100. The record of Chicago, including the annexed territory, reaches the total of 830 miles of electric-car tracks, with more to be added, according to the most recent returns.

City Notes. *Chicago.*—In an exhaustive statement furnished for the "Annual Cyclopædia" by the mayor of Chicago, it is stated that the estimated cost of double-track horse-car railroad in that city is \$36,000 a mile; cable road, \$100,000; electric, \$40,000.

Boston.—The municipal authorities of Boston, in a letter to the "Annual," estimate the average cost per mile for electrical-car track, etc., at \$32,266; equipment, \$24,351; land and buildings, \$39,794.

San Francisco.—An estimate supplied by the mayor shows that the estimated cost of a cable road in that city is from \$100,000 to \$125,000.

Cleveland, Ohio.—In the statement furnished by the mayor of Cleveland it is noted that street-railroad companies in that city pay a general property tax of \$28.50 per \$1,000 of valuation. They also pay a license fee of \$10 on each car owned, and are required to pave a strip 14 to 16 feet wide when pavements are laid on streets occupied by tracks.

Washington, D. C.—It is reported officially that the cost of cable construction and equipment in Washington, D. C., exclusive of land, approximated \$87,200 per mile of single track. The cost of road-bed and engineering per mile of single track is approximated at \$53,177. The cost of construction, equipment, etc., of the Connett electric system now in use is approximately \$106,000 per mile of single track, including land acquired for power houses, sheds, etc. Cost of road bed and engineering, \$37,500.

SURETY COMPANIES. In view of all that has been said and written upon the dangers of one individual becoming surety for the honesty or good conduct of another, it is somewhat surprising that a system of corporate indemnity was not devised earlier than the middle of the present century. The theory of Prof. De Morgan, set forth in the "Dublin Review" for August, 1840, first applied the laws of average governing insurance to the moral hazard of personal integrity, though a society for the purpose of guaranteeing hired servants was organized at the Devil's Tavern, Charing Cross, London, in June, 1720. the advertisement being published in the "Daily Post." The advantages to employer and employed in a system that, assuming a risk with the expectation of meeting it, makes indemnification prompt and sure, and at the same time undertakes the punishment of an offender, while it relieves a person seeking honorable employment from the obligation to secure a bond, and enables him by the payment of a small premium to insure his own faithful conduct himself, can readily be perceived. Men who would prefer to forego obtaining a place rather than importune an unwilling friend and men not possessing friends able to do them the service of acting as surety are benefited by the existence of surety companies, while private individuals are free from the embarrassments attending personal suretyship—the contingency of loss and interminable liability, extending often be-

yond the lifetime of the surety, attached to the execution of private bonds. The security given is also far more tangible, not being subject to the uncertainties of death, insolvency, or removal of individuals. This system is thoroughly established in England as an element of commercial life, and in our own country it is gaining ground. In both countries the business of fidelity insurance, as it is termed, may be divided into two classes: that originally intended, the guarantee of persons holding places of trust in the ordinary occupations of life, as clerks in banks, mercantile, insurance, and railway offices, and the later development of corporate suretyship in the issuing of court bonds (of administrator, guardian, trustee, or receiver) and undertakings in attachment, appeal, and suits of like character.

In considering the first and simpler class of bonds, it is to be noted that the strictly business principles upon which surety companies act constitute their prime recommendation. In all essential elements the contract is one of insurance, and is entered into for a definite period, subject, moreover, to cancellation at pleasure of the insurer. Liability to loss on any single risk is limited to a certain percentage of capital or resources, and before any risk is assumed investigation is made not only into the character of the person seeking insurance, but the nature of the employment desired and the amount of salary to be received. Some occupations, it is conceded, afford too many opportunities for dishonesty, and are in general filled by a class of persons who are unfit subjects of fidelity insurance; while by the amount of salary received is generally determined the degree of responsibility, upon which depends the premium to be paid.

Periodical inspections are required, or made, of accounts of persons guaranteed, and a general supervision of behavior is maintained, while, as a protection against collusive fraud, the criminal prosecution of all defaulters is required as a *sine qua non*. This last is to be considered a more efficient check upon individuals tempted to delinquency than the theoretical "moral guarantee" of fear of involving friends or relatives, acting as private sureties, in ruin or disgrace. At one time the question was discussed by the English Government of superseding altogether the requirement of securing from public officials, the Lords of the Treasury having become "strongly persuaded, in the course of their inquiries, that the exposure and prosecution of defaulters, without exception and under all circumstances, offer in the long run a much more efficacious guarantee against the dishonesty of public servants than any pecuniary indemnity which it is possible to exact from them," and, although the proposition was not carried into effect, it was ordered that in every case of default report should be made, "whether or not the amount be recovered," that exposure and prosecution might be had.

The second class of obligations assumed by surety companies offers the disadvantages of indefinite duration and speculative character, pecuniary as well as "honesty" risks being in some cases incurred, dependent on contingencies and events. In England the acceptance by law of policies or bonds of surety companies in place of the form of bonds prescribed by statute removes in great measure the former objection, while in both countries surety companies require security as protection to themselves from the persons for whom they assume risks. Thus, the American Surety Company of New York, issuing the bond of an administrator for \$1,000,000, was secured by the bond of the administrator and of all the heirs interested in the estate, and also by the securities and funds of the estate deposited in a safe-deposit and trust com-

pany, under the joint control of the administrator and the surety company.

The Guarantee Society, of London, incorporated in 1840 on the basis laid down by Prof. De Morgan, secured, June 18, 1842, a special act of Parliament, authorizing the acceptance of its bonds by the treasury and by heads of Government departments. The principles of its business were approved by the then Chancellor of the Exchequer, the Rt. Hon. Henry Goulburn, and by his predecessor, the Rt. Hon. H. T. F. Baring. On Aug. 20, 1867, was passed the guarantee by companies act, prior to which only such companies transacted surety business as were authorized by specific acts of Parliament. By this act the security of any qualified company was received, holding a certificate from the treasury, where its accounts were yearly filed. The Government officers security act of Aug. 11, 1875, repealed the foregoing, in consequence of the involved condition of affairs of the European Assurance Society, authorized to transact surety business, which had assumed large liabilities of other kinds of insurance, and for which an arbitration act had been passed three years previously, July 25, 1872. By this repeal the Government ceased to warrant the solvency of surety corporations, the treasury being forbidden to issue further certificates; but the security of such corporations was and continues to be received under treasury minute of Nov. 1, 1871.

The act of June 23, 1887, of the Canadian Parliament enabled the acceptance in the Dominion of Canada of the guarantee by policy or bond of any public officer by an incorporated company.

Prior to 1880 there were 5 surety companies in the United Kingdom, having a joint capital of more than \$665,000, which published no statistics and had no stock on the market, both circumstances indicating that the business investment was profitable.

At the opening of the year 1889 10 guarantee or surety companies were in existence in England, the policies of the larger being accepted by the courts of justice, the corporation of London, railroad companies, and various heads of Government departments. By a new method individual contracts are now dispensed by these companies, and a collective or "floating" policy, covering loss from a staff of employees of any number beyond five, is issued, the employer being insured against loss to the amount contracted for on each member of the staff. The lowest premium paid is 5s. per cent., and the highest 60s. per cent. The usual charge for clerks and cashiers is from 10s. to 30s. per cent. There is also a Bankers' Guarantee Trust Fund Society, to indemnify against loss from bank employees, and the Bank of England and several railway companies possess funds contributed by employees to secure their employers against loss by dishonesty of any of their number.

The first legislation with regard to fidelity insurance in the United States is found in chapter 463 of the laws of the State of New York for 1853. By acts of 1881, 1885, and 1886 the Legislature of that State extended the powers of surety companies to cover the judicial branch of security that has been referred to. Successive States have provided for the acceptance of this class of bonds in the following order: Rhode Island, 1884; Oregon, Florida, Maine, Nebraska, Indiana, California, Missouri, Wisconsin, Connecticut, Michigan, Pennsylvania, 1885; New Jersey, 1886; Massachusetts, 1884, 1886, and 1887; Illinois and Georgia, 1887.

While no restriction is imposed by the Government of the United States upon the acceptance of the guarantee of surety companies in cases within the jurisdiction of Federal courts and departments, there is no legislation enabling such. Postmaster-

Generals Timothy O. Howe and Frank Hatton, in 1882 and 1884, called the attention of Congress to the subject, urging the advantages to the Government and to public officials of corporate suretyship, as did Secretary-of-War Robert T. Lincoln, in 1883, relative to paymasters' bonds, and the paymaster general of the army in 1882, 1883, and 1884. Mr. Glover, of Missouri, Jan. 26, 1886, introduced a bill in the House of Representatives authorizing the acceptance of corporate surety for officials by "any judge of any Federal court, or clerk thereof, district attorney, United States commissioner, head of a department, collector of customs or revenues," etc., and a similar bill, introduced in 1887, passed the House only in 1888. The surety companies existing in America in 1889 are:

The Guarantee Company of North America, a Canadian incorporation, having its central office at Montreal, Canada, established in 1872. This company confines itself exclusively to guarantee of officers and employees of financial and commercial corporations, and does not issue court bonds. The limitation of loss on any single risk is 5 per cent. of the capital. Offices of the company are established in New York, Boston, Chicago, Richmond, Philadelphia, Baltimore, Pittsburg, Louisville, Nashville, St. Louis, Detroit, and Washington. For security of patrons in the United States \$200,000 in United States Government bonds are deposited with the Insurance Department of New York.

The American Surety Company of New York, central office 160 Broadway, New York city, organized April, 1884, in addition to bonds given for persons in places of trust, also issues bonds and undertakings in the courts of New York and other States. President, W. L. Trenholm; Vice-President, H. Lyman. The liability to loss in any one case is less than 3 per cent. of the cash resources. The company has agencies at Montreal, Toronto, and London, Canada, and \$50,000 in United States Government bonds are deposited as security for patrons with the Finance Minister of Canada. The agencies in the United States number 110.

By opinion of the Hon. George A. Kirkpatrick, Q. C., Speaker of the House of Commons of Canada, "an employer bonded or secured by a Canadian surety company will have no advantage over one secured by a company organized in the United States in obtaining the amount of defalcation over and above the security given by the corporation."

The Fidelity and Casualty Company of New York, 214 and 216 Broadway, organized in 1876, transacts both branches of fidelity insurance, with a department of accident business. President, W. M. Richards, Vice-President, George F. Seward. The number of agencies in the United States is 35.

The City Trust, Safe-deposit, and Surety Company of Philadelphia was organized in 1886, and the Pacific Surety Company of California, 328 Montgomery Street, San Francisco, Cal., does an insurance business of guarantee and accident.

As early as 1849 a plan to combine life and fidelity insurance was instituted, but it has not been carried largely into effect.

The Artel, a sort of combination of guild and friendly society, in Russia, embodies, in a measure, the principles of fidelity insurance.

SWEDEN AND NORWAY, two kingdoms in northern Europe, united in the person of the sovereign. The throne in both monarchies descends to the heirs of the house of Bernadotte. Affairs common to both kingdoms are referred to a mixed Council of State. The reigning King is Oscar II, born Jan. 21, 1829, who succeeded Carl XV, his brother, Sept. 18, 1872.

Sweden.—The legislative power is vested in the Riksdag, consisting of a First Chamber of 150

members elected for nine years by the provincial and municipal bodies, and a Second Chamber of 230 members elected for three years, 80 in the towns and 150 in the rural districts, by natives of Sweden who own or farm land of a certain value or pay taxes on an income of 800 kronor. The Council of State at the beginning of 1897 was composed of the following members: Minister of State, Erik Gustaf Boström; Minister of Foreign Affairs, Count L. W. A. Douglas; Minister of Justice, Dr. P. S. L. Annerstedt; Minister of War, Lieut.-Gen. Baron A. E. Rappe; Minister of Marine, Rear-Admiral J. C. E. Christerson; Minister of the Interior, J. E. von Krusenstjerna; Minister of Finance, R. Wersäll; Minister of Education and Ecclesiastical Affairs, Dr. Gustaf Fredrik Gilljam; Councilors of State, Baron Albert Lars Evert Akerhielm and Sven Herman Wikblad.

Area and Population.—The area of Sweden is 172,876 square miles. The population was estimated on Dec. 31, 1896, at 4,962,568, comprising 2,412,004 males and 2,550,564 females. The number of marriages in 1895 was 27,728; of births, 138,134; of deaths, 77,903; excess of births, 60,231. The emigration was 18,955, and the immigration 8,528. Stockholm, the capital, had 279,680 inhabitants at the end of 1896; Göteborg, 117,350.

Finances.—In the budget for 1898 the total receipts are estimated at 120,086,000 kronor, the value of the krona, or Swedish crown, being 28-6 cents. In this sum is included the surplus from preceding budgets, amounting to 14,229,000 kronor. The receipts classed as ordinary amount to 21,082,000 kronor, of which 1,694,000 are land taxes, 1,400,000 tonnage dues, 2,300,000 rent of domains, 665,000 the personal tax, 9,000,000 railroad profits, 1,410,000 telegraph revenue, 3,500,000 receipts from forests, and 1,118,000 various receipts. The extraordinary sources of revenue yield 82,975,000 kronor, of which 39,000,000 are from customs, 9,025,000 from the post office, 5,000,000 from stamps, 15,500,000 from the impost on spirits, 8,000,000 from the sugar duty, 5,600,000 from the income tax, and 850,000 from various sources. The State Bank pays out of its profits 1,800,000 kronor.

The total expenditures for 1898 are calculated at the same figure as the revenue. The ordinary expenditures amount to 80,358,773 kronor, of which 1,320,000 are for the royal household, 3,848,350 for justice, 606,750 for foreign affairs, 26,342,985 for the army, 7,046,340 for the navy, 5,738,800 for the interior, 13,800,698 for worship and education, 2,284,450 for pensions, and 18,376,400 for finance, including 2,658,000 kronor for the customhouse, 8,688,000 for the post office, 450,000 for excise control, 1,410,000 for telegraphs, 1,158,000 for forests, and 4,012,400 for other expenses. The extraordinary expenditures are set down at 27,047,127 kronor, of which 11,964,375 are for the army and navy and 15,082,752 for other purposes. The expenses of the debt are 11,243,000 kronor, besides 1,400,000 kronor set aside as a fund for insuring workmen against accidents, and 36,300 kronor remain as a surplus to be carried over.

The public debt in 1897 amounted to 289,566,573 kronor, of which 48,566,500 kronor were the internal loan of 1887, paying 3-6 per cent. interest, and the rest consisted of various foreign loans, paying mostly 3½ per cent.

Navigation.—The merchant marine on Jan. 1, 1896, numbered 2,030 sailing vessels of 301,727 tons, and 733 steamers, of 181,276 tons. There were entered during 1895 at Swedish ports 2,020 Swedish, 607 Norwegian, and 12,935 foreign vessels; total, 29,561 vessels, of 6,117,000 tons, of which 11,344, of 2,623,000 tons, were with cargoes. There were cleared 14,664 Swedish, 2,187 Norwegian, and 12,-

984 foreign vessels; total, 29,835 vessels, of 6,267,000 tons, of which 19,781, of 4,691,000 tons, carried cargoes. Among the vessels entered 13,451, of 4,796,000 tons, among those cleared 13,605, of 4,931,000 tons, were steamers.

Commerce.—The commerce of Sweden in 1895 with the different countries is shown in the following table, giving the values in kronor of imports and exports, including precious metals:

COUNTRIES.	Imports.	Exports.
Norway.....	28,742,000	18,054,000
Russia and Finland.....	19,755,000	11,292,000
Denmark.....	37,976,000	41,464,000
Germany.....	116,233,000	42,759,000
Netherlands.....	8,331,000	18,302,000
Belgium.....	9,629,000	8,898,000
Great Britain.....	97,775,000	130,820,000
France.....	7,932,000	25,208,000
Portugal.....	1,786,000	1,084,000
Spain.....	864,000	3,624,000
Italy.....	1,077,000	539,000
Africa.....	258,000	7,668,000
United States.....	10,643,000	82,000
West Indies.....	132,000	.....
Australia.....	30,000	579,000
Asia.....	96,000	.....
Other countries.....	3,041,000	1,061,000
Total.....	344,290,000	311,434,000

The imports of coal were 32,462,000 kronor in value; of coffee, 27,101,000 kronor; of rye and wheat, 22,144,000 kronor; of woolen goods, 17,482,000 kronor; of hides and skins, 13,227,000 kronor; of machinery, 11,150,000 kronor; of woolen yarns, 9,654,000 kronor; of iron manufactures, 9,441,000 kronor; of cotton, 8,695,000 kronor; of petroleum, 8,612,000 kronor; of cotton goods, 7,994,000 kronor; of tobacco, 7,222,000 kronor; of fish, 6,654,000 kronor; of wool, 5,331,000 kronor; of vegetable oils, 4,982,000 kronor; of wood manufactures, 4,425,000 kronor; of pork products, 3,856,000 kronor; of paper, 3,832,000 kronor; of cotton yarns, 3,456,000 kronor; of clothing, 3,364,000 kronor; of iron, 3,252,000 kronor. The exports of timber amounted to 114,427,000 kronor; of butter, 43,348,000 kronor; of iron, 37,491,000 kronor; of wood pulp, 12,489,000 kronor; of fish, 7,968,000 kronor; of matches, 7,601,000 kronor; of iron manufactures, 6,295,000 kronor; of paper, 6,226,000 kronor; of oats, 6,015,000 kronor; of animals, 5,565,000 kronor; of machinery, 5,524,000 kronor; of glass, 4,523,000 kronor; of cotton goods, 3,482,000 kronor.

Communications.—The state railroads at the end of 1896 had a total length of 2,283 miles, and the lines belonging to companies a length of 3,862 miles; total, 6,145 miles.

The post office in 1895 transmitted 54,053,000 internal, 12,866,000 international, and 173,000 transit letters, 6,219,000 internal, 6,428,000 international, and 13,000 transit postal cards, 75,104,000 internal, 6,428,000 international, and 45,000 transit newspapers and circulars, and 3,019,000 internal and 317,000 foreign money letters and post-office orders of the respective values of 721,737,000 and 59,527,000 francs. The receipts were 8,548,268 kronor, and expenses 7,717,080 kronor.

The Government telegraph lines had a total length of 5,412 miles, with 15,420 miles of wire; the lines of the railroad companies had a length of 2,870 miles, with 9,731 miles of wire. The number of paid internal messages was 1,067,310; international messages, 727,725; forwarded in transit, 272,072; service messages, 110,370. The receipts were 2,007,739 francs; expenses, 1,874,592 francs.

Norway.—The legislative power is vested in the Storting, containing 114 members elected for three years, 38 by the towns and 76 by the rural districts. The Storting elects one fourth of its members an-

nually to form the Lagthing, which has a veto power over the legislation passed by the Odelsting, composed of the rest of the members elected by the constituencies. The Council of State in the beginning of 1897 was composed of the following members: Minister of State, Dr. G. F. Hagerup; Minister of Worship and Education, J. L. R. Sverdrup; Minister of the Interior, T. W. Engelhart; Minister of Finance and Customs, B. Kildal; Minister of National Defense, Col. C. W. E. B. Olsson; Minister of Revision, H. Smedal; Secretary of State, H. Lehman; Section of the Council of State sitting in Stockholm, G. W. W. Gram, Minister of State; F. Stang-Lund, O. J. Olsen, and H. Schlytter, Secretary.

Area and Population.—The area of Norway is 124,445 square miles. The population in 1891 was 1,988,674. The urban population was 467,680; the rural population, 1,520,994. Christiania, the capital, had a legal population of 151,239. The number of marriages in 1895 was 13,389; of births, 62,932; of deaths, 32,189; excess of births, 30,743. The number of emigrants in 1896 was 6,679.

Finances.—The revenue for the financial year 1895 was 71,932,500 kronor, including 201,200 kronor of local subscriptions for railroad construction and 13,389,900 kronor of loans. The ordinary revenue was 58,341,400 kronor, of which 4,008,400 came from direct taxes, 23,311,100 from customs, 3,120,300 from the duties on spirits, 2,974,400 from the malt duty, 822,300 from stamps and the tax on playing cards, 1,020,500 from law courts, 526,700 from succession duties, 1,076,900 from state forests, domains, and mines, 1,876,900 from active capital, 3,662,000 from the post office, 1,400,900 from telegraphs, 8,869,000 from railroads, 1,840,700 from universities, schools, and churches, 309,200 from prisons, 985,300 from hospitals and insane asylums, and 2,541,600 from various sources. The ordinary expenses were 59,288,300 kronor, and the extraordinary expenditures 9,874,400 kronor; total, 69,162,700 kronor. The ordinary expenditures included 345,400 kronor for the civil list and appanages, 621,600 for the Storting, 1,254,100 for the Council of State, 6,871,900 for public instruction and worship, 5,994,600 for justice, police, and sanitary service, 8,768,700 for the interior department, including among other expenses 3,614,500 kronor for the postal service and 1,926,700 for telegraphs, 11,676,800 for public works, of which 8,275,300 were the operating expenses of railroads, 9,434,700 for finance, including 1,820,700 for the customhouse, 532,500 for amortization, 4,967,800 for interest of the debt, and 517,200 for pensions, 9,061,100 for the army, 4,281,100 for the navy, 815,800 for foreign affairs, and 162,500 for accidental expenses. The total debt on June 30, 1896, amounted to 157,353,000 kronor, and the assets of the Government were valued at 161,273,000 kronor, comprising 40,068,200 kronor of active capital, 17,952,400 kronor of money in the treasury and arrears to be collected, and 106,252,400 kronor invested in railroads. The bulk of the debt pays 3½ per cent. interest. The loan of 1886, amounting to a little over 30,000,000 kronor, has been converted and will pay only 3 per cent. from May 1, 1898.

Navigation.—There were entered at Norwegian ports during 1895 the total number of 11,836 vessels, of 2,624,037 tons, of which 6,179, of 1,747,972 tons, were Norwegian, and 5,657, of 876,065 tons, were foreign vessels, and 6,202, of 1,771,729 tons, were with cargoes and 5,634, of 852,308 tons, were in ballast. There were cleared 11,930 vessels, of 2,715,213 tons, of which 6,293, of 1,840,066 tons, were Norwegian and 5,637, of 875,147 tons, were foreign, and 10,406, of 2,149,360 tons, were with cargoes and 1,524, of 565,853 tons, were in ballast.

The merchant navy on Jan. 1, 1896, numbered

6,355 sailing vessels, of 1,283,913 tons, and 915 steamers, of 321,052 tons.

Commerce.—The foreign trade of Norway was divided in 1896 as shown in the following table, giving the values in kroner :

COUNTRIES.	Imports.	Exports.
Great Britain	63,017,000	56,347,000
Germany	63,933,000	17,832,000
Sweden	38,292,000	22,792,000
Russia and Finland.....	21,316,000	4,344,000
Denmark	10,992,000	4,836,000
France	5,219,000	7,044,000
Netherlands	9,934,000	7,592,000
Belgium	8,845,000	5,246,000
Spain	1,110,000	10,486,000
Portugal.....	297,000	808,000
Italy	1,413,000	2,554,000
United States.....	11,268,000	758,000
Other countries.....	4,582,000	7,132,000
Total.....	240,218,000	147,771,000

The imports of cereals were 35,700,000 kroner in value, and exports 400,000; imports of fermented liquors 6,200,000 and exports 300,000 kroner; imports of colonial products 26,400,000 and exports 1,100,000 kroner; imports of fruits and vegetables 3,800,000 and exports 100,000 kroner; imports of animals and provisions 16,500,000 and exports 44,200,000 kroner; total imports of alimentary products 88,600,000 and exports 46,100,000 kroner. The imports of coal were 13,500,000 kroner: imports of metals 8,500,000 and exports 1,300,000 kroner; imports of hides and skins 7,700,000 and exports 7,100,000 kroner; imports of textile materials 7,000,000 and exports 300,000 kroner: imports of timber 5,900,000 and exports 34,900,000 kroner; imports of minerals 5,400,000 and exports 4,200,000 kroner; total imports of raw materials 48,000,000 kroner and exports 47,700,000 kroner. The imports of metal manufactures were 11,600,000 and exports 3,500,000 kroner; imports of woven goods 35,900,000 and exports 6,400,000 kroner; imports of paper and paper products 2,300,000 and exports 7,500,000 kroner; imports of leather goods 2,200,000 and exports 300,000 kroner; imports of wood manufactures 4,300,000 and exports 20,000,000 kroner; total imports of manufactured articles 56,300,000 and exports 37,700,000 kroner. The imports of drugs and colors were 1,100,000 and exports 100,000 kroner; imports of oils 12,100,000 and exports 8,400,000 kroner; imports of miscellaneous merchandise 34,100,000 and exports 7,700,000 kroner.

Communications.—The railroads in operation in 1896 had a length of 1,202 miles. The length of the state telegraph lines was 5,232 miles, with 12,994 miles of wire; that of the telegraph lines belonging to railroad companies was 1,070 miles, with 1,960 miles of wire. There were 1,229,008 internal, 663,703 international, and 17,539 service dispatches sent in 1896; the receipts were 1,503,589 kroner, and expenses 1,540,113 kroner. The postal traffic in 1896 comprised 28,345,800 internal letters, including 1,965,700 money letters, containing 283,100,000 kroner, 10,285,000 foreign letters, including 85,700 money letters, containing 24,700,000 kroner, and 39,848,000 internal and 4,326,400 foreign printed inclosures; the receipts were 3,826,272 kroner, and expenses 3,701,721 kroner.

Political Affairs.—The Storthing on June 16, 1897, unanimously voted an address to the King requesting him to negotiate treaties with foreign powers for the establishment of a permanently organized court of arbitration to deal with any conflicts that might occur between them and Norway, which from its geographical position was so little exposed to conflicts that there appeared to be no difficulty in arranging such treaties. The triennial election of delegates to choose the representatives

for the Storthing occurred in the beginning of October and resulted in large gains for the Left, rendering more acute the conflict with Sweden over diplomatic representation and foreign affairs. The ministers, however, did not resign. The Norwegian delegation in the Council of State had serious differences with the Swedish members in the autumn. The treaty of commerce and navigation between the two kingdoms expired in the summer.

SWITZERLAND, a federal republic in central Europe. The Federal Assembly is composed of the National Council, containing 147 members elected for three years by the direct vote of the nation, and the States Council, containing 44 members, two for each canton, elected for one, two, or three years, by popular vote in some cantons, and in others by the legislative authorities. These two bodies elect the Federal Council, composed of 7 members, which is the executive authority of the Confederation. Every Swiss citizen twenty-one years of age is an elector and is eligible to any of these bodies. Any act of legislation may be vetoed or any amendment to the Constitution carried by popular vote when a petition demanding the referendum is presented by 30,000 citizens or when the demand is made by 8 cantons. The Federal Council in 1897 was composed of the following members: President and Chief of the Department of Foreign Affairs, Dr. A. Deucher, of Thurgau; Vice-President and Chief of the Department of the Interior, M. Ruffy, of Vaud; Military Affairs, E. Müller, of Bern; Justice and Police, Dr. E. Brenner, of Basel; Commerce, Industry, and Agriculture, A. Lachenal, of Geneva; Finance, W. Hauser, of Zurich; Posts and Railroads, Dr. J. Zemp, of Luzern. On Dec. 15, 1897, M. Ruffy was elected President of the Confederation for the ensuing year, and E. Müller was elected Vice-President.

Area and Population.—The area of Switzerland is 15,976 square miles, with a population estimated in 1894 at 2,986,848. The number of marriages in 1896 was 23,784; of births, 91,835; of deaths, 59,379; excess of births, 32,456. The number of emigrants over the sea in 1896 was 3,330, of whom 2,789 emigrated to North America and 499 to South America. The city of Zurich had 151,994 inhabitants in July, 1897; Basel had 89,687, and Geneva had 86,535.

Finances.—The revenue of the Federal Government in 1896 was 87,262,389 francs, of which 473,009 francs were derived from real property, 1,807,013 francs from invested capital, 53,326 francs from the general administration, 35,335 francs from the Political Department, 344,654 francs from the Departments of the Interior and of Justice and Police, 2,589,214 francs from the Military Department, 46,466,535 francs from the Department of Finance and customs, 216,339 francs from the Department of Industry and Agriculture, 35,245,822 francs from the post office, telegraphs, telephones, and railroads, and 31,142 francs from various sources. The total expenditures were 79,559,658 francs, of which 4,283,387 francs were for interest and amortization of the debt, 1,066,337 francs for general administration, 556,249 francs for the Political Department, 9,814,437 francs for the interior, 374,161 francs for justice and police, 23,200,849 francs for the Military Department, 4,339,300 francs for finance and customs, 3,275,150 francs for industry and agriculture, 25,173,972 francs for the postal service, 7,147,484 francs for telegraphs and telephones, 277,973 francs for railroads, and 50,369 francs for unforeseen expenses. The indebtedness of the Confederation on Jan. 1, 1897, amounted to 80,870,764 francs and the assets to 175,461,492 francs.

Commerce.—The special commerce of Switzerland with different countries in the year 1896 was

valued in francs according to the customhouse returns as follows:

COUNTRIES.	Imports.	Exports.
Germany	304,971,000	172,261,000
France.....	177,612,000	81,016,000
Italy.....	137,298,000	39,163,000
Austria-Hungary.....	71,412,000	40,413,000
Great Britain.....	51,707,000	147,008,000
Netherlands.....	3,426,000	4,670,000
Belgium.....	24,169,000	11,354,000
Spain.....	15,591,000	11,028,000
Russia.....	65,151,000	24,394,000
Rest of Europe.....	25,086,000	20,457,000
United States.....	39,258,000	70,515,000
Rest of America.....	26,011,000	22,822,000
Asia.....	31,737,000	31,202,000
Africa.....	15,608,000	5,558,000
Australasia.....	4,822,000	2,493,000
Unreported.....	.....	3,907,000
Total merchandise.....	993,859,000	688,261,000

The imports of coin were 67,973,000 francs and the exports 50,555,000 francs.

The imports of grain and flour were 114,900,000 francs in value; raw silk, 110,200,000 francs; animals, 52,300,000 francs; coal, 46,700,000 francs; woolen goods, 46,600,000 francs; precious metals, 39,500,000 francs; iron, 36,500,000 francs; wine, 34,000,000 francs; chemical products, 31,800,000 francs; cotton cloth, 31,500,000 francs; raw cotton, 30,400,000 francs; machinery, 24,500,000 francs; iron goods, 23,500,000 francs; timber, 22,600,000 francs; sugar, 21,200,000 francs; coffee, 18,100,000 francs; barley, malt, and hops, 14,200,000 francs; leather, 13,000,000 francs; silk manufactures, 12,300,000 francs; wool, 11,600,000 francs; building materials, 10,700,000 francs; books, etc., 10,200,000 francs; linen goods, 9,800,000 francs; haberdashery, 9,600,000 francs. The values of the principal exports were: Silk goods, 132,700,000 francs; cotton goods, 117,200,000 francs; watches, 100,400,000 francs; cheese, 38,700,000 francs; raw silk, 37,300,000 francs; spun silk, 32,400,000 francs; machinery, 30,000,000 francs; chemical products, 22,700,000 francs; milk, 18,700,000 francs; cotton yarn, 18,000,000 francs; animals, 14,300,000 francs; straw goods, 11,100,000 francs; woolen yarn, 10,000,000 francs; precious metals, 8,900,000 francs; woolen goods, 8,900,000 francs; hides and skins, 8,700,000 francs.

Communications.—The railroads in 1896 had a total length of 2,254 miles.

The state telegraph lines in 1896 had a total length of 4,435 miles, with 12,608 miles of wire. The number of messages sent in 1896 was 3,848,489, of which 1,741,018 were internal, 1,441,556 international, 527,184 forwarded in transit, and 138,731 service dispatches. The post office carried in 1896 88,002,000 domestic and 36,447,000 foreign letters, 16,997,000 domestic and 11,493,000 foreign postal cards, 30,703,000 domestic and 20,806,000 foreign newspapers and circulars, 4,418,000 domestic postal remittances amounting to 488,014,000 francs, and 5,015,000 foreign ones to 495,812,000 francs.

Legislation.—In the session of the Federal Assembly that began on June 8, 1897, the question of the state purchase of the railroads and a scheme of insurance against accidents and sickness were considered. The National Council unanimously decided upon the introduction of a system of compulsory insurance. On Oct. 7 it adopted by 98 votes to 29 the bill authorizing the Swiss Confederation to repurchase the five principal railroads according to the terms of the concessions at the dates when these expire, in 1903 as regards four of the lines and in 1906 for the St. Gothard Railroad. The States Council had disapproved of the nationalization of the railroads, but the divergence between the votes of the two bodies was arranged, the pro-

ject was adopted subject to the referendum, and preparations were made to submit it to the popular vote early in 1898.

Labor Congress.—An International Congress for the Protection of Labor was held in the latter part of August, 1897, at Zurich, in accordance with the resolution of the Swiss National Labor Congress at Bienne in April, 1893. The International Labor Congress was open to representatives of working-class associations of all parties and all religions. The only qualification was that the delegates should be in favor of state intervention and legislation in labor questions, a provision which shut out the anarchists only. Catholics who side with the workers rather than with the capitalists were cordially invited, and they responded without hesitation. The Socialists promised to appear in force, but the French and Italian deputies, as well as the leaders of the English Independent Labor party, failed to keep their promises. There were 107 delegates belonging to the Clerical party, and some representatives of evangelical associations and Liberal Social reformers, besides trades-unionists of all shades of opinion, so that in a congress of 375 members the Socialists, who were strongly represented from Switzerland, Germany, Austria, and Belgium, were counterbalanced by an equally numerous moderate party. The British delegation, representing 190,000 workers, proposed in the interest of Sunday recreation and of the liberty of non-Christians that Sunday should not be retained as the exclusive day of universal rest, but that, while all industrial undertakings should be closed on that day, another day of cessation for labor should be provided for those working people whose services are required on that day for the good of the community, as well as for Jews or others who devote another day to religious observances. They desired to change the English and Scotch Sunday into an intellectual and pleasurable holiday, but to their surprise the Continental Socialists joined with the Catholics in defeating their general proposition in favor of thirty-six consecutive hours of rest per week. The congress voted in favor of the prohibition on stringent penalties of Sunday labor, except when such labor is absolutely necessary to secure the resumption of work on Monday, or when for technical reasons the process of production can not be interrupted, or in occupations the continuation of which is required for the education and recreation of the people. The resolution went on to say that in no case should Sunday rest be interrupted under the pretext of covering any deficit of production; that all exemptions under the law should not be left to the discretion of magistrates and officials, but should be plainly stated in the act; and that where workmen are employed on Sunday they should have alternate Sundays free and a free day in the week for the Sunday on which they work. A stringent resolution restricting unhealthful trades was carried. One introduced by Prof. Erismann, of Moscow, which was adopted unanimously, favors prohibiting night work in all but very exceptional cases, also overtime in the case of young persons and in the case of adults after eight o'clock in the evening, or only allowing it in consequence of pressure of business, and the institution of three-hour shifts where continuous labor is indispensable. A difference between the Catholics and Socialists arose over the question of women's work. A resolution of Gaston de Wiart, a Catholic member of the Belgian Parliament, in favor of gradually abolishing the work of women in large industries, on the ground that the equality of the sexes in factory labor destroyed the sanctity of family life and led to immorality, was opposed by Herr Bebel, Socialist member of the German

Reichstag, who argued that women were as badly treated in small trades, shops, and home work as in the large mills, and it was defeated by 165 votes to 98. The congress voted in favor of strengthening the laws protecting women in all forms of employment, resolving that they should receive the same wages as men for the same work, and that the maximum hours of labor for women should be eight per day and forty-four per week, with a rest of forty-two hours from noon on Saturday, and for six weeks after confinement women should not work and should receive an indemnity equal to their wages from the state or municipality. The congress resolved that home work causes serious social and sanitary evils, prevents the organization of workers and the application of labor laws, but it defeated a motion in favor of its total abolition, the Socialists being divided on the question, which was referred to another congress as being too complex for immediate solution. Laws still in force in Germany and Austria permitting the corporal punishment of servants were condemned, and a resolution was carried declaring that domestic servants and agricultural laborers should have the right of

combination. The English resolution fixing the age of juvenile labor at sixteen years was lost, and an amendment was carried substituting the limit of fifteen years. The resolution in favor of an eight-hour working day by legal enactment was carried easily. In regard to the ways and means of realizing labor protection the congress concluded unanimously that good laws are of no avail unless the people concerned have the right to vote and are free to combine nationally and internationally, and are thus in a position to bring the necessary pressure to bear so that the laws may be effectively carried out. To meet the objection of foreign competition and facilitate the international assimilation of laws for the protection of labor, the congress requested the governments of Europe to create an international office of labor. In the meantime the congress created a central office of its own, composed of the committee by which it was organized, which will convoke another congress when some practical necessity arises for making a further and similar manifestation of the opinions on which Catholic and evangelical and Socialist labor organizations are united.

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TENNESSEE, a Southern State, admitted to the Union June 1, 1796; area, 42,050 square miles. The population, according to each decennial census since admission, was 105,602 in 1800; 261,727 in 1810; 422,771 in 1820; 681,904 in 1830; 829,210 in 1840; 1,002,717 in 1850; 1,109,801 in 1860; 1,258,520 in 1870; 1,542,369 in 1880; and 1,767,518 in 1890. Capital, Nashville.

Government.—The following were the State officers in 1897: Governor, Robert L. Taylor; Secretary of State, William S. Morgan; Treasurer, Edward B. Craig; Comptroller, James A. Harris; Attorney-General, G. W. Pickle; Superintendent of Instruction, Price Thomas; Adjutant General, Charles Sykes; Commissioner of Agriculture, John T. Essary; Labor Commissioner, A. H. Wood; State Geologist, J. M. Safford; Railroad Commissioners, Ernest L. Bullock, Newton H. White, and Frank M. Thompson; Chief Justice of the Supreme Court, David L. Snodgrass; Associate Justices, W. C. Caldwell, John S. Wilkes, W. K. McAllister, and W. D. Beard; Justices of the Court of Chancery Appeals, M. M. Neil, S. F. Wilson, and R. M. Barton. All the State officers are Democrats.

Finances.—The Treasurer's books show that on Jan. 1, 1898, there was a balance on hand of \$240,159.49, which includes \$225,000 borrowed recently. The net balance, therefore, on Jan. 1, 1898, was \$15,159.42. The total amount borrowed during the year was \$725,000. Taking from this the net balance on hand, the total actual deficit for the year is \$709,840.58. A large number of outstanding warrants, if added, would make the total actual deficit about \$750,000.

The receipts from Dec. 19, 1896, to Dec. 19, 1897, including the amounts borrowed, were \$1,748,748.70, and the disbursements were \$1,992,006.34.

The interest on the State debt for the fiscal year was \$555,679.60.

The deficit results, in part at least, from the reduction of the tax rate in 1895 from 30 to 20 cents. The Legislature of 1897 raised it to 45 cents, including 15 cents for schools.

The Railroad Commissioners increased the valuation of the railroad, telegraph, and telephone companies by nearly \$33,000,000, and the Board of Equalization, after hearing objections from the

companies, sustained the commissioners. The companies brought suit in the United States district court, and a temporary injunction was granted. The court required the roads to pay taxes under the assessment of 1896, this sum to be paid as taxes for 1897, and to go as a credit on the present assessment, if sustained on final hearing, and without prejudice to the State's rights.

In October an important decision was rendered in the Supreme Court which will have the effect of securing a large amount of taxes to the State and the counties, that a tax lien has priority over a mortgage right.

A controversy began in 1891 between the State and the Tennessee Coal, Iron, and Railroad Company, growing out of the Penitentiary lease and the mining troubles. The company, having defaulted in the payment of rentals on the lease of convicts and other respects, was sued by the State for more than \$200,000. The company set up counter-claims. A compromise was made, Dec. 14, 1893, whereby the company agreed to pay \$150,000 in full settlement. Of this, \$75,000 was to be in cash and \$75,000 in deferred payments, for which a decree was to be entered, if the same was not discharged in convict labor. This decree was entered early in 1896 and a reference ordered to ascertain what payments had been made. The master's report showed that the decree had been reduced to \$44,034.74. The company excepted to this, but the report was confirmed by the Court of Chancery Appeals.

Crime and Convicts.—The amount expended for criminal prosecution during the year ending Dec. 19 was \$219,199.78, exclusive of the salaries of attorneys-general, which amounted to \$35,694.35. The amount paid for criminal prosecutions during the fiscal year ended Dec. 19, 1896, was \$174,968.75.

In March there were 473 convicts at Brushy mountain, 113 at Inman, 391 at the new prison, and 522 at the old prison; total, 1,499. Several escaped this year from the old prison. The new one has been erected at a cost of \$600,000.

The purchasers of the Harriman Railroad refused to be bound by a contract entered into when the State bought its mining property at Brushy mountain in regard to the rates for hauling coal. Suit

was brought, and judgment was rendered in May in the United States Circuit Court of Appeals in favor of the State.

Banks.—The statement of the national banks of Tennessee shows that the average reserve of all combined on Oct. 5 was 31.37 per cent., or a little over 7 per cent. above the legal requirements. The total resources were \$35,226,414.24, and the liabilities as follow: Capital stocks paid in, \$8,760,000; surplus funds, \$1,914,134.24; undivided profits, less expenses and taxes paid, \$839,332.19; national

and Memphis. The judge said: "I shall not deny that the carriers had a right to take into consideration the fact as adduced here of a low rail and water rate from the East via Evansville to Nashville in making and forming their rates; but this rule is not to be carried to unreasonable lengths in making defense in this instance, and unless the carriers can show where the commission failed to take into account some material right which the carriers had, I will sustain the order of the Interstate Commerce Commission."

The Tennessee Central was sold this year, and its completion is regarded as a certainty.

Building and Loan Associations.—Several Knoxville associations have been in difficulties this year. One of them, the Southern, is the largest in the South. A receiver was appointed Jan. 22. Its last annual report showed assets and liabilities of \$5,200,825. The amount due installment and paid-up stockholders is \$2,929,094.80.

Products and Industries.—The national Agricultural Department estimated the State's wheat crop in 1897 at 7,500,000 bushels, an advance over that of 1896.

The lumber business amounts to about \$15,000,000 annually.

The report of the Commission of Labor, rendered in April, shows that the value of the mineral production in Tennessee in 1896 was the largest in its industrial history. The production of coal was 2,663,714 tons, 343,994 tons larger than the previous year. The output of coke was 332,746 tons, a slight decrease from 1895. There were required 594,218 tons of coal to produce this coke, of which 348,941 tons were washed. The most notable feature in the coke industry is the increased attention paid to the preparation of the coal for coking. In 1891 but 11 per cent. of the coal used in the manufacture of coke was washed, whereas 58 per cent. was washed during the past year. This has resulted directly from the successful effort on the part of furnace men to manufacture pig iron profitably at its present low price, which required a more economical fuel.

The report shows that 246,998 tons of pig iron, of which 219,749 tons was coke pig and 27,249 tons charcoal iron, was produced in 1896. There were in operation nine furnaces, of which six were coke and three charcoal. Of iron ore 566,191 tons were produced.

The total production of phosphate since the discovery in Tennessee in 1895 was 113,188 tons.

Mob Violence.—A negro believed to be guilty of the horrible murder of a young girl near West Point was shot in the street of that place, July 15, in the presence of about 500 people, and his body was burned. The Rev. Mr. Edmondson, a colored preacher, who had secreted the man in his house during the search for him, was hanged by the mob three days later near Florence, Ala.

At Savania, Oct. 12, about 50 Whitecaps went to the cabin of Dot Price, colored, and riddled it with bullets. A shot broke the negro's arm, and while the disabled member was dangling by his side he and his wife fired several shots at the gang. In the morning one dead man and four badly wounded were found near the cabin. The negro had been warned, with many others, to leave the community, and his cabin had been visited on several occasions.

Clarksville.—The one hundred and third anniversary of the day on which pioneer citizens of Clarksville were massacred by Indians was observed Nov. 11. The number of visitors was estimated at 20,000. There was a parade, an address by Senator Turley, and a sham battle, representing the engagement with the Indians.

Ruskin.—The socialistic colony of Ruskin, founded in 1894 at Tennessee City, and removed in 1895



ROBERT L. TAYLOR, GOVERNOR OF TENNESSEE.

bank notes outstanding, \$1,342,805; due to other national banks, \$1,046,357.41; due to State banks and bankers, \$1,735,700.12; dividends unpaid, \$12,131.50; individual deposits, \$17,219,151.53; United States deposits, \$186,785.77; deposits of United States disbursing officers, \$96,214.44; notes and bills rediscounted, \$157,902.04; bills payable, \$1,719,000; liabilities other than above stated, \$900; total liabilities, \$35,226,414.24.

Insurance.—The following figures give an idea of the condition of the Insurance Department: Gross fees received to Dec. 31, 1897, were \$11,076. The gross fees received Dec. 31, 1896, were \$8,532.70. State tax from insurance companies to Dec. 31, 1897, \$102,566.10. The amount for the previous year was \$98,671.22. The amount of insurance agents' tax to Dec. 31, 1897, was \$7,291.63. During the previous year it was \$7,188. The license of the Massachusetts Mutual Benefit Life Association was revoked in August, the members having failed to respond to a call for extra assessment made necessary by the financial condition of the company.

An investigation of the Farmers' Mutual Insurance Association of Nashville in December showed it to be in a precarious condition. "The trouble seems to be," says the report, "that the cost of insurance has greatly exceeded the expectations of the members."

Railroads.—A decision was given, Dec. 14, in the United States circuit court against certain railroad companies entering Chattanooga, which have been discriminating against that city in the matter of freight rates and in favor of Nashville

to its present location in the Yellow Creek valley has been very successful, having increased its assets in the three years from \$15,000 to nearly \$100,000. It was chartered by 19 men, who contributed in money and material \$15,000. These men settled on a barren waste, without houses, wells, or machinery. The plan of incorporation and by-laws made it necessary that each member should be a socialist, be willing to do any work that seemed best for the general good of the colony, and receive no wages other than the maintenance of himself and his family. Every man and woman who is able to do so is expected to work forty-eight hours of each week. Their leisure is spent in athletic exercise in the gymnasium, reading in the library, attending music and dancing classes or the school of political economy, in the study of the sciences, or any line desired. The foundation is laid for a school to be called "the College of the New Economy." The colony had 280 members in July.

Legislative Session.—The fiftieth session of the General Assembly began Jan. 4 and ended May 1. John Thompson was president of the Senate, and Morgan Fitzpatrick Speaker of the House.

Gov. Taylor was inaugurated Jan. 21. In March the Legislature re-elected the Secretary of State, the Treasurer, and the Comptroller. The Governor's message advised legislation amending the election laws so as to protect the legal voter, prevent unlawful voting, and do away with the abuses of the poll-tax law; also reform of the fee system, increase of the tax levy, abolition of unnecessary offices, making penitentiary convicts self-supporting, the establishment of a reformatory for youthful offenders, and an appropriation for the Centennial Exposition.

Assessment and revenue laws were passed. The tax-rate was raised to 30 cents for general purposes, with 15 cents for schools. The office of back-tax attorney was abolished, and delinquent taxes are to be collected by the trustees of the counties. Changes were made in the laws on privilege taxes, which will increase the income from that source.

There was a general demand for legislation to reduce the cost of criminal proceedings. The Comptroller's report showed that the State paid for this purpose in 1895 \$242,136; and it was estimated that the cost to the counties was about three times as much. Under the fee system the clerk of a criminal court sometimes earned \$10,000, while the salary of the judge was \$2,500. Three bills affecting the county attorneys-general were passed. One abolishes the system of payment by fees, and fixes their salaries at \$2,500; a second act allows assistant attorneys-general in the four largest counties, and a third permits county courts to vote \$1,000 a year additional salary in counties of more than 80,000 inhabitants—Davidson and Shelby Counties.

An act called the Jarvis law, which was passed, will save about \$700,000 a year on the cost of criminal trials. It was opposed on the ground that in a majority of cases it would confiscate the services of sheriffs, clerks, and witnesses; and was brought before the courts in test cases. In two courts it was declared unconstitutional; but the Supreme Court found that it is not open to any constitutional objection, and is valid.

At the special session of 1896 a bill was passed providing for the submission to popular vote of the question of calling a constitutional convention, and April 1, 1897, was named as the time for the election. But as the subject was not mentioned in the call for the extraordinary session, the constitutionality of the act was called in question, and the Governor did not issue the call for the election. In order to do away with the doubt, a bill to the same

effect was passed in the regular session, naming Aug. 5 as the day of the election, and on May 5 the Governor issued a proclamation accordingly. At that election the people decided against holding a convention by a vote of about three to one.

A railroad commission was created, to be composed of three members, one from each grand division of the State. They are to be also *ex officio* State tax assessors of railroad, telegraph, and telephone property.

A law was passed prohibiting the sale or giving away of cigarettes and cigarette papers. This law was assailed in the courts, on the ground that it was unconstitutional—a restriction of interstate commerce—and the decision, given in October, in the United States circuit court, was against the law. It, however, covered but part of the question involved, and other test cases have been brought, one court holding that, while cigarettes may be brought into the State and sold in the original packages, they can not be sold again in the State, either in the original packages or otherwise. Others hold that they may be sold in any way. Appeal on the cases decided will be taken to the Supreme Court.

A law was made for the government of the militia, instituting radical changes. The period of enlistment was made three years; the Governor was authorized to appoint 20 aids with the rank of colonel on his honorary staff; the rank of assistant adjutant general was reduced from colonel to major, and the rank of other officers was also reduced; the office of inspector of rifle practice was abolished, both for the brigade and the regiments.

An act "for the protection of boarding schools and colleges for females and the principals and inmates thereof" makes it unlawful for any one "willfully and unnecessarily to interfere with, disturb, or in any way disquiet the pupils of any school or college for females in this State, or the principal or teachers in charge of them, while on any public road or street, or in any building or structure, or on the school premises. Nor shall any communication be had for such purposes with such pupils or any one of them, either orally or in writing, or by signs or otherwise, and it shall also be unlawful for any person to enter upon any such school or college premises, except on business, without first having obtained permission of the principal in charge. And it shall be unlawful for any person or persons to loiter, wander, stand, or sit upon the public roads, streets, alleys, sidewalks, or other places, or to frequently and unnecessarily pass along the same in such manner and with intent to annoy, vex, or disturb the owners, lessees, or occupants of any premises in the State used for the purpose of a school or college for the education of females, or with intent to disturb, annoy, and harass the teachers, principals, or pupils or any one of them as they pass along the public highways, streets, or alleys of any city in the State." The penalty is a fine of \$5 to \$50 for the first offense, and for subsequent convictions \$10 to \$50, with imprisonment at the discretion of the court ten to thirty days.

A design for an official flag for the State was adopted. It is to be red, blue, and white, and "so shaped by diagonal lines as to represent the geological lines of the State." The proportions of width and length are to be as 2 to 3. "The dimensions of the three colors employed shall be governed by a diagonal line drawn from the upper corner to the lower corner through the center of said colors employed in its construction, and the width of the three colors measured on said lines so drawn shall be equal. The figure '16' shall be on the white field, and shall be made blue in color. The words 'The Volunteer State' shall be placed diagonally on the blue field, and of yellow or gold letters."

Resolutions were passed authorizing the State funding board to borrow money at the lowest rate of interest obtainable when, in their opinion, the necessities of the State should demand it, and to cancel 400,000 bonds of \$1,000 each outstanding against it; and authorizing the Secretary of State, the Attorney-General, and the Comptroller to settle the tax suit against the Mobile and Ohio Railroad.

Committees were appointed to investigate State institutions and offices. The Committee on the Penitentiary reported that they found "no evidences of dishonesty or fraud in connection with the prison management." They recommended some changes so as to concentrate the management and the responsibility, to reduce expenses, and to guard against excessive punishments. A bill was passed for better regulation of the prison.

The Committee on the University made several criticisms on its management, the principal of which was that "the trustees have not provided the kind of instruction which the law of the United States and the State of Tennessee requires should be given." The committee declares that this instruction should be limited to "the agricultural and mechanical arts," and while they commend the university highly as a literary and scientific institution, they say it is not a practical agricultural and mechanical school; that there is no authority for giving instruction at the university in "scientific and classical studies," which they charge are made the chief object of the institution, instead of farm and mechanical work.

To this the trustees replied, showing that the committee have misquoted the law of the United States fixing the instruction to be given at these colleges and have omitted a clause which expressly requires instruction to be given in "scientific and classical studies," and contending that the training should be, and is designed to give students a sound education, thereby enabling them to become practical farmers.

Other enactments were:

Appropriating \$17,000 for the Confederate Soldiers' Home.

Making married women who are engaged in business subject to the same liability for debt as single women so engaged.

Changing the line between Davidson and Williamson Counties.

Regulating the inheritance tax so as to make it fall equally on the inheritance of children of the half and those of the whole blood, and increasing the jurisdiction of county courts.

Requiring a contestant for the office of Governor to give a bond of \$25,000 for the costs of the contest; providing, however, that the penalty shall not be enforced against the contestant or his securities unless the joint Assembly shall be of opinion that the contest was not in good faith, or was malicious or unwarranted, or made for political effect, or without reasonable cause.

To prevent the attachment or garnishment in this State of salaries or wages which are earned or payable in another State.

Appropriating \$50,000 for the Centennial Exposition.

Providing for quarantine against Texas cattle fever.

For the suppression of trusts and combinations to control and limit trade.

For regulating the incorporation of mutual benefit associations.

Prohibiting the wearing of any insignia of labor organizations by those not members.

United States Senator.—Senator Isham G. Harris died July 8, and Thomas B. Turley was appointed

by the Governor to the vacancy. The Legislature will elect a successor at the special session which the Governor has called to meet Jan. 17.

The Centennial Exposition.—The Tennessee Centennial and International Exposition was held at Nashville, from May 1 to Oct. 30, 1897, both inclusive, and in some respects it marked a new era in exposition work. These particular respects were the patriotic nature of the enterprise, the celebration of the one hundredth anniversary of the admission of the State to the Union, the reproduction of noted structures of ancient times, and the vast amount of work performed without compensation. The first suggestion of such a celebration was made when the centennial of the founding of Nashville was celebrated, in 1881. After that came other suggestions, the first of which was made by Douglass Anderson, a member of the Nashville bar, who in August, 1892, sent to several papers in the State a letter making the proposition to hold a centennial exposition in 1896 in commemoration of the State's admission to the Union. In the autumn of 1893 Capt. William C. Smith took up the idea, and, after consultation with many citizens, brought the matter before the Commercial Club and other organizations. The Commercial Club adopted resolutions on the subject, the idea was received with marks of popular approval, and the papers of the State expressed their friendliness to such an enterprise. Committees were appointed by the Commercial Club, the Board of Trade, the Historical Society, the Art Association, the Tennessee Press Association, and the Southern Engineering Association, and the result of these consultations was the formation of a committee and the election of officers. James M. Head was chosen chairman, and correspondence was opened with the mayors of Tennessee cities, with the chairmen of county courts, with industrial and commercial organizations, and historical, agricultural, and horticultural societies, and with associations having for their object the advancement of science, art, and manufactures. An address to the public was issued, and the newspapers were liberally supplied with items concerning the movement. The convention was called for June 19, 1894, and on that day there was a well-attended meeting of representative men from many sections of the State. James M. Head called the meeting to order. W. A. Henderson was made temporary chairman. Dr. R. A. Halley, B. Kirk Rankin, and J. W. Frierson were made secretaries, and the committees were appointed. The report of the Committee on Resolutions formulated the general outline of a plan for celebrating the centennial on purely patriotic grounds, and making the displays largely historical, but having in view the material wealth of the State and the undeveloped resources. The Hon. R. J. Morgan was made permanent chairman and the temporary secretaries made permanent. The plan adopted provided for holding the exposition at Nashville, in the autumn of 1896, designated the departments, and recommended for officers the following: Nat. Baxter, Jr., of Nashville, President; W. A. Henderson, of Knoxville, Vice-President; A. W. Wills, of Nashville, Director General; William C. Smith, of Nashville, Director of Works; T. T. Wright, of Nashville, Secretary; Treasurer to be elected by the directors; Frank Goodman, of Nashville, Auditor; J. M. Head and T. J. Tyne, of Nashville, General Counsel. Mr. Wright declined the office of secretary, and Col. J. B. Killebrew was elected to the place. Tennesseans residing in other States were invited to participate. The charter was procured, and the directors perfected the organization at an early day. The first substantial aid came from Davidson County (in which Nashville is situated), which county voted

\$50,000 to the enterprise. The directors decided to petition the Legislature for a bonus of \$350,000, and sent a delegation to Washington in December, 1894, to urge Federal aid. The bill in Congress failed, and the Legislature adjourned without voting a dollar. Then the citizens of Nashville made up their minds that they would hold the exposition themselves, whether State and Government aided them or not. In the end they triumphed, but they had to bear the burden almost alone.

The work of interesting the State was carried on unceasingly, and at last the Legislature passed laws enabling counties to make appropriations for displays of their own resources at the exposition and to enable the city of Nashville to subscribe \$100,000 to the enterprise by majority vote of the legal voters. In July, 1895, the subscriptions amounted to \$62,635, including the \$50,000 given by Davidson County. A meeting was held in the evening of July 8, and proved to be the turning point in the fortunes of the enterprise. Just as the Hon. Tully Brown closed a patriotic appeal, the news came that the City Council had passed the bill submitting to a vote of the people the proposition to subscribe \$100,000 to the capital stock. The officers tendered their resignations, believing that those who had subscribed should have the right to elect, and the hall had become so crowded that in answer to a demand for more room the meeting marched to Watkins Hall, increasing as it went. A committee of nine was appointed to consider the question of reorganization, and the meeting reluctantly adjourned. Within two weeks the subscriptions had reached \$165,000. An immense gathering assembled at the Tabernacle and heard the report of the committee of nine, which proposed Major J. W. Thomas, President of the Nashville, Chattanooga and St. Louis Railway, for President of the Exposition Company. This gentleman accepted the office with the condition, made by himself, that he receive no salary. He also furnished an efficient secretary in Charles E. Currey, on the same terms. Van Leer Kirkman was elected Vice-President; W. A. Henderson, Second Vice-President; John Overton, Jr., Third Vice-President; W. P. Tanner, Treasurer; and Frank Goodman, Auditor. These gentlemen served throughout the period of preparation and during the exposition proper. President Thomas and an executive committee had charge of all affairs when the directors were not in session, and all served without compensation. On July 30, 1895, Major E. C. Lewis was appointed director general.

West Side Park, two miles from the heart of the city, reached by all the street-car lines, as well as by the Nashville, Chattanooga and St. Louis Railway, was chosen as the site. The first call for 10 per cent. on subscriptions was made, payable Sept. 1, 1895. Sept. 12 the director general outlined his plans. The central figure and the architectural center of the exposition was to be a reproduction of the Parthenon. The foundations of this building were begun Sept. 10, and the corner stone was laid with appropriate ceremonies Oct. 8. Subscriptions continued to increase in amount through the winter of 1895 and the spring of 1896, and the city voted the \$100,000 at the election held for that purpose, only 488 votes being cast against the proposition. The bonds were sold at a premium. Owing to the opening of the presidential campaign and the growing scope of the enterprise, it was decided to postpone the opening until May 1, 1897, and to continue the exposition through six months. The construction of the buildings was continued, and every one of them was ready for the opening day except the Government Building and the Education and Hygiene Building, which had been begun almost at the last moment.

On June 1, 1896, the Woman's Building and the Auditorium were complete, so that in these two buildings the ceremonies incident to the celebration of Tennessee's actual centennial were held. To this celebration came citizens of 12 States and at least 125,000 Tennesseans participated in the exercises. In July the Nashville, Chattanooga and St. Louis Railway and the Louisville and Nashville Railroad Company each subscribed \$25,000 in cash to the exposition, in addition to more than \$10,000 in transportation already given. This policy of aid on the part of the railroads continued throughout the exposition. These and the other subscriptions enabled the management to prosecute the work without cessation, and to pay for every dollar's worth of work when it was completed. In the latter half of 1896 applications for space were so numerous as to necessitate enlargements of several of the buildings. Visiting delegations from the large cities came, and were so much pleased that they went home and inaugurated the movements which resulted in the erection of special buildings of great beauty. The press of the country gave the exposition an unusual amount of attention from the beginning, and the cost of advertising it was merely nominal. For more than a year beforehand every effort had been made to secure the meeting in Nashville during 1897 of as many of the great bodies and conventions as possible, and the list of special days was the longest ever had by any exposition.

A renewed effort at Washington resulted in the appropriation by Congress of \$130,000, of which \$30,000 was for a building and the remainder for a display, the appropriation being conditioned on the previous subscription by private persons of \$500,000. This was in December, 1896, and in two weeks the additional \$27,000 thereby made necessary had been secured. The struggle with the Tennessee Legislature was harder and less successful. At first \$350,000 had been asked for, but at the session early in 1897 it was decided to ask for only \$100,000. After a bitter struggle with the opponents of the measure, the State of Tennessee, through its representatives, voted \$50,000. Of this, but a part was available, for \$30,000 was used to purchase the Agricultural Building, and the rest used in placing the State exhibit and in the expenses of administration. The last great struggle came not long before the opening day, in the effort to incorporate Centennial City. This brought up the question of the sale of malt, vinous, and spirituous liquors. A bill for the incorporation of Centennial City was introduced in the Legislature. It was the work of the combined intelligence and conservatism of the entire Executive Committee, but was denounced as the work of brewers and distillers. The laws of Tennessee do not allow the sale of spirituous or malt liquors within four miles of a school, except within an incorporated municipality, and the Centennial Park is just outside the city of Nashville, with schools and universities around it. The Executive Committee asked for a limited corporation, which should expire on Dec. 31, 1897. They took the view that, having invited the people of the world to join in the celebration of the centennial of Tennessee, as the host they must allow the tastes and customs of their guests to be consulted as far as might be, and that beer and wine might be sold under proper restrictions. Not one of the Executive Committee was engaged in any industry connected with the liquor traffic, directly or indirectly. The opposition to the measure was bitter and persistent, but finally it became a law. Bonds were prepared for \$220,000, and a loan was obtained that kept the treasury replenished. This was paid off before the exposition closed. Just before the opening Dr. W. L. Dudley, of Vanderbilt University, was elected

director of affairs, the work of the director general being too much for one man.

The opening exercises were held May 1 in the Auditorium on the grounds, and after the speeches and music the machinery was formally started by the pressure of a button by President McKinley in Washington. The report of a cannon announced at the instant that the machinery was started and the exposition formally opened. The Legislature and a host of other distinguished visitors were present. The exposition ran its course without a single serious casualty, without the slightest suspicion of fraud, and without the faintest approach to scandal of any kind. Half the States of the Union had their special days, when their governors or other representatives were present, and showed their friendly relations to the people of Tennessee. President McKinley and his Cabinet were present June 11 and 12, when the celebration of Ohio and Cincinnati Days took place at the Cincinnati Building. The Woman's Department made of Mrs. McKinley's presence the social event of the summer. The attendance culminated in the observance of Nashville Day, Sept. 11, the anniversary of the original incorporation of Nashville. But the crowning effort of the exposition workers was directed to making J. W. Thomas Day exceed all others, and it was seen that the attendance was within a few hundred of 100,000. Director General's Day was another great day, ranking among the five greatest. Nebraska Day, when the Governor of that State and William Jennings Bryan were present, ranked third of the days. United Confederate Veterans' Day was fourth.

Organization.—The organization of the Exposition Company was as follows; President, John W. Thomas; Vice-President for East Tennessee, W. A. Henderson, Knoxville; Vice-President for Middle Tennessee, Van Leer Kirkman, Nashville; Vice-President for West Tennessee, John Overton, Jr., Memphis; Director General, E. C. Lewis, Nashville; Director of Affairs, W. L. Dudley, Nashville; Commissioner General, A. W. Wills, Nashville; General Counsel, S. A. Champion; Secretary, Charles E. Currey, Nashville; Treasurer, W. P. Tanner, Nashville; Auditor, Frank Goodman, Nashville; Chairman of Finance Committee, S. J. Keith, Nashville; Chairman of Legislative Committee, Tully Brown; Executive Committee—President J. W. Thomas, chairman, J. W. Baker, E. E. Barthell, G. H. Baskette, Tully Brown, H. W. Buttorff, S. A. Champion, E. W. Cole, M. J. Dalton, W. L. Dudley, J. H. Fall, T. D. Fite, W. A. Henderson, W. H. Jackson, Samuel J. Keith, Van L. Kirkman, E. C. Lewis, H. H. Lurton, Samuel M. Murphy, J. J. McCann, J. H. McDowell, J. C. Neely, John Overton, Jr., H. E. Palmer, A. H. Robinson, W. P. Tanner, J. W. Thomas, Jr., J. VanDeventer, B. F. Wilson, Luke E. Wright. Chiefs of departments: Engineer in Charge, R. T. Creighton; Art, Theodore Cooley; Machinery, George Reyer; Electricity, J. W. Braid; History, G. P. Thruston; Commerce, J. H. Bruce; Agriculture, T. F. P. Allison; Geology, Mines, and Mining, J. M. Stafford; Forestry, A. E. Baird; Negro, Richard Hill; Children's, W. T. Davis; Woman's, Mrs. Van L. Kirkman; Concessions, S. B. Wadley; Admissions, J. N. Brooks; Military, Charles Sykes; Music and Amusement, W. L. Dudley, chairman of committee; Installation, E. P. Blodgett; Transportation, J. W. Thomas, Jr.; Publicity and Promotion, Herman Justi; Board of Management of the Government Display, Charles W. Dabney, President; Education, W. L. Dudley; Hygiene, Medicine, and Surgical Appliances, Dr. J. D. Plunket; Grounds and Building, W. C. Kilvington; Live Stock and Poultry, Van L. Kirkman; Foreign, A. Macchi. The Board of Directors

numbered 168 from all parts of the State, and met monthly. The company was chartered under the general laws of the State.

Centennial City.—Centennial City stands unique in the history of municipalities. It was short-lived, but in its ideal character it suggests Lyncurgus's ideal commonwealth. Like the little kingdom of Monaco, it was beautiful, artistic, and given up largely to the pursuit of pleasure. Never was an application for office considered, for the office sought the man, being named in the act of incorporation. An act of the Legislature provided that organized State fairs shall be exempt from the payment of any license for privileges taxable by the laws of the State. As the income of the exposition was expected to be largely derived from amusement and other concessions, in the way of commissions, space rent, etc., the revenue bills of 1895 and 1897 continued this provision for State fairs and their tenants. In order to control the crowds at the Exposition it was seen that some sort of municipality would be necessary. Under the general law for organization of municipalities at least 15 qualified voters must reside within the territory to be incorporated, three fourths of whom must give their consent. Not a single qualified voter resided within the centennial grounds. The bill to incorporate Centennial City provided that only the exposition grounds be included, and that the sale of intoxicants be not allowed, except wine as a restaurant privilege and beer under proper regulations. The bill named the members of the board of aldermen, who should elect a mayor, to be *ex officio* recorder, with jurisdiction to try and punish offenders against the city laws; but no revenue was provided for except what came from fines and forfeitures. The charter was to expire by limitation Jan. 1, 1898. An arm of the government created without power to raise revenue except by fines and forfeiture, known to be wholly insufficient to pay the necessary expenses; a police known as the Centennial Guard, authorized by the ordinances of the city, and which acted *ex officio* as a fire department, and could be increased, if required, to 1,000 men, was unique. Though nearly 2,000,000 people visited the exposition, very few dollars' worth of anything was stolen, no one was seriously injured, and not a single death occurred as the result of violence. The mayor and board of aldermen named in the charter were Norman Farrell, Edward Buford, John W. Thomas, Jr., W. L. Dudley, H. W. Buttorff, E. C. Lewis, and W. H. Jackson. The board elected Norman Farrell mayor, Norman Farrell, Jr., secretary and treasurer, and Eastman G. Currey chief of police.

The Park.—The site of the exposition was West Side Park, a former race course on which more than \$100,000 had been expended in grading and laying out the grounds before it came into the hands of the exposition management. Lakes existed already fed by running streams, with hundreds of trees, many of them forest monarchs. The hills and rolling country to the west were a continuation of the characteristics found in the park. The beautiful suburbs of Nashville reached to the very fence inclosing the place. The main buildings were arranged in the form of an ellipse, the Parthenon, in an elevated position, occupying the center. Around this ellipse, following the old race course, were arranged the Government, Minerals and Forestry, Negro, Machinery, Agriculture, Transportation, Commerce, Administration, Children's, and Woman's Buildings. In the southern portion of the inclosed ellipse was the Auditorium, and in the northern portion the Education and Hygiene Building, while the smaller structures were scattered promiscuously, but always with a view to picturesque-

ness. Arbors covered with native vines or with gourd vines led from the Auditorium to the Children's Building on the west, and to the Parthenon on the north. Capitol Avenue, on which were most of the State, county, and city buildings, ran toward the east from the Rialto, which spanned Lake Wautauga directly in front of the Parthenon. The dome of the Commerce Building, the ridge line of the Parthenon, the statue of Pallas Athene, the Rialto, the middle of Capitol Avenue, and the dome of the State Capitol, two miles away, were in a straight line. Everything in the way of flowers was used lavishly in beautifying the grounds, and nearly 1,000,000 plants were in full bloom during the summer. Besides the Parthenon, the most striking structures were the flagstaff, 250 feet high, the reproduced Pyramid of Cheops used as the Memphis Building, the exact reproduction of the Alamo as the Texas Building, the copy on exact lines of the Rialto at Venice, the Administration Building of the World's Fair with statuary and every detail reproduced on a scale of one sixth as the Illinois Building, and the famous Blue Grotto of Capri, on an island in the lake. Other unique attractions were cotton and tobacco fields in full growth, where all the operations connected with the culture and gathering of these crops were shown as the season progressed; old-time cotton presses and water wheels, pioneer cabins and furniture, wild-cat distillery, flax hackling and spinning; the gondolas from Venice and the native Venetian gondoliers; the chimes in the Auditorium tower; the History Building, with its relics more valuable than their weight in gold, to preserve which a permanent brick building had been constructed; statuary, including a bronze statue of Commodore Vanderbilt, by Moretti, of New York, which has since been removed to a permanent home on the grounds of Vanderbilt University; the statue of Pallas Athene, 25 feet in height, the largest statue ever made by a woman, the work of Miss Enid Yandell, of Louisville. Fountains, lakes, flowers, and aquatic fowls made up the accessories. Palms and cacti were everywhere in evidence, and many of the floral designs were at once stupendous and beautiful. Lily lake was filled with every obtainable variety of water lily.

The Buildings.—The names of the buildings, style of architecture, size and cost are given here-with: Exposition buildings proper—Agriculture, Renaissance, 153×510, \$30,000; Administration, modern, \$1,650; Auditorium, colonial, 200×250, \$20,000; Air-Ship House, 30×60, \$500; boiler house, 50×100, \$2,500; band stand, Oriental, \$1,287; Children's Building, modern, 80×80, \$5,123; Commerce Building, Roman, 527×126 and 160×60, \$40,000; Customhouse, modern, \$800; main entrance, Egyptian, 16×50, \$1,550; concessions, modern, \$1,500; small entrances, \$600; Education and Hygiene, Renaissance, 144×144, \$12,000; flagstaff, 250 feet high, \$2,500; hitch stable, 25×200, \$300; Emergency Hospital, Renaissance, 30×50, \$2,000; Negro Emergency Hospital, \$500; History Building, Greek, 80×80, \$10,000; Machinery Hall, Greek, 100×350, \$20,000; Minerals and Forestry Building, Roman-Doric, 426×101 and 162×72, \$20,000; Mexican, 50×150, \$2,500; Negro Building, Spanish Renaissance, 80×250, \$12,300; Nursery, modern, \$800; Parthenon, Greek, 110×230, \$30,000; Press Building, modern, \$1,850; power house, \$1,500; Rialto, Venetian, \$4,000; Transportation Building, Renaissance, 116×400, \$16,987; Terminal Building, and Nashville, Chattanooga and St. Louis Railway Exhibit Building, Roman, 120×120, \$12,000; Train Exhibit Shed, 75×300, \$2,500; Woman's Building, colonial, 65×165, \$14,000; blacksmith shop, bath houses,

bonded warehouses, three military buildings, carpenter shop, and oil house. Other exhibit buildings were as follow: Alamo, or Texas Building; Alabama, Cincinnati, Cotton Belt Railway, Chambers Brothers' brick factory, Round Bale Company Warehouse, Illinois Building, Junior Order of United American Mechanics, Knoxville, Kentucky, Ladies of the Maccabees' Beehive, Knights of Pythias, Memphis, New York, Red Men, Settler's Cabin of 1797, Seaboard Air Line palace car, Woodmen of the World, Page Woven-Wire Company, and the United States Government Building, which cost \$30,000. Restaurants—Alhambra, Café Militaire, Casino, Clubhouse, Lion Roof Garden, Schlitz Pavilion. The amusement buildings were Beauty Show, Brownie Show, Blue Grotto, Chinese Village and Beauty Show, Cyclorama Battle of Gettysburg, Colorado Gold Mine, California Big Tree, Cuban Village, Cineomatographe, A Day in the Alps, Electric Carrousel, Fire Dance and Roitair's Illusions, Giant Seesaw, Gladish Wheel, Trained-Animal Show, Moorish Palace, Mirage, Lincoln and David Cabins, Night and Morning, the Old Plantation, Ocean Wave, Old Times in Tennessee, Phantom Swing, Streets of Cairo, the Chutes, Palace of Illusions, shooting gallery, the Nebraska Sod House, Wild West Show, Phonograph Parlor, two Japanese tea houses, Model Chinese Farm, and the Bureau of Public Comfort. Besides these there were hundreds of smaller concession houses and stands, such as are found at all expositions, for the sale of innumerable articles.

Electric Lighting.—The problem of illumination was satisfactorily settled, and no department gave greater satisfaction. The electrical department was organized July 1, 1896, with J. W. Braid as chief and J. W. Pentecost as superintendent. A conduit for the underground system was laid in the autumn, and the force was gradually increased as the work grew, until 77 men were engaged. The cost of the department was \$28,000. The lights were turned on in full on the evening of May 1, 1897, and never was there a delay or any break of any kind. There were 18,382 incandescent lamps and 458 arc lights used in the scheme of decoration and illumination. The plant included fifteen dynamos, and the decorative lamps were distributed as follow: Fountain, 102; Woman's Building, 368; Children's Building, 534; Commerce Building, 1,442; garlands, 424; Transportation Building, 540; Agriculture Building, 1,897; Machinery Hall, 502; Negro Building, 384; island, 200; Rialto, 602; Minerals and Forestry Building, 568; Auditorium, 812; Arbor, 109; Parthenon, 390; Terminal Station, 912; Education and Hygiene Building, 522; Memphis Building, 346; Illinois Building, 236; Administration Building, 196; Pool, 164; main entrance, 88; History Building, 382; Vanity Fair, for decorative purposes purely, 965; making a total of 12,685; for illuminating in buildings, concessions, etc., 5,697 lamps were used, making a grand total of 18,382 lamps.

Art Department.—The art department in the Parthenon of the exposition comprised the largest collection of fine pictures ever gathered in the South. Theodore Cooley, the chief of this department, enjoyed a personal acquaintance with such a large proportion of the artists of the country that he had exceptional facilities for getting pictures loaned, and many of the best private galleries helped in his work. The art catalogue was a work of art itself. More than 5,000 letters were written in eighteen months, and the result was most satisfactory. Leon Roecker, of Chicago, superintended the hanging of the pictures, completing the work ten days after the exposition opened. The jury of awards was composed of F. Hopkinson Smith, of New

York; Thomas Allen, of Boston; and Halsey C. Ives, of St. Louis. A prize offered the painter of the picture declared most popular by ballots of all visitors who chose to express themselves was awarded to John G. Brown, whose picture "Heels over Head" received a very large plurality. There were 967 paintings and nearly 200 pieces of sculpture in the collection, besides the architectural drawings and other works in allied fields of art.

Woman's Department.—The management of the Woman's Department was in the beginning left entirely to the women, the only part the men took being to erect the building for them after a design prepared by Mrs. Sara Ward Conley, of Nashville. The first actual organization was headed by Mrs. H. L. Craighead as president and Mrs. Bettie M. Donelson as chairman of the Executive Committee, but upon Mrs. Craighead's resignation Mrs. Van Leer Kirkman was elected president of the department. The first large sum secured was by a special woman's edition of the Nashville "American," which netted them nearly \$3,000. Every member of the State Board and every member of the Executive Committee was pledged to raise not less than \$25, and many of them gave entertainments, at their residences and elsewhere, which brought them many times that sum. Ward and district Centennial Clubs were organized by them in Nashville and Davidson County, and much money thus raised. When the exposition opened they had exclusive control of all privileges and concessions in their building, and altogether they raised more than \$30,000. The women of Memphis spent \$4,000 in decorating the main hall of the building, which they took as their part of the work; Chattanooga women paid \$2,000 for the decoration of the Chattanooga Room, and each of the rooms thus taken in charge by the women of a city or State or county had a great deal of money spent upon it. In one room were shown the articles invented and patented by women. There was a library where were gathered 4,000 volumes written by women in all parts of the world, though mainly in the United States. A model kitchen was equipped by Cheatham County women, and courses of lessons in cooking were given throughout the exposition period. Other special rooms were decorated and furnished, and mainly filled, by New York, Chicago, Georgia, Knoxville, Maury County, Sumner County, and Murfreesboro. Women notable in every department of modern life were brought to Nashville by women's congresses, musical festivals, and lectures. The first month's congresses were managed by Miss Clara Conway, and those of the remaining period by Mrs. Robert F. Weakley. The organization of the department was as follows: President, Mrs. Van Leer Kirkman, Nashville; Vice-President for East Tennessee, Miss Mary Boyce Temple, Knoxville; Vice-President for Middle Tennessee, Mrs. Florence K. Drouillard, Nashville; Vice-President for West Tennessee, Mrs. Charles N. Grosvenor, Memphis; Vice-President for the State at Large, Mrs. J. W. Thomas, Nashville; Secretary, Miss Ada Scott Rice, Nashville; Treasurer, Mrs. Robert F. Weakley, Nashville; Executive Committee—Mrs. Van Leer Kirkman, Mrs. Florence K. Drouillard, Miss Mary Boyce Temple, Mrs. C. N. Grosvenor, Mrs. J. W. Thomas, Mrs. Robert F. Weakley, Mrs. G. W. Fall, Mrs. M. P. Maguire, Mrs. M. B. Pilcher, Mrs. F. L. Blume, Mrs. S. A. Champion, Mrs. John Hill Eakin, Mrs. Norman Farrell, Mrs. T. F. Kendrick, Mrs. Isadore Lewinthal, Mrs. James S. Pilcher, Mrs. G. H. Ratterman, Mrs. John Ruhm, Sr.

Machinery Department.—The great departure in the Machinery Department was the separation of the exhibits from the power plant and the refrigeration of the former, so that this exhibit could

be inspected at any time on the hottest day, free from the discomforts of heat and smell that usually characterize these exhibits. The boiler plant consisted of 6 Morrin Climax vertical water-tube boilers, 4 being rated at 500 horse power each and 2 at 250 horse power each. The actual horse power furnished was 2,800, 30 tons of coal being used daily. In Machinery Hall were 1 direct-connected Phoenix engine, 150 horse power, and 100 kilowatts Western Electric dynamo, 1 125 horsepower direct-connected engine, and 1 80 kilowatts Triumph dynamo, and 2 Wood dynamos of 80 kilowatts. The shafting used for distributing the power was under the floor the full length of the building, the lines of shafting being driven by 1 Hamilton Corliss engine of 500 horse power and 1 Lane & Bodley Corliss engine of 400 horse power. The power house contained 4 Westinghouse engines of 400 horse power each and 1 40-horse-power Beck engine. These engines furnished the power for driving 6 alternating and 5 arc dynamos. In the pump house were 1 Underwriters' fire pump and 1 Worthington compound. Each was capable of delivering 1,000 gallons of water a minute with a pressure of 150 pounds to the inch. The water was taken from the mains of Nashville. Capt. George Reyer, chief of the department, had valuable assistants in James A. Robinson, Henry Monk, and U. G. Graham, superintendent of the boiler plant. The force numbered 48 men. Notable among the exhibits of interest to the South was the round bale cotton press, in wonderful contrast to the old method; also a gear-cutting machine from a Providence, R. I., firm, and measuring tools by which measurements as small as .00001" are readily made. These exhibits are not singled out because they were better than the others, but because they seemed to mark a great advance in mechanical science.

The State Displays.—The strong purpose was to show the history of Tennessee for the past hundred years and the hopes that lay in the undeveloped resources of the State. These resources were fully shown—minerals, forest products, agricultural products, phosphates, clays, and ores—and the showing was very satisfactory. The displays made by various counties in the State were given space, as a rule, in the Agricultural Building, but some of them were in the Minerals and Forestry Buildings, notably that of Chattanooga and Hamilton County. Other counties and cities had special buildings, of which Memphis and Knoxville were particularly notable. The general collective State exhibit was made in the Agricultural and Minerals and Forestry Buildings. The Nashville, Chattanooga and St. Louis Railway had a complete display of the products of all the territory along its line, and this was allowed to remain after the exposition closed, as the nucleus of a permanent exposition.

Music and Amusements.—The expense for music and amusements was \$99,864.99, of which the larger part was spent for music. Great bands were in attendance throughout the exposition, the season opening with the Bellstadt-Ballenberg band, of Cincinnati, for four weeks. Following this came Innes's band, Victor Herbert's 22d Regiment band, and Conterno's band, with the spectacular "Battles of our Nation"; then the Bellstadt-Ballenberg band played a return engagement for the last four weeks of the exposition. Other amusements consisted of a few special performers, which did not draw as was expected; fireworks, that were always popular; sham battles and gorgeous parades, allegorical and otherwise. Baseball, football, and other athletic contests were also had, and cavalry drills, which were always witnessed by great crowds.

Receipts and Disbursements.—Up to April 1, 1898, with considerable assets in the way of salvage yet unrealized upon, the receipts and disbursements of the Exposition Company proper had been as follow: Receipts—admissions, \$435,399.95; concessions, \$124,735.60; individual subscriptions, \$257,015.44; city of Nashville subscription, \$100,000; Davidson County subscription, \$50,000; State of Tennessee subscription, \$50,000; salvage, \$32,175.35; from various departments, \$27,783.72; total, \$1,087,227.85. Of the receipts from the departments all were in small sums, comparatively, the Electrical Department being the only considerable source of receipts, \$16,785.37 being received for lights furnished. Of the admissions, gate receipts amounted to \$394,799.20, the season tickets to \$28,537, and the photographic passes, etc., to \$12,029.25. This gives the total of \$435,399.95, representing 1,273,827 paid admissions. The total registered by the turnstiles was 1,886,714, showing that the number of entrances on passes and all free admissions—workmen, soldiers, *concessionnaires*, employees, distinguished guests, press, etc.—aggregated 612,887. Against these receipts the disbursements were as follow: Preliminary organization, \$16,263.07; administration, \$63,964.89; publicity and promotion, \$79,564.85; grounds and buildings, \$520,390.51; commissioner general's department, \$15,630.50; Art Department, \$25,639.29; Agricultural Department, \$14,448.51; Machinery Department, \$80,527.72; Electricity Department, \$67,991.17; Geology, Mines, and Mining, \$2,525.58; Forestry, \$759.20; Hygiene, Medicine, and Surgical Appliances, \$789.63; Live Stock and Poultry, \$551.77; Military, \$7,193.17; Educational, \$408.80; Children's Department, \$3,081.13; Negro Department, \$2,009.68; Woman's Department, \$749.48; music and amusements, \$99,864.99; Admissions Department, \$25,134.18; concessions, \$18,923.67; guard, \$38,329.38; installation, \$3,728.60; hospital, \$3,239.84; history, \$766.53; foreign, \$3,358.98; inaugural ceremonies, \$7,212; total, \$1,087,227.85. The small cost attached to the running of the Woman's Department is explained by the fact that after the preliminary work the women paid their own running expenses and raised the money themselves.

Sundry Statistics.—There were on the grounds 2 stone dams, 5 bridges, 2 arbors, 4 lakes, 10 miles of road, 5 miles of water pipe, and 3 miles of sewers, all constructed by the Engineering Department. Altogether there was in use 190 acres of ground. During the six months there was used 11,338,210 cubic feet of water, or about 80,000,000 gallons. Of ice there was used 489,075 pounds. Of sewerage there was removed 128,712 barrels of 55 gallons each, 2.6 per cent. being solid matter. The greatest number of men employed in the Engineering Department was 436, the week before the opening, when 54 teams were used, and the pay roll was \$5,126.30.

TEXAS, a Southern State, admitted to the Union Dec. 29, 1845; area, 265,780 square miles. The population, according to each decennial census since admission, was 212,592 in 1850; 604,215 in 1860; 818,759 in 1870; 1,591,749 in 1880; and 2,235,523 in 1890. Capital, Austin.

Government.—The State officers in 1897 were: Governor, Charles A. Culberson; Lieutenant Governor, George T. Jester; Secretary of State, J. W. Madden; Treasurer, W. B. Wortham; Comptroller, R. W. Finley; Superintendent of Public Instruction, James M. Carlisle; Commissioner of the Land Office, Andrew J. Baker; Commissioner of Agriculture, Insurance, Statistics, and History, A. J. Rose, succeeded by Jefferson Johnson; Attorney-General, Martin M. Crane; Adjutant General, W. H. Mabry; Health Officer, R. M. Swearingen; Chairman of the Railroad Commission, John H. Reagan; Chief Jus-

tice of the Supreme Court, Reuben R. Gaines; Associate Justices, Leroy G. Denman and Thomas J. Brown; Clerk, Charles S. Morse. All the State officers are Democrats.

Finances.—The appropriations for all purposes for 1897 and 1898 amounted to \$4,384,855.90. The disbursements for one year preceding were \$2,884,700.03.

The report on school-land operations in 1897 is as follows: "Lands leased during the year, 4,859,808 acres. Canceled leases during same time caused by nonpayment of rental, expiration or sales, 2,571,702 acres. There are now under lease and in good standing 9,947,942 acres. The lease money paid on the lands leased in 1897 was \$145,794.24, and on leases already existing there was paid \$137,457.97, or a total of \$282,860.11, which was paid into the available school fund for the education of the children of the State. This is an unprecedented year in this department."

The State school fund was this year large enough to pay all the apportionment for the school year for the first time in five years, a balance due from the State having been left over each August for that length of time.

Education.—The school population this year was 775,933, an increase of 24,598 over that of 1896. The apportionment for each of the two years 1897 and 1898 was \$4 *per capita*.

The Sam Houston Normal School had 350 students and 88 graduates. The attendance at the Prairie View Normal also was large.

There were 730 students in attendance at the State University. In the medical department, which is at Galveston, while the other departments are at Austin, there were 270, of whom 34 were in the School of Pharmacy. The degree of doctor of medicine was conferred on 33, one of them the only young woman graduated by the department. As she had not reached the requisite age, her diploma was withheld. Two of the graduates in pharmacy were Sisters of Charity.

The university has received valuable gifts this year, notably a library of about 25,000 books and pamphlets from Sir Swante Palm, who has been Swedish consul at Austin for thirty years. This library is valued at \$100,000 and contains many rare works, manuscripts, and engravings.

A resolution was adopted in the lower house of the Legislature in June calling for an investigation into the truth of the report that there "have been employed and included in the faculty of said university those who are not in sympathy with the traditions of the South, but hold our traditions and our institutions in contempt, and circulate and teach political heresies in place of the system of political economy that is cherished by our people."

The instructor alluded to is Prof. Houston, who teaches political economy and is the author of a work on the subject, in which, it is charged, he advances ideas not in sympathy with the spirit and interest of Southern institutions. President Winston also comes in for a share of blame. An address at an alumni banquet at Dallas in March has the following paragraph, which has been quoted against him:

"The Constitution of our State seems to be made up mainly of prohibitions. It is a series of don'ts. It is a sort of combination of the democratic idea of everybody doing what he pleases without interference from anybody, and the old carpetbagger idea that the State should be protected from plunder by its public servants. And the result is, that we have a Constitution, and we have a machinery of government in Texas which is the most remarkable obstruction to progress that probably exists anywhere."

The report of the committee said: "We have not had time to make a critical examination of the book, but from a casual reading would pronounce it to be unacceptable from a Southern standpoint, as setting forth principles contrary to Southern teachings. We questioned Prof. Houston, who is a South Carolinian, with regard to the book, and he stated that it was written before he came to Texas, and that in his teaching here it was not used, nor was it referred to. The personal predilections of the regents are, other things being equal, for Texas men first, and Southern men next. And we are satisfied that there has not been taught in the university anything objectionable to Southern people. We ascertained that of the professors 2 were from North Carolina, 1 from New Jersey, 2 from Indiana, 3 from Virginia, 4 from Texas, 1 from New York, 1 from Georgia, 1 from South Carolina, 1 from Wisconsin, 1 from Kentucky, 1 from Maryland, 1 from Alabama, and 1 from Switzerland; and in addition there were employed 11 graduates of the University of Texas as instructors and tutors and fellows. In answer to a direct question, the Board of Regents stated that on their part there has never been any desire to employ professors or not to employ professors because of their coming from the Northern States. The sole test has been fitness for the position, which has included a careful inquiry into family history and moral character."

A college has been founded at Stephenville, called the John Tarleton College, from the name of the founder, who left about \$75,000 for the establishment of a college in Erath County for students not otherwise able to gain a collegiate education. Mr. Tarleton bequeathed an equal amount to a benevolent school at Knoxville, Tenn., his native place.

The Penitentiary.—There were 4,672 penitentiary convicts, June 30. Of these, 1,813 were contract forces, 687 were working on share farms, 195 on the State farms, and 241 were on railroad forces.

Charities.—The Institute for Deaf, Dumb, and Blind Colored Children, at Austin, has 75 pupils. The old building was pronounced unsafe, and the Legislature this year made appropriation for a new one, which will cost \$11,280. It was to be finished in October. The State School for the Deaf had an attendance in 1897 of 178.

At the end of the year there were 197 inmates at the Confederate Soldiers' Home, and 42 more were accepted, and will be admitted as soon as accommodations are prepared. The allowance for maintenance for the year was \$28,000.

A new school building has been put up this year at the State Orphans' Home, at a cost of about \$12,000, and a \$4,000 hospital building and a \$3,000 addition to one of the other buildings are to follow. There are 343 children at the home, which is at Corsicana.

The Buckner Orphans' Home, near Dallas, was burned on the night of Jan. 15, and 17 children lost their lives. There were 127 inmates.

Railroads.—The most noteworthy incident in railroad history in the State this year was the compromise between the State and the Southern Pacific in the rebate suits. These were on account of discriminations in rates, in violation of the regulations of the Railroad Commission, which, as was alleged, had been going on for years and made the company liable for fines and penalties aggregating a large amount. There were 7,000 cases against the road and connecting lines. The proof of the rebates was in voucher stubs in the hands of a former auditor of the road. The compromise provided that the road should plead guilty in 50 of the cases, receive the minimum penalty in each (\$500), and have the other 6,950 virtually dismissed; so that the State received \$25,000.

The commission made a new tariff of freight rates on cotton, reducing them, which went into effect Aug. 13.

New roads incorporated during the year are the Southwest Texas, which is to go from Brenham to Brownsville by way of Corpus Christi, and from the latter point to Eagle Pass, and the Texas Southern, the line of which will be 300 miles, including parts already constructed. The Arkansas Central has filed articles of incorporation, proposing to build from Fort Smith, Ark., to Paris, Texas.

The citizens of Jasper County, having failed in several projects to have railroad lines extended to Jasper, the county seat, have been building a connecting road this year, literally doing the work themselves. Five per cent. of the stock was paid in at the beginning to meet the requirements of the law, and much of the remaining stock has been paid for in labor. The road starts without a dollar of indebtedness.

Products.—The cotton crop of 1896-'97 amounted to 2,250,000 bales. The prices were fair, the highest quotation for middling, the standard grade, at Galveston, during the season being 8½ cents a pound, and the lowest 6¼ cents. The corn yield was estimated at 68,628,000 bushels, the wheat at 7,174,000 bushels, and the oats at 24,045,000 bushels. A large crop of mesquite beans was harvested this year.

Discoveries of gold in Llano, Uvalde, Gillespie, Williamson, and neighboring counties have attracted attention this year, and it is believed that valuable deposits have been found. This region is not far from the capital. Discovery of a rich vein of gold and silver ore has also been reported from Presidio County, on the Mexican border in the southwest. Rich discoveries of copper in western Texas are reported, and oil fields at Corsicana are being developed.

Yellow Fever.—It appears to be an open question whether the State was visited by the fever when this was epidemic in other Gulf States. Cases of illness were pronounced yellow fever by Dr. Guiteras, and quarantine was established. But at a meeting of the South Texas Medical Association, Dec. 28-29, at Beaumont, the majority took the ground that the disease was dengue, and that there was no yellow fever in Texas.

The Antitrust Law.—This law, passed in 1895, was declared void by Judge Swayne, of the United States district court, in February. He said in part: "If there is any one thing evident from a careful study of the act, it is that it is aimed to favor the agricultural class, and is against the merchant and mechanic, and all the others, without either reason or justice. This law that deprives the citizen of all his rights of contract, and that seeks to divide citizens, not exactly by the calling they follow, but by the source of the property they hold, and exempts 80 per cent. of them from the penalties it visits upon the remainder, is not sustained by any good reason or excuse, is not just, is utterly without support in law, and can have no just purpose, is vicious class legislation, depriving the citizen of his constitutional right of life, liberty, and property without due process of law, contrary to the law of the land."

Mob Violence.—A negro was lynched at Bryan, Jan. 23, for assault. Six negroes were hanged at Sunnyside, April 29, by a mob, mostly of their own race. Their crime was the murder of an old man, a child, a young woman, and two young girls after an assault on the girls and the burning of the home of the victims. At Tyler, May 24, a mob shot a white man in jail who was accused of having hired a negro to murder another white man, on whose life the former held an insurance policy for \$10,000. At

Rosebud, May 14, three negroes were lynched for attempted assault on two white girls; and for the same crime a negro was taken from the jail at Nacogdoches, Aug. 7, and hanged. None of these victims had been tried. A resolution introduced in the Legislature mentions also a lynching at Elgin. In a message on the subject the Governor said: "Its growth is alarming and ominous. For a time the sole objects of its vengeance were those charged with criminal assault upon females, and thus found some measure of provocation and apology in manly and chivalric instincts. Taking encouragement from this toleration, it now seeks to judge and punish for murder, and in a recent instance in Waller County was used for the suppression of testimony. It has reached that stage in this State where it is an indictment of the whole people and defilement of their civilization. Experience makes it plain that ordinary judicial machinery is inadequate, and if it is to be destroyed and the State spared further debasement extraordinary measures must be adopted."

The Texas Rangers.—Following is the work done by the Rangers during a single month—December, 1897: They made 40 arrests during the month for various crimes, made 70 scouts, assisted the sheriffs 47 times, guarded jails 9 times, attended district courts 34 times, made 9 attempts to arrest that failed, and traveled during the month 4,843 miles.

Galveston.—The harbor improvements have given the city a straight, wide channel leading to the wharves. The depth in the channel at mean low tide in December, 1895, was 21 feet; in December, 1896, it was 25 feet; and in December, 1897, it had increased to 26½ feet. As the channel was deepened the whole space between the jetties has shown an increase in depth. The jetties, including expenditures on previous projects, have cost \$8,019,867. Work was suspended on the south jetty Feb. 14, 1897. That jetty is completed, unless it is decided to extend it to the 30-foot curve. The north jetty is completed as far as its effect on the channel is concerned. The bars have been entirely removed. The length of the south jetty is 34,800 feet: that of the north jetty is 25,907 feet.

After deep water was secured a new line of steamers was established between New York and Galveston, resulting in a rate war by which the shippers and producers have benefited. The city has an elevator capacity of 2,750,000 bushels. The port can handle 70,000,000 bushels of grain during the season. Galveston now has fifteen direct lines of European steamers and two lines to Mexico.

Dallas.—A monument to the soldiers of the Confederacy was unveiled at Dallas, April 29. The shaft is surrounded by statues of Gens. Lee, Jackson, and A. S. Johnston, and Jefferson Davis. It was erected by means of the efforts of the Daughters of the Confederacy.

Legislative Session.—The twenty-fifth regular session began Jan. 11. Joseph B. Dibrell was president *pro tempore* of the Senate, and Representative Dashiell was Speaker of the House.

The Governor and Lieutenant Governor were inaugurated Jan. 19. The regular session was adjourned May 21. In less than two hours a call was issued for a special session, to begin at noon the following day. It closed June 20. The cost of the two sessions is given as \$170,000.

The appropriation bill passed at the regular session was vetoed by the Governor in the interest of economy. The object of the special session was to secure one that should meet with executive approval, as well as bills on other subjects on which the party was pledged to legislate—responsibility as to fellow-servants, official fees, and others.

The fee bill, enacted at the special session, affects 63 counties—those with a vote of more than 3,000—but in some respects it operates upon all. The reduction of the fees of sheriffs and clerks of the district and county courts paid by litigants will probably average 20 per cent. The fees of assessors are reduced, and the payment by the State and counties for assessment equalized.

The general appropriation bill passed at the special session and approved carries appropriations for two years amounting to \$4,384,855.90. This is \$395,137.49 less than the total appropriation made in the bill that was disapproved at the regular session. Included in this bill was \$50,000 heretofore paid out of the available school fund for the support of the Normal Institute and Department of Education, and \$172,000 for the erection of new buildings at the Colored Asylum, the Orphans' Home, the Agricultural College, and the Terrell and San Antonio asylums. The additions to the asylums will afford accommodations for 700 additional patients.

Among school measures were an act for uniform primary text-books, provision for enlarging the facilities of the university, the Agricultural College, and the Sam Houston Normal School, and for setting apart 50,000 acres of land for a university for colored students. The price of school lands to actual settlers was reduced, and they will be permitted to acquire more sections than before—a measure which is expected to increase the school fund by promoting speedy sales.

An act to suppress lynching provides for immediate trials in cases of criminal assault, for the legal denunciation of participants in mobs as murderers with a view to their speedy conviction, and for the perpetual exclusion from office of any sheriff or other officer who permits mob violence in his county.

A new and more stringent law was made for the collection of delinquent taxes.

An act was passed providing for a labor lien to protect accountants, bookkeepers, artisans, craftsmen, factory operatives, servants, mechanics, quarymen, common laborers, and farm hands.

It was provided that the proceeds of the voluntary sale of the homestead of a family shall not be subject to garnishment or forced sale within six months after such sale.

Bills were passed for improving the roads in certain counties, and one providing for a system of drainage along the public roads of the State and for the improvement and encouragement of natural drainage.

The Aransas Pass Harbor Company was authorized to buy from the State Harbor island.

The law on divorce was amended so as to make husband and wife competent witnesses. Laws were made in regard to new trials and appeals, concerning absent evidence and presumption of regular proceedings in the court below.

A method was prescribed for determining contests for the office of presidential elector. An election on the question of abolishing the corporation of a town of 500 to 10,000 inhabitants may be held on petition of 25 qualified voters. Where an entire county has adopted local option any town or subdivision therein may hold a local-option election.

An act to prevent the sale and distribution of immoral publications makes it a felony, with penalty of two to five years in the Penitentiary. Selling or giving intoxicating liquors to minors is to be punished by a fine of \$25 to \$100. Throwing missiles or discharging firearms at or into any moving train, residence, church, schoolhouse, etc., is made a misdemeanor, punishable by fine of \$5 to \$1,000 or imprisonment in the county jail ten days to two

years. The provision for imprisonment was struck out of the punishment for carrying concealed weapons, and also from the penalty for disturbing public worship. The minimum term for horse theft was placed at two years, and the maximum at ten. Receivers and concealers of stolen property must be punished in the same manner as the thieves. Entering and remaining concealed in a house by day or night for the purpose of committing theft constitutes burglary. The penalty for perjury, except in cases specially provided for in the penal code, is to be imprisonment for two to ten years.

The sale or gift of deadly weapons to minors is prohibited, and minors are forbidden to gather in pool or billiard rooms.

A bill was passed defining "cold storage" of liquors, and affixing a penalty for maintaining "cold-storage" plants in local-option counties, precincts, etc.

The Railroad Commission is authorized to make emergency freight rates. Street railways and suburban belt lines carrying freight are placed under the control of the Railroad Commission.

The act providing for the incorporation of private corporations was amended.

Bills were passed to prevent the spread of diseases of horses, cattle, and sheep. The herding of animals on the land or within a half mile of the residence of any citizen without his permission is forbidden; but exception is made in the case of droves held for shipment, provided the owner pays for pasturage and any damage that may be done.

It was made a felony for any officer of a bank or banking institution or trust company to receive or assent to the receipt of deposits of money or other valuable things after having knowledge of the insolvency of such institution.

The tax on life insurance companies was increased to 2 per cent. of their gross premium receipts. An annual tax of \$200 is to be levied upon persons selling liquor or medicated bitters in local-option districts upon physicians' prescriptions.

The franchise tax acts were amended.

It was provided that personal property temporarily removed from the State and subject to taxation shall be assessed in the county where the owner resides or the one where his principal business office is.

Foreign corporations having permits to do business in the State are granted the same rights with domestic corporations.

It is made unlawful for any fire or marine insurance company to place any contract or policy except through legally authorized and licensed agents, residents of the State.

The Land Commissioner is empowered to declare forfeit all land heretofore sold by the State under various acts of the Legislature for failure to pay any portion of interest thereon.

Under what appears to have been a wrong construction of an act of 1887 which granted authority to sell sections of public lands in counties organized before 1875 to other than actual settlers, provided they were isolated and detached from other public lands, lands near the coast were sold for much less than their value. When the matter came before the Legislature in 1893 an appropriation was made to refund the purchase money to buyers of such as were illegally sold; but, as claims were filed amounting to much more than the appropriation, the officials in charge made no payments. A bill was therefore passed at this session to validate the sales.

Other enactments were:

A fellow-servant law to protect railway employees against corporate negligence.

Authorizing corporations to engage in the busi-

ness of becoming surety on bonds and other obligations.

Providing that the homestead of a married man shall not be sold without consent of his wife; also that husband and wife shall join in the conveyance of real estate which is the separate property of the wife.

Amending the fish and game protection law.

Prohibiting the admission to record of instruments in any other language than the English.

Providing for the disorganization of the county of Loving and to attach its territory to the county of Reeves; also abolishing the organization of Buehel and Foley Counties and attaching them to Brewster County.

Providing for the establishment of a public park on the site of the battlefield of San Jacinto.

Requiring cities to provide for an examining and supervising board of plumbers.

Quieting title to lands located and surveyed by virtue of land certificates granted under the act giving to persons who have been permanently disabled by reason of wounds received in the service of this State or the Confederate States a land certificate for 1,280 acres of land, and to validate patents issued on such locations and surveys.

Regulating the practice of dentistry, and creating a State examining board.

It was resolved to ask the Government to take measures, by treaty or otherwise, to provide for the punishment of crimes committed this side the border of Texas by Mexicans who then flee to their own country and are secure from arrest.

Proposed Constitutional Amendments.—An election was held Aug. 3 to decide on the adoption of three amendments to the Constitution passed by the Legislature. They were all defeated by large majorities. They were: 1. To permit the formation of irrigation districts in west Texas. 2. To validate certain county bonds held by the school fund and heretofore declared invalid by the Supreme Court. Similar bonds are held by individuals, but the amendment did not apply to these. 3. Authorizing certain counties in the western part of the State to give aid in the construction of railroads.

Other amendments were proposed by the Legislature this year. Among them were: Providing for a county judicial system, in which all the duties now discharged by district judges and district attorneys shall devolve upon the county judges and county attorneys; changing the *per diem* of members of the Legislature; authorizing pensions to disabled Confederate soldiers.

Political.—A conference of Democrats, attended by more than 1,000, was held at Waco, July 30. Together with resolutions in favor of bimetalism was one declaring it to be the sense of the meeting that the State committee should propose a primary election throughout the State in 1898 "for the selection of the nominees of the Democratic party and for the settlement of such issues as there may be serious conflict over within the party; the details of the recommendation to be made by said committee to be hereafter formulated and adopted, it being the purpose of this resolution to reaffirm as a principle of Democratic faith the relegating to the body of the Democracy the right and power of making their voice the voice of the Democratic party, expressed in a free and untrammelled manner, which experience has proved may be best done in a primary election."

The State Populist Executive Committee issued an address to the party, Oct. 27, which said in part:

"We call attention to the fact that our party management is now controlled by the initiative, referendum, and imperative mandate, thus placing

party machinery in the hands of the people themselves."

The State Farmers' Alliance, at Dallas, Aug. 19, adopted by a unanimous vote the report of the committee severing allegiance with the National Alliance.

TIN-PLATE MANUFACTURE. In 1891 the increase of tariff on tin- and terne-plate from 1 cent a pound to $2\frac{1}{2}$ cents a pound induced many firms in the United States to go into the manufacture. The domestic consumption in this country was then a little more than 500,000,000 pounds annually, the larger part of which was imported from Wales, where there are very productive tin mines. Native tin hardly exists in the United States, having been found in only a few places, in quantities unprofitable for mining. Hence there was no inducement to manufacture tin-plate in this country until the tariff raised a material discrimination in favor of the American. The remarkable growth of the industry since 1891 is shown in a few figures, the statistics being taken from reports made up to June 30 of each year. It should be understood first that black plates are sheets of untinned iron, tin-plates sheets of tinned iron, and terne-plates those in which an alloy of lead is used in the tinning. In 1891-'92 there were manufactured in this country 4,539,590 pounds of tin-plate and 9,107,129 pounds of terne, 32 per cent. of which was made from imported black plates, the remainder being from American black plates. In 1892-'93 the total home output of tin- and terne-plates was a fraction less than 100,000,000 pounds, 56 per cent. being from foreign black plate, owing to the fact that the construction of the American black-plate mills had not kept pace with the tinning sets in operation. Black-plate mills were rapidly erected, and the product of 140,000,000 pounds in 1893-'94 included only 28 per cent. of foreign black plate. Since 1896 the foreign black plate has been but a small factor in the manufacture of American tin- and terne-plate. The next year (1894-'95) there was an enormous increase in the American product, the total running up to 334,014,798 pounds, while the last report (for 1896-'97) gives the figures 436,438,035 pounds. Although foreign black plate has almost ceased to come into the United States, yet the importation of tin- and terne-plates continues, owing to rebates of tariff to certain great corporations. The total imports for 1896-'97 were 244,407,601 pounds, or more than half as much as was manufactured in this country. To offset this, we exported 139,246,130 pounds, which figures include a large portion of the tin-plate imported, which simply came here for transshipment, mostly to southern countries.

The capacity of the American mills, Jan. 1, 1898, may be safely given at 600,000,000 pounds, and the domestic consumption at 550,000,000 pounds. There are now about 250 black-plate mills in operation, and more than 500 tinning sets. The manufacture is so well established, and the machinery in use has been so much improved, that in spite of the fact that the wages paid in the American mills average about double those paid in Wales, the reduction in the tariff does not materially affect the industry. The standard size of tin-plates is 14×20 inches, and the weight of a sheet varies from half a pound to a pound, the average being perhaps two thirds of a pound. They are put up in boxes, 112 sheets to the box, and the jobbers' price to the trade in 1897 for a good quality of plate was from 7 to 8 cents a pound. Imported tin-plates, which sold at $4\frac{1}{2}$ cents a pound in 1880, and at 3 cents from 1887 to 1891, in 1897 averaged $2\frac{3}{8}$ cents a pound.

Manufacture.—The American methods of manufacture differ in many respects from the practice in the older mills of Wales, owing to the utilization

of new time-saving machinery. A black-plate mill, which is simply a rolling mill fitted up especially for rolling steel or iron for tin-plates, is provided with hot rolls, heating furnaces, shearing machines, doublers, elevators, conveyors, tramways, etc. The tinning department includes pickling machines, tinning pots, annealing ovens, oil baths, cooling racks, cleaning machines, etc. The first operation is the placing of steel billets in the furnace and heating to a welding temperature, when the billets are rolled into bars about 7 inches wide and $\frac{1}{2}$ to $\frac{3}{4}$ inch thick. The bar is cut into lengths of somewhat more than 20 inches, so that a margin may be left for subsequent trimming to 20 inches. Reheating then becomes necessary, after which the bar is rolled to a length of 56 inches, and matched with a similar bar or sheet, the two being doubled together while still hot, and then trimmed in a doubling shears. This doubling and rolling continues until there are 8 thicknesses, which are then placed together in a machine, and commonly trimmed to the standard size of 14×20 inches, the final trim being given in what are known as squaring shears. This completes the ordinary black plate of commerce, which derives its name from its color, it being covered with dark scale, frequently termed forge scale, largely the result of oxidation.

Pickling.—Before the coating with tin it is essential that the scale shall be totally removed, else the tin will have a tendency to scale off. Pickling in hot dilute sulphuric acid is resorted to for this purpose, and the American pickling machines, whose introduction was coincident with the manufacture in this country, are marvels of labor-saving and automatic mechanism, conducting the entire processes of pickling and "swilling," as the cleansing is sometimes called. The main feature of the pickling machine is an upright tubular column, that lengthens and shortens telescopically under the pressure of steam, admitted by valves under the control of an attendant. To the top of the column are attached three radiating cross arms, each bearing a hook on which may be hung a bundle of plates. At the beginning of the operation one of these arms extends over a tramway, on which the black plates are run out on small cars. Another arm swings over the pickling vat, and the third arm over the swilling vat. A bunch of plates is hung on the outer arm, and swung over the pickling vat. The steam pressure is then lowered in the column, and allows the plates to become submerged in the sulphuric bath. A regular up-and-down motion is then imparted to the column, which raises and lowers the plates about a foot at a stroke, which agitation assists the sulphuric acid in its work of eating off the scale. When they are thoroughly clean the column is raised to swing the plates out of the pickling vat and around to the swilling vat, where they are agitated again to remove the acid. At the next hoist the plates are swung back to the tramway, to be reloaded on a car. By this means the operations of loading and unloading the plates are carried on continuously with the pickling and swilling, and the manual labor required is simply the hooking and unhooking of the plates and the operation of shifting the steam valves. Electric methods of pickling have also been tried with some success.

Annealing.—After pickling it is necessary to pack the plates in boxes so that the air and moisture will be excluded, these boxes being suited to the annealing furnace. Iron boxes are commonly employed, having flaring tops and bottoms so as to retain the sand in which the plates are packed. These boxes are placed in an annealing oven, where a temperature is maintained that keeps the plates at a dull-red heat. There they remain ten to twenty

ty-four hours, and are then removed and permitted to cool very gradually. Being then undisturbed, they may be kept for weeks, or even months, without oxidizing seriously. The next process is the cold rolling, the object of this being to give a better finish to the plates, which are passed cold between hard-chilled rolls of great size and strength so that they exert a pressure that has a calendering effect. In some of these cold mills the rolls are 2 feet in diameter, and have housings that weigh more than 7 tons each. After the cold rolling a second pickling is required, so that the last remains of oxidation may be removed before tinning. This second dipping is termed white pickling, and is followed by scouring in sand and water by means of hemp pads, after which there is a rinsing, when the plates are ready for tinning.

Tinning.—The best plates are tinned by the palm-oil process, and inferior grades by the acid process. The essential difference in these is the substitution in the latter of chloride of zinc and muriatic acid for palm oil. In the palm-oil process the plates are thoroughly coated with oil before dipping in the tinning pot. The molten tin in the pot is also covered with oil. The plates are dipped in the tin three times, being well brushed between the second and third dippings. A final rolling in a bath of palm oil is given to add a finish. After the plates have been exposed for a time in cooling racks, they are taken to the cleaning machine and rubbed with bran, which absorbs the remains of the oil. In a common form of cleaning machine the plates are fed to a bed which passes them under a cylinder, arranged to rub them with the bran. Polishing or dusting, sometimes by hand and sometimes by machine, is the last process before packing the plates in boxes for the market.

The tin ore or pure tin metal is brought into the United States in the form of blocks, bars, pigs, and grain, and most of our supply is from Wales, though a portion comes from Malacca, where are located the largest tin mines in the world. In 1896-'97 we imported 50,460.123 pounds of tin, of the value of \$6,535,852. All this ore or metal comes in free, but on tin-plates there is now a tariff of $\frac{1}{2}$ cent a pound.

TURKEY, an absolute monarchy in eastern Europe, western Asia, and northern Africa. The Sultan is the eldest prince of the line of Osman. Abdul Hamid II, the thirty-fourth Sultan of the Osmanli dynasty, born Sept. 21, 1842, succeeded his brother Murad V. who was deposed on Aug. 31, 1876, on the ground of insanity. The Sultan is recognized as Khalif, or temporal chief of Islam, not only within the bounds of the Ottoman Empire, but by a large proportion of the Sunnite Mohammedans outside. In matters of religion and law the Sultan is advised by the Sheikh-ul-Islam and guided by the decisions of the Ulema, a body of eminent expounders of the sacred books which sits in Constantinople. In civil and political matters the Sadrazam, or Grand Vizier, is the chief executive officer under the Sultan. These two functionaries, together with the ministers at the head of the departments of State, form the Privy Council or Cabinet of the Sultan, which was composed in the beginning of 1897 as follows: Grand Vizier, Halil Rifat Pasha; Sheikh-ul-Islam, Mehmed Djemal Ed-din Effendi; Minister of War, Riza Pasha; Minister of Justice and Ecclesiastical Affairs, Abdurrahman Pasha; Minister of Marine, Hassan Pasha; Minister of Foreign Affairs, Ahmed Tevfik Pasha; Minister of the Interior, Memduh Pasha; President of the Council of State, Said Pasha; Grand Master of Artillery, Zeki Pasha; Minister of Finance, Ahmed Nazif Pasha; Intendant of Religious Endowments, Galib Pasha; Minister of Public Instruction, Zuhdi Pasha; Minister of Commerce and

Public Works, Mahmud Pasha; Secretary of the Grand Vizier, Mehmed Tevfik Pasha. Tevfik Pasha succeeded Nazif Pasha as Minister of Finance on Oct. 2, 1897.

Area and Population.—The area of the immediate possessions of Turkey is 1,147,578 square miles, and their population is estimated at 23,930,000. The European vilayets, with an area of 65,909 square miles, have 5,812,300 population; Crete, area 2,949 square miles, has 294,192; Asia Minor, area 201,669 square miles, has 9,238,900; Armenia, area 89,264 square miles, has 2,472,400; Syria and Mesopotamia, area 215,349 square miles, 4,062,200; Arabia, area 173,700 square miles, 1,050,000; Tripoli, area 398,738 square miles, 1,000,000. The census of 1885 makes the total population 27,694,600. The vilayets of Bosnia and Herzegovina and the sandjak of Novi Bazar, occupied and administered by Austria-Hungary by virtue of the Treaty of Berlin, the island of Cyprus, administered by Great Britain under the Anglo-Turkish convention of June 4, 1878, the tributary principality of Bulgaria, and the autonomous province of Eastern Roumelia now united with it have been freed from Turkish jurisdiction in consequence of the last Russo-Turkish war, though nominally they are still integral parts of the Ottoman Empire. Their aggregate area is 75,010 square miles, with a population of 4,867,752. The tributary principality of Samos, with an area of 180 square miles and 50,993 population, has had an autonomous Christian administration since 1832. The position of the viceroyalty of Egypt, now occupied by British troops, has been merely tributary since the time of Mehemet Ali. Including all the provinces that still recognize the suzerainty of the Sultan, the area of the empire is 1,623,000 square miles and the total population is 38,600,000.

Finances.—The revenue under the control of the Minister of Finance, with deduction of the revenues assigned to the Debt Administration, was £ T. 14,368,700, and the ordinary expenditure was £ T. 14,137,940 in 1891, showing a surplus of £ T. 230,760 in the ordinary budget, but the extraordinary expenditure in the same year, chiefly for military purposes, was £ T. 779,000, producing a deficit of £ T. 548,200. In the succeeding years down to 1896 there was an annual deficit of about £ T. 1,000,000, which was met by fresh loans, while an annual sum exceeding these was laid by for the sinking fund of the old loans. On the basis of these figures Sir Edgar Vincent in December, 1896, estimated the future normal revenue at the disposal of the Minister of Finance at £ T. 13,961,700 and the expenditures at £ T. 15,354,000, giving an annual deficit of £ T. 1,352,300, which, however, might easily be avoided by means of financial and administrative reforms. The debts outstanding on June 30, 1897, amounted to £ T. 127,098,688, exclusive of £ T. 25,000,000 of war indemnity due to Russia and £ T. 10,000,000 of floating debt. The Debt Administration in the financial year 1897 received £ T. 1,114,805 from the liquor, salt, stamp, and silk duties, £ T. 768,771 from the tobacco *régie*, £ T. 90,962 from tobacco tithes, £ T. 38,007 from the Eastern Roumelian tribute, £ T. 102,596 of tribute from Cyprus, £ T. 50,000 of customs duties on Persian tobacco, and £ T. 47 from other sources; total, £ T. 2,165,188. The expenses were £ T. 95,973, leaving the net receipts £ T. 2,069,215.

The official estimate of the revenue of the Turkish Government for the year ending Feb. 28, 1898, is £ T. 18,511,322, or approximately \$81,500,000, and the Turkish lira or pound being worth \$4.40, and the estimate of expenditures is £ T. 18,429,411. The average receipts for the three years ending with 1895 were £ T. 18,927,745, of which £ T. 4,332,338 came from tithes, £ T. 2,511,924 from the *verghis*,

or land and property tax, £ T. 742,135 from the *temettu*, or income tax, £ T. 886,210 from payments in lieu of military service, £ T. 1,737,849 from the *aghnams*, or tax on sheep, etc., £ T. 321,273 from various other direct taxes, £ T. 2,165,784 from customs, £ T. 2,571,146 from other indirect taxes, £ T. 532,793 from the military departments, £ T. 1,938,202 from the civil departments, £ T. 51,775 from the profits from the tobacco *régie*, and £ T. 1,136,316 from tributes. The average annual expenditures for the same period were £ T. 19,796,182, of which £ T. 932,550 were for the civil list, £ T. 6,483,253 for the service of the public debt, £ T. 795,490 for pious foundations, etc., £ T. 5,296,953 for the army, £ T. 1,254,174 for the gendarmerie, £ T. 653,170 for the navy, £ T. 552,122 for the artillery, £ T. 901,853 for the Grand Vizierate, State Council and Interior Department, £ T. 901,853 for the Finance Department, £ T. 450,541 for the Department of Justice, and £ T. 1,892,137 for the other civil departments.

The Army.—The laws of 1880, 1886, and 1888 make service in the Turkish army obligatory. The term of service in the permanent army is three years, which can be shortened by a money payment, by virtue of which any recruit can obtain indefinite leave of absence after five months of active service. After serving in the active army every Turk is liable to duty for three years in the *Ichtia*, or reserve, then for eight years in the *Redif*, or territorial army, and six years in the *Mustahfiz*, or territorial army reserve. Conscripts assigned originally to the *Tertibani*, or depot reserve, have to serve only from six to nine months. The army is divided into seven *Ordus*, or military districts, outside of which are two independent divisions, in *Hedjaz*, Arabia, and in *Tripoli*. Six of the *Ordus* have to furnish in time of war *corps d'armée*—namely, 1 corps of *Nizam*, or troops of the line, 2 corps of *Redif*, and 1 corps of *Mustahfiz*. The five principal *corps d'armée* have each 64 battalions of *Redif*, the sixth corps 32. The infantry is armed with Mauser rifles, part having 7.65 and part 9.5 millimetres caliber, with magazines holding 5 cartridges. The approximate strength of *Nizam* in 1897 was 350,000, of the *Redif* 300,000, and of the *Mustahfiz* 250,000; total, 900,000 men, of whom 750,000 had a thorough military training. In three of the Asiatic *Ordus* are being organized 48 regiments of *Hamadieh* cavalry, a militia commanded by tribal leaders, which furnishes its own horses and equipment, while Government supplies the arms.

The Navy.—The Turkish navy has been much neglected, and many of the vessels are inefficient for lack of crews, repairs, or armament and supplies. The nominal strength in 1897 was 3 ironclads with casemated batteries, 2 turret ships, 2 broadside ironclads, 7 armored corvettes, 1 monitor, 1 ironclad gunboat, 2 river gunboats, 2 torpedo-boat catchers, 15 torpedo boats of the first class, and 7 of the second class, besides 24 unarmored vessels; the "*Hamidieh*," of 6,700 tons, carrying ten 10.2-inch guns in a central battery, the "*Mesoudiye*," of 9,000 tons, armed with twelve 10-inch Armstrongs, the reconstructed "*Osmaniye*," of 6,400 tons, armed with 11-inch Krupps, and the unfinished belted cruiser "*Abdul Kader*," of 8,000 tons. The armored vessels are all out of date, small, or too weakly armed and protected. Two deck-protected cruisers of 4,050 tons and three smaller ones are in course of construction.

Navigation.—There were 46,223 steamers, of 35,523,438 tons, and 141,810 sailing vessels, of 2,885,706 tons, entered and cleared at Turkish ports during 1896. The merchant navy in 1897 comprised 104 steamers, of 48,572 tons, and 1,114 sailing vessels, of 249,206 tons.

Commerce.—The commerce with foreign countries in 1894 is shown in the following table, giving the values in Turkish piasters, worth 4.4 cents:

COUNTRIES.	Imports.	Exports.
Great Britain.....	905,498,000	573,598,000
France.....	274,105,000	355,826,000
Belgium.....	66,579,000	5,864,000
Netherlands.....	13,795,000	39,684,000
Germany.....	28,170,000	29,466,000
Austria-Hungary.....	516,353,000	132,865,000
Italy.....	62,448,000	46,986,000
Greece.....	42,815,000	23,384,000
Bulgaria.....	123,129,000	36,144,000
Servia.....	6,615,000	6,730,000
Roumania.....	71,489,000	23,866,000
Russia.....	150,443,000	33,521,000
Persia.....	67,158,000	1,720,000
Egypt.....	68,356,000	.....
Tunis.....	2,042,000	41,000
United States.....	2,051,000	15,033,000
Other countries.....	9,820,000	1,514,000
Total.....	2,410,866,000	1,326,242,000

The imports of sugar were 175,500,000 piasters in value; of cereals and flour, 172,100,000 piasters; of cloths, 167,700,000 piasters; of quilts, 133,000,000 piasters; of woolen and cotton stuffs, 120,700,000 piasters; of drugs and colors, 102,400,000 piasters; of cotton yarns, 89,500,000 piasters; of coffee, 88,700,000 piasters; of rice, 83,400,000 piasters; of hides and skins, 83,400,000 piasters; of animals, 56,600,000 piasters; of madapolams, 54,300,000 piasters; of cashmeres, 46,300,000 piasters; of petroleum, 46,100,000 piasters; of iron, 46,000,000 piasters; of hardware, 42,900,000 piasters; of broadcloth, 42,400,000 piasters; of timber, 37,400,000 piasters; of raw silk and cocoons, 33,200,000 piasters; of haberdashery, 32,900,000 piasters; of butter and cheese, 32,500,000 piasters; of paper, 28,700,000 piasters; of carpets, 27,200,000 piasters; of silk goods, 25,500,000 piasters; of coal, 25,300,000 piasters; of packing cloth, 24,900,000 piasters; of clothing, 24,000,000 piasters; of copper, 23,800,000 piasters; of fezes and hats, 22,600,000 piasters. The exports of raisins were 178,200,000 piasters; of raw silk and cocoons, 166,800,000 piasters; of cereals and flour, 127,400,000 piasters; of mohair, 69,400,000 piasters; of cotton, 67,500,000 piasters; of opium, 54,000,000 piasters; of drugs and coloring matters, 53,800,000 piasters; of gall nuts, 53,000,000 piasters; of coffee, 47,200,000 piasters; of hides and skins, 42,900,000 piasters; of minerals, 39,300,000 piasters; of legumes, 39,200,000 piasters; of olive oil, 38,500,000 piasters; of wool, 38,400,000 piasters; of figs, 38,100,000 piasters; of seeds, 24,400,000 piasters; of sesame, 24,100,000 piasters; of dates, 24,000,000 piasters; of carpets, 20,800,000 piasters; of animals, 19,800,000 piasters; of nuts, 14,100,000 piasters.

Communications.—The railroads in operation in September, 1897, had a total length of 2,807 miles, of which 1,249 miles were in Europe, 1,347 in Asia Minor, and 211 in Syria.

The telegraph lines have a total length of 21,799 miles, with 33,761 miles of wire. There were 2,318,222 internal, 442,415 international, 58,780 transit, and 206,668 service dispatches sent in 1893. The receipts were 62,550,462 piasters; expenses, 27,564,884 piasters.

The postal traffic in 1893 comprised 8,117,000 internal, 2,586,000 international, and 2,048,000 transit letters, 48,000 internal, 80,000 international, and 48,000 transit postal cards, and 2,297,000 internal, 1,089,000 international, and 1,121,000 transit printed inclosures. The receipts were 21,358,911 and expenses 7,236,829 piasters.

The Armenian Question.—In January, 1897, the Armenians held in prison, except those who were under sentence of death, were released, and Arme-

nian refugees were allowed to return from abroad if they could show passports vised by the Ottoman consuls. The amnesty was not issued until the petition of the new Armenian Patriarch, Monsignor Ormanian, had obtained the support of the French, Italian, and Austrian ambassadors. The Patriarchate guaranteed the good behavior of about 100 prisoners who were regarded by the police as dangerous. The death sentences of those who were in prison were commuted to imprisonment in fortresses until such time as the prisoners should show contrition for their misdeeds. As the amnesty could not be one-sided, it was accompanied by the release of all Mohammedan prisoners and a cessation of all proceedings against persons suspected of having participated in the Armenian massacres. In order to carry out the Armenian reforms demanded by the powers the Porte proposed a new loan and a readjustment of the debt guarantees. Influenced by the French, the Russian Government sent a note stating that, if the Ottoman Government should infringe the rights of the Council of the Public Debt or meddle with the revenues conceded to the holders of Turkish securities, Russia would be compelled, along with the other powers, to demand an international financial commission to study the financial situation of the Ottoman Government and the proportion of the revenues that should be assigned to its creditors, pointing out that this would be a fatal eventuality for the Turkish Government. M. Hanotaux suggested the addition of a Russian member to the Debt Commission, and the Czar approved; but after receiving the advice of M. Melidoff, the Russian ambassador at Constantinople, concluded that this would not advance the political interests of Russia. The Armenian gendarmes who had been enlisted under the reform charter of 1895 were systematically ill treated, so that they were forced to quit the service. The large fertile district north of Van, from which the Armenians had disappeared, was occupied by Kurds.

The Marquis of Salisbury had revived the discussion of Armenian reforms in a note to the British ambassador at Vienna, explaining that the British Government still desired the preservation of the Ottoman Empire, and considered that this end could only be insured and justified by introducing reforms in the present system of government, and suggesting that the Austrian ambassador at Constantinople consult with his colleagues regarding the reforms that it would be requisite to introduce into the Turkish administration in order to prevent the recurrence of frightful cruelties. The British Government, he stated, was prepared to join the other powers or a number of them in enforcing any measures that might be agreed upon, provided that if any one of the powers declined to take an active share in the measures such power should not offer any opposition to their being taken by the other powers. In a circular dispatch on Oct. 20, 1896, he explained the British policy in detail, and proposed a meeting of ambassadors for the purpose of considering and reporting to their governments what changes in the government and administration of the Turkish Empire are in their judgment likely to be most effective in maintaining the stability of the empire and preventing the recurrence of the cruelties of the last two years, it being previously understood that no action should be taken on any resolution on which all six powers were not agreed, but that any resolutions on which the powers were unanimous should be considered final and admitting of no objections on the part of the Turkish Government, and should be executed by the employment of any force that may be necessary and that the powers have at their command. Count Goluchowski, the Austrian Minister of Foreign Affairs, agreed to the

proposal on condition that the powers agree to insist on the execution of whatever proposals of reform they make to the Sublime Porte. Germany and Italy made similar replies. Baron Marschall laid down conditions for Germany's acquiescence, which were that the powers should be unanimous, and that the object of all diplomatic endeavors should be the maintenance of the integrity of the Turkish Empire. Germany's policy was to extend reforms to all the subjects of the Sultan without distinction of race or creed and to avoid a European conflict. M. Hanotaux treated the matter with great reserve in an extended correspondence, obtaining first an assurance from Lord Salisbury that no violation of the integrity of the Ottoman Empire, no isolated action, and no condominium would be considered, and finally, on Dec. 28, 1896, declining to agree beforehand to the use of coercive measures, while willing to examine them at the proper moment if the powers were unanimous in recognizing their absolute necessity. M. Shishkin thought that a threat to employ coercion would weaken the authority of the Sultan, through whom the reforms must ultimately be carried out, and that it would be unnecessary after the Sultan saw that the powers were united. He told the Turkish ambassador at St. Petersburg to telegraph to the Sultan that the era of paper reforms was past and that the powers were all acting together. The Russian minister thought that it would be time for the Powers to discuss what further steps were to be taken after the Sultan had refused to listen to reason. After consulting the Czar, the Russian minister agreed to the application of coercive measures in case the Sultan resorted to his customary tergiversation, provided there were unanimity among the powers. The Sultan made efforts to induce the powers to suspend diplomatic action for effecting an improvement in the situation in Turkey. To this end a circular was sent to the Ottoman ambassadors abroad, pointing out the reforms already executed, and suggesting that the initiative in the adoption of the necessary measures should be left to the Sultan. To these representations the powers generally replied that the matter was now in the hands of Europe.

The Armenian Patriarchate formulated a list of concessions desired immediately, with a view of relieving the terrible distress of the Armenians in the provinces, in response to which an imperial *irade* was issued adjourning for one or two years the collection of the military exemption tax from such as could prove their indigence, recommending the agricultural banks to advance money to Armenians, and promising to lend seed corn, barley, and wheat out of the Government tithes. The Government also issued proclamations announcing that all converts to Islam are free to return to the faith of their fathers, and that all women and girls carried off by Kurds and others are at liberty to go back to their homes. The conferences of the ambassadors led to no result. It was useless to bring pressure upon the Sultan for the execution of administrative reforms unless he could be provided with the financial means of carrying them out. The project of the French Government to institute an international financial control over Turkey in the interests of the bondholders was rejected by Russia and condemned by the central European powers. In answer to the representations of the ambassadors in regard to reforms the Porte suggested that the powers should fulfill their engagements undertaken in the Berlin Treaty to fix the contributions to be paid by the minor Balkan states toward the interest and principal of the Ottoman public debt. The signatories assumed the obligation to fix by agreement among themselves, in concert with the Sublime Porte, the

portion of the public debt of Turkey to be borne respectively by Bulgaria, by Montenegro, and by Servia, and to fix the annual tribute to be paid by Bulgaria. By the convention of 1881 the powers bound themselves to determine between their representatives at Constantinople and the Sublime Porte the portion of the debt to be borne by Greece in respect of the Ottoman territory ceded to her. The Porte has often reminded the powers of these obligations, which still remain unfulfilled. The Porte has also desired a revision of the treaties prohibiting Turkey from levying more than 8 per cent. customs duties. The results of the memorial of the Armenian Patriarchate, which included demands for the appointment of Armenians as tax collectors; the creation of boards composed partly of Armenians for the restitution of Armenian property pillaged during the riots; the surrender of clergymen charged with crimes to be tried by the Patriarchate in accordance with its ancient privileges; the admission of Armenian students to the military academies; and the prohibition of newspaper attacks on the Armenians, were so meager and unsatisfactory to the Armenians that the political agitation was renewed in the Anatolian provinces, as the Patriarch had warned the Turkish Government that it would be if the demands were not granted, although he declined to undertake any responsibility for the actions of the revolutionary committees when the Government sought to impose such an engagement as a condition for granting amnesty and relief. The revolutionists again collected funds from wealthy Armenians by intimidation, and over the Persian border they prepared to make raids. The renewal of agitation inflamed the Mussulman population afresh. In Tokat, in the Sivas district, a mob attacked the Armenians on March 19 while they were at church, and, after killing 89 persons and wounding 36, pillaged their quarter of the town. The disturbances spread to Arbah and other villages in the neighborhood. The military commandant, Hakki Pasha, was dismissed by the Government, the Vali of Sivas was removed, 185 arrests were made, and 61 persons were convicted of having taken part in the riot, of whom 15 were condemned to death. In the beginning of August revolutionists instigated raids on Kurdish villages in Van by 3,000 armed men from Salmas and other Persian frontier towns, but the Turkish military authorities were well prepared, and the raiders were driven back into Persia, but not before they had massacred 200 persons. On Aug. 18 a bomb was exploded in Constantinople in the court of the Grand Vizierate department, an attempt was made to blow up the barracks at Pera with another, and a man was caught entering the Ottoman Bank with a quantity of explosives sufficient to demolish the building. Although bands of Mohammedans appeared instantly in the streets with bludgeons to wreak vengeance on the Armenians, as they had a year before, the police preserved order and arrested 10 men who were concerned in the outrages. Of these 8 were afterward sentenced to death. The central Armenian committee at Constantinople sent to the ambassadors at this time a circular appealing to the nations of Europe not to allow the Armenians to be annihilated, but to come to their aid and put an end to their sufferings, pointing out that the promised reforms have remained a dead letter, and warning the ambassadors that the Armenians, reduced to extremity, are resolved to commit acts of terrorism of which the occurrences of Aug. 26, 1896, were only the preliminaries; that they asked to live like men governed by law instead of under an absolute and arbitrary tyranny; and

would never cease to act until full satisfaction had been granted to demands sanctified by the blood of their martyrs. A few days later the police arrested Serkiz, the head of the Troschak, one of the principal Armenian revolutionary organizations in Turkey, having been appointed to that post by the central committee in London. The Austrian Lloyd agent at Mersina, Herr Brazzafolli, who had given passage on the Austrian steamers to many Armenian refugees during the disturbances in Asia Minor, was summarily expelled by the authorities in October because he had delivered some money sent through him by an Armenian committee. The Turkish Government afterward apologized for this act, and in compliance with the demand of the Austrian ambassador dismissed the Vali of Adana, and also paid a disputed sum claimed by the Oriental Railroad Company, an Austrian corporation.

Internal Reforms.—The Sultan acceded to a recommendation in Sir Edgar Vincent's report in favor of the control of the budget by a financial commission, to which he appointed two Europeans and two high Turkish officials. The Turkish party of progress and reform was offended by the virtual exile of Marshal Fuad Pasha, under the disguise of his appointment to the command of the army corps at Bagdad. As a result of the conflict between the Phanar and the Servian Government in regard to Macedonian bishoprics, the Patriarch Anthimos, after dismissing the Metropolitan of Herelea and Anehiolos, who had resisted the Servian and Roumanian claims, was forced by the Synod to resign on Feb. 10, and Constantinos, Metropolitan of Ephesus, was on April 14 elected Ecumenical Patriarch. The Albanians, displeased by the contributions imposed for military purposes and increased taxes on wine and cattle, committed disturbances in the vicinity of Monastir. The Bulgarian Government urged on the Porte the introduction of liberal reforms in Macedonia in the direction of the absolute and practical equality of all the inhabitants in view of their loyal behavior during the war with Greece (see GREECE). The Porte in response to these representations made important changes, giving the Christians a share in the administration. After the successful campaign of the Turkish troops in Thessaly the attitude of the Young Turkish party toward the Government underwent a change, and a truce was arranged. The exiled leader Murad Bey, who was under sentence of death, was allowed to return to Constantinople. Arrests of Liberal Mohammedans continued to be made by the police, and the palace officials made extraordinary efforts to keep alive the policy of proscription, but without being sustained by the Government. When several young military officers were condemned to death by a court-martial on the charge of using seditious language, the Minister of War refused to allow the sentence to be executed.

The definitive treaty of peace with Greece was signed at Constantinople on Nov. 22, and ratifications were exchanged on Dec. 18. The Turkish Government had intended to apply a part of the war indemnity of £ T. 4,000,000 to the reconstruction of the navy. A check to this project for augmenting the armaments of Turkey was administered by Russia in a note demanding a settlement of the arrears of the Russo-Turkish war indemnity, amounting to £ T. 1,300,000. An advance of £ T. 250,000 was obtained by the Government in the beginning of the year, an equal sum was advanced after the war upon the security of the indemnity, and at the close of the year the bank agreed to advance £ T. 400,000 more to pay for the transport of troops.

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UNITARIANS. The Unitarian churches in the United States report for 1897 535 ministers, 455 churches, and 70,000 members.

American Unitarian Association.—The seventy-second annual meeting of the American Unitarian Association was held in Boston, Mass., May 25. The directors in their report asserted that the financial condition of the society was better than that of any other missionary society in the United States of which they had knowledge. The treasurer reported that while since 1882 the expenditures had exceeded the income in amounts varying from \$7,000 to \$37,000 a year, for the past year the income had exceeded the expenditures by \$6,224; or, to state the situation more clearly, the excess of receipts over expenditures had enabled the board to pay all arrearages from past years, except \$3,080; and further payments to the Guarantee fund had been made since the books were closed that would reduce this amount by \$1,300, leaving only \$1,780 actual arrearages. A profit of \$1,817 had been realized on the sale of books. Seven bequests had been made to the association during the year, amounting in all to \$2,577. Seven new houses of worship had been built and dedicated, the enterprises having been assisted by loans, the annual installment repayments upon which to the fund would not exceed the rent of a hall. Ten of the beginnings regarded as hopeless had been dropped, while 14, showing more life, had been added. Unitarian book rooms and headquarters were established at San Francisco, Chicago, New York, Philadelphia, and Boston. Cordial relations were maintained with the Unitarians of Hungary, and the association, acting with the British and Foreign Unitarian Association, had appropriated \$300 to the church at Buda-Pesth. A satisfactory report was made of the mission in Japan, and the appropriations to it were ordered continued, and the extension of its work was recommended. Four general periodicals, with several "minor" ones, were represented as doing effective work. A considerable part of the report of the Board of Directors was devoted to the condition of the ministry. Concerning ministerial supply, the association voted that "while we believe there is need of an advisory bureau of information to mediate between parishes and ministers, we also believe that this function should be entirely separated from the administration of the American Unitarian Association."

National Conference.—The seventeenth meeting of the National Conference of Unitarians and other Christian churches was held in Saratoga, N. Y., Sept. 20 to 23. The Hon. George F. Hoar presided. The council reported respecting the general condition of the societies, and presented recommendations concerning closer organization for practical work, with a policy and method adapted to attract those who engage in independent movements outside the Unitarian fellowship, and advising continued striving to promote the object of the association of producing union, sympathy, and co-operation among liberal Christians relative to the formation, as supplementary to the work of church organization and church building, of Unity Circles in places not yet ready for a regular church; respecting the endowment of the quarterly review of the denomination, the "New World"; and concerning a bond of church membership in the shape of the expression of a purpose and a pledge to help on the work of the Church. Action was taken by

the Conference looking to the completion of a proposed endowment fund of \$50,000 for the "New World" quarterly. Resolutions were adopted recommending the institution by the American Unitarian Association of a system of collecting and keeping information concerning clergymen, religious societies, and churches, and advising consultation by the independent churches and societies represented in the Conference with the respective committees of fellowship in their sections of the union concerning the settlement or resignation of their ministers. The Fellowship Committee of the Conference was instructed to confer annually with the officers of the American Unitarian Association in regard to the list of ministers as published in the "Yearbook," recommending the addition or dropping of names, so as to make it as nearly as possible a list of those who are entitled to such recognition. A committee of five ministers and five laymen was instituted, to report to the Conference from time to time what changes, if any, in organization or methods are need, to deepen and extend the good influence of the Conference. Greetings were sent to the Liberal Congress of Religion which was appointed to meet in Nashville, Tenn., in October, with the sentiment added, "While seeking to do faithfully our own specific work as an organized religious body, we rejoice in the spirit which brings together members of various denominations to testify to the unity of the spirit, and to strengthen the work which we have in common."

The fourth biennial session of the National Alliance (of women) was held in connection with the meeting of the National Conference. The reports showed that the Alliance had 218 branches, with 9,145 members. The report of the Executive Board described the method employed of gathering information, the close fellowship maintained with the different branches, and the efforts made to secure active co-operation in all lines of work. The operations of the post-office mission had increased very largely within the past two years.

At the meeting of the Unitarian Temperance Society, also held in connection with that of the National Conference, summaries were given of what the society had achieved in the past ten years in developing a temperance sentiment among Unitarians, in efforts before legislatures and Congress, and in the development of "a sound and rational temperance literature which has met with wide recognition and has been sought for from all directions. The society invites to its membership all who would work for temperance by any method their consciences may approve."

British Unitarians.—The annual meeting of the British and Foreign Unitarian Association was held in London, beginning June 8, and was opened with a lecture by the Rev. R. A. Armstrong on "The Significance of the Teaching of Jesus." The reports presented at the business meeting showed that more than £2,500 had been received from subscriptions and donations, £433 from collections, £843 from dividends, £1,273 from sales of literature, etc., and that several legacies had accrued. The grants for home and foreign work had amounted to £2,718. About 80 congregations had received aid. The free distribution of literature had cost more than £400, and included more than 2,000 books and 17,000 tracts and pamphlets. The income of the McQuake trust amounted to £877, all to be expended in Scotland.

The special Indian fund reached £1,559. Three Indian students were to be at Manchester College in the next year. By means of a "Special Service fund" of nearly £1,000 the Rev. Stopford Brooke had been retained for preaching at various churches in different parts of the country; and special literature to appeal to the more educated classes was in contemplation. More than 80 congregations had been supplied by one publishing house with the large one-volume edition of the Revised New Testament at a cheap rate, and a subscription had been received for 10,800 copies of the revision to be presented to the pupils of Dudley as a "jubilee" commemoration. In the work of the central postal mission a small decrease had taken place in the number of applicants for literature, which was attributed to the refusal of some newspapers to insert advertisements containing the name "Unitarian." Papers were read on the position of the minister with regard to the management of the church; means of increasing the membership of the churches; and "The Sunday-School Scholar and his Difficulties." At a meeting of the Temperance Association reports were made of progress in the inculcation of temperance principles, and especially with reference to preventing the sale of intoxicants to children.

The English Unitarian Triennial Conference, officially styled "The National Conference of Unitarian, Liberal Christian, Free Christian, Presbyterian, and other Nonsubscribing or Kindred Congregations," met in Sheffield, April 6. Five triennial meetings and one interim meeting had been previously held. The attendance was the largest on record. Among the foreigners present were several Hungarian Unitarians, and Mr. P. L. Sen, an Indian theist, a relative of the late Keshub Chunder Sen. Mr. J. R. Beard, of Manchester, presided, and in his opening address spoke of some questions that had been raised in connection with the certification of candidates by advisory committees, which had given rise to some controversy, but which were not otherwise brought before the Conference. A resolution was passed declaring that no immediate educational legislation would be satisfactory to the Conference unless it provided that the superintendence of elementary education be everywhere placed under local elected authorities, who should have control in all schools receiving grants of public funds; that no preferential treatment be given in the distribution of public money to the denominational as compared with the board schools; that training colleges supported by public money be freely open to students of all denominations. The resolution further declared that no settlement of the education question could be regarded as satisfactory and final which did not provide that only secular education shall be directly or indirectly paid for out of public funds. Sympathy was expressed with the Cretans, and a resolution passed in favor of leaving the destinies of the island in the hands of its people. A resolution of greeting to the Evangelical Free Church Council (Federation of Free Churches) was unanimously adopted. The subjects of "The Deepening of the Spiritual Life of the Churches," "Ministerial Superannuation," "The Means of Recruiting our Ministry," "The Outlook in Relation to Church Life," "The Place of Immortality in Religious Belief," "Social Life," "Science," and "The Bible" were discussed; and, in a woman's meeting by women, the Sunday-school, adult classes, working societies, temperance, and kindred questions.

UNITED BRETHREN CHURCH. The statistical tables of this Church for 1897 give it 1,724 ministers, 4,172 churches, and 235,117 communicant members.

The twenty-second annual meeting of the Board of Managers of the Woman's Missionary Association was held in Lisbon, Iowa, May 12. The total receipts of the society had been \$18,802, and the expenditures \$13,764. The association had 41 active branches, with 486 local societies and 7,571 members; 45 young ladies' bands, with 1,038 members; and 113 children's bands, with 4,052 members. The work of the association in Africa and China engaged the attention of the meeting.

The thirty-seventh quadrennial General Conference met at Toledo, Iowa, May 13. Reports were made by the Sunday-school secretary, the Executive Council of the Young People's Christian Union, the Board of Church Trustees, and other boards. The report of the standing Committee on Temperance mentioned its co-operation in the organization of the American Anti-Saloon League. The Committee on Educational Interests recommended the adoption of a uniform standard for all the schools of the Church in the courses of study leading to degrees. It was advised that a special effort be made to relieve the educational institutions of the Church from financial embarrassment. The Conference having been visited and addressed by Bishop Dubs, of the United Evangelical Church, a fraternal delegate was appointed to attend the next General Conference of that body. Further, the Conference resolved unanimously: "*Whereas*, The activities and polity of the Church of the United Brethren in Christ are in the most perfect accord with the tenets of the United Evangelical Church; and *Whereas*, The fraternal spirit between these bodies is most cordial; therefore, *Resolved*, That we are favorable to a still more intimate relation between these churches, and will consider overtures looking toward organic union; and that we favor the appointment of a commission composed of the Board of Bishops, which shall be intrusted with all matters looking to closer fraternal relations between our respective denominations." A committee was provided for to arrange for the celebration of the one hundredth anniversary of the meeting of the first Conference in the history of the Church, near Frederick, Md., to be held during the year 1900, and to close with the General Conference session of 1901. A minute was adopted emphasizing the importance of instructing the people on the preservation and ennobling of the Christian home, and urging that the pastors give this matter special attention. Bishop J. Weaver, retiring from active service on account of age, was elected bishop emeritus; the other bishops, Castle, Kephart, Holt, and Mills were elected for another term of four years. The Conference ordered that the bishop of a district must reside upon and preside over the district throughout the quadrennium. A proposition to the effect that no bishop shall be eligible to serve more than two successive quadrenniums was voted down. The Conference approved a ruling of the bishops upon a delicate case relating to their tenure of office; and decided that, "even if it were, in a parliamentary sense, legitimate, it would not be wise to restrict the tenure of the bishop's office by imposing a time limit of eligibility."

Conservative.—The conservative branch of the United Brethren Church was formed after the withdrawal of Bishop Milton Wright and 11 delegates of the same opinion with him from the General Conference of 1889, on account of its adoption of a new constitution and declaration of doctrine. It holds that this action of the General Conference was irregular and the changes made by it were illegal and touched points beyond the competency of the General Conference to determine. Hence it holds that it is the true United Brethren Church. It had, in 1897, 700 ministers, 855 churches, and

45,000 communicant members. The General Conference of 1897 elected Milton Wright, H. T. Barnaby, H. Floyd, and H. L. Barelay bishops for four years. It directed that each bishop should reside in his district during the four years, and fixed their salaries at \$1,000 a year each. The subject of changing the location of the publishing house was considered, Huntington, Ind., seeming to be the place most favored for the new location. Provisions were made for the organization of Young People's Societies, to be called the Young People's Association of the Church of the United Brethren in Christ.

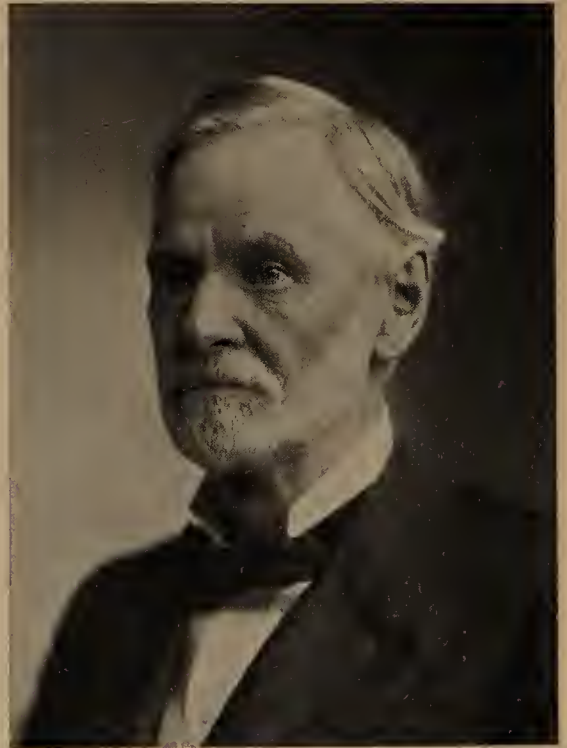
UNITED EVANGELICAL CHURCH. The following is a summary of the statistics of this Church, as compiled in July, 1897: Number of conferences, 8; of itinerant preachers, 425; of local preachers, 201; of members, 57,028, showing a net gain of 1,910; of Sunday schools, 759, with 10,231 officers and teachers and 71,414 pupils; of members received during the year on confession of faith, 6,571; of baptisms, 1,664 of adults and 2,710 of infants; of churches, 605, valued at \$1,578,518; of parsonages, 134, valued at \$152,820. Amount of contributions: For conference treasuries, \$3,137; for the Sunday-school and Tract Union, \$642; for education, \$6,234; for Church extension, \$2,271; for missions (conference treasuries), \$25,049; for missions (general treasury), \$9,599, making a total of \$35,048 missionary collections; for building and repairing of churches and parsonages, \$100,118; for the Charitable Society, 318. The Keystone League of Christian Endeavor returned 373 senior and 35 affiliated societies, with 12,123 active and 3,347 associate members, and 83 junior societies, with 2,056 active and 915 associate members.

UNITED STATES OF AMERICA, a federal republic in North America. The legislative power is vested in the Congress, consisting of the Senate and the House of Representatives. There are 90 Senators, 2 from each State, elected by the State Legislatures for the term of six years, one third being renewed every two years. The House of Representatives has 357 members elected by the ballots of the adult male citizens in separate districts. The executive power is exercised by the President, who is commander-in-chief of the army and navy and has a suspensive veto over the acts of the Congress, which can be passed over his veto by a two-third majority. The Vice-President is president of the Senate, and in case of the death, removal on impeachment, or resignation of the President, he succeeds the latter for the remainder of the term. The Senate can remove the President or other executive officers for unconstitutional actions, on articles of impeachment voted by the House of Representatives. In case of the death or disability of both the President and the Vice-President, the Secretary of State becomes acting President, and after him other members of the Cabinet in their order. The members of the Cabinet, who are the heads of the eight administrative departments, and other high officials of the Government are nominated by the President and require the confirmation of the Senate. All treaties made by the President with foreign powers must be ratified by a two-third majority of the Senate. The President and Vice-President are elected by the majority of a college of electors chosen in each State in such manner as the Legislature prescribes, and equal in each State to the number of its Senators and Representatives in Congress. It is the practice for each political party that names electors to be voted for to select beforehand in a national convention its candidates for President and Vice-President, and for the electors, who are chosen in each State on a collective ticket, to cast their votes solidly for

the candidates of their party; so that the election of the President and Vice-President has come to be in fact, though not in form, by the direct vote of the nation. The term of the presidency is four years, and elections are held every leap year on the first Tuesday following the first Monday in November. The President-elect is sworn into office on the 4th of March following.

The President for the term ending March 4, 1901, is William McKinley, of Ohio, and the Vice-President is Garret A. Hobart, of New Jersey. The Cabinet was constituted in March, 1897, as follows: Secretary of State, John Sherman, of Ohio; Secretary of the Treasury, Lyman J. Gage, of Illinois; Secretary of War, Russell A. Alger, of Michigan; Attorney-General, Joseph McKenna, of California; Postmaster-General, James A. Gary, of Maryland; Secretary of the Navy, John D. Long, of Massachusetts; Secretary of the Interior, Cornelius N. Bliss, of New York; Secretary of Agriculture, James Wilson, of Iowa.

John Sherman has been prominent in national politics since the Kansas-Nebraska troubles that preceded the civil war, on which question he, as a member of an investigating committee of Congress, wrote the majority report that startled the nation. He was the eighth child in a family of eleven, being

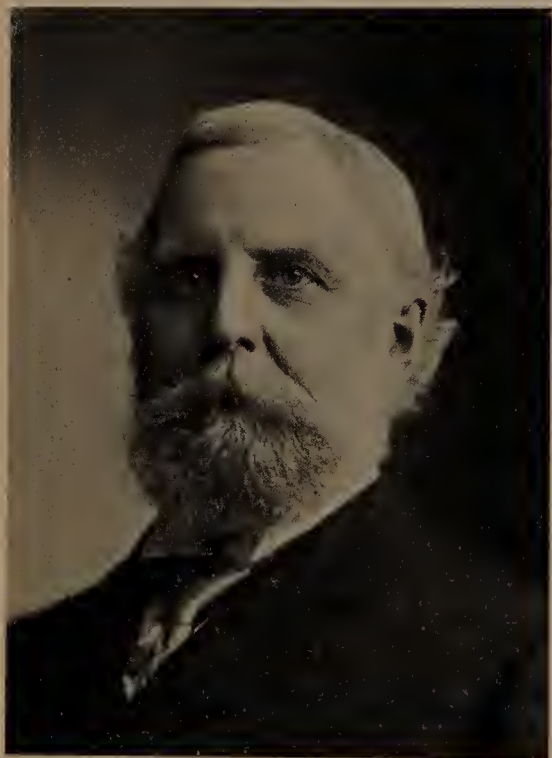


JOHN SHERMAN, SECRETARY OF STATE.

the junior by three years of his brother Gen. William Tecumseh Sherman. He was born in Lancaster, Ohio, May 10, 1823, and received in the common schools the foundation of the education that he acquired through his insatiable avidity for knowledge. He studied law, and at the age of twenty-one was admitted to practice. He was first elected to Congress in 1855. In 1859 he was an unsuccessful candidate for the speakership. He was, however, elected chairman of the Ways and Means Committee, and thus was made leader of the House of Representatives. He entered the United States Senate in 1861, and sat continuously in that body, with the exception of the eventful four years in which he served as Secretary of the Treasury under President Hayes, until President McKinley called upon him to take the premiership in his Cabinet.

During the civil war Mr. Sherman was one of the staunchest and most influential supporters of the policy of President Lincoln. He took a prominent part in the reconstruction policy after the war, and during President Grant's second term came still more prominently before the country as the chief author and champion of the measures for the resumption of specie payments, which he afterward carried to a successful issue as the head of the Treasury Department. He was three times put forward as an eligible candidate for the presidency, but each time failed to receive the nomination.

Lyman Judson Gage came of New England ancestry and was born in De Ruyter, N. Y., June 28, 1836. He had to earn his own living from the age of fifteen, became a clerk in the Oneida Central Bank at eighteen, removed to Chicago a year later, made his way as best he could, while keeping the banking business in view, became connected after a while with the Merchants' Loan and Trust Company, rose step by step till he became cashier, and gained such a reputation in this post that he was called to be cashier of the important First National Bank of Chicago in 1868, and in the same year was

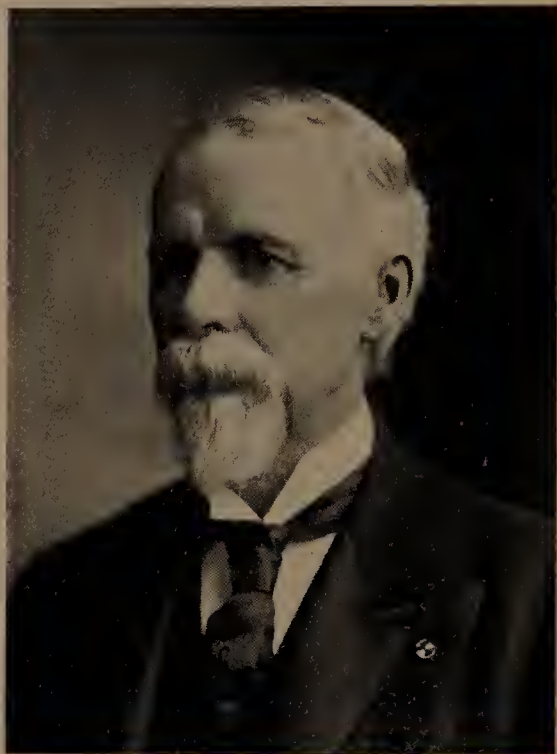


LYMAN J. GAGE, SECRETARY OF THE TREASURY.

elected President of the American Bankers' Association. In 1891 he was made President of the First National Bank. He took a prominent part in the movement to secure the Columbian Exposition for Chicago, was one of three who pledged \$10,000,000 in behalf of the city, and was the first president of the Exposition Company. He also presided over the bankers' section of the World's Congress Auxiliary. He was president for many years of the Civic Federation of Chicago, and he has been known throughout the country for his views on honest money and banking reform.

Russell Alexander Alger was born in Medina County, Michigan, in 1835, of a New England family that was left destitute by the death of his father when Russell was thirteen years of age. He soon became an aid and support to the family, and while yet a youth advanced toward success in the lumber business. When the civil war broke out he was chosen captain in the Second Regiment of Michigan

Cavalry. He served with distinction throughout the conflict, was present in about sixty engagements under the command of Sheridan, Kilpatrick, or Custer, and received several wounds, and when the



RUSSELL A. ALGER, SECRETARY OF WAR.

army was mustered out he received the brevet rank of major general for gallant and meritorious services during the war. He returned to commercial life, and in the course of years obtained almost a



JOHN D. LONG, SECRETARY OF THE NAVY.

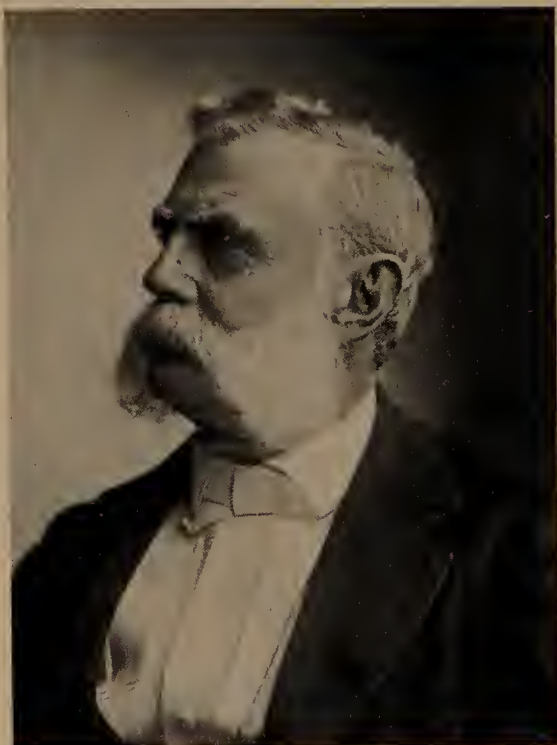
controlling interest in the Michigan lumber trade. In 1884 he was chosen to be the Republican candidate for Governor, with little hope of success, for

the Democrats and Greenbackers together had control of the State. Nevertheless he was elected by the largest majority ever given to a Republican candidate. This triumph made him a conspicuous figure in national politics and a possible candidate for the presidency. He held no other office, however, until President McKinley selected him for the post of Secretary of War.

John Davis Long was born in Buckfield, Maine, Oct. 27, 1838. He entered Harvard College when he was only fourteen years of age, but was graduated second in his class, of which he was chosen to be the poet at commencement. He was master of a school for a short time, then studied law, began his professional life in Boston in 1862, and rose to an eminent position at the bar. He entered the State Legislature in 1875, and in 1876 was a candidate for Speaker. In 1879 he was elected Governor of Massachusetts, and he was re-elected for the two succeeding terms, defeating Gen. Benjamin F. Butler both times. Subsequent to this he was elected to Congress, in which he sat for three successive terms. He was an unsuccessful candidate for the United States Senate. Secretary Long has long resided at Hingham, and in intermissions of his professional and business pursuits he has cultivated literature, producing a volume of light verse and a translation of Virgil's "Æneid."

Joseph McKenna was born in Philadelphia in 1855, was taken to California in childhood, was

James Albert Gary was an active Republican of Maryland, a delegate to every national political convention from 1872, but never held office until called by President McKinley to the head of the



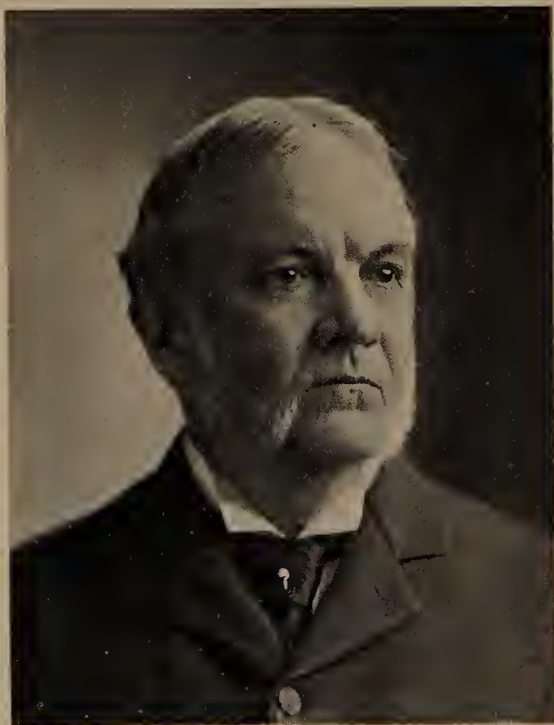
JAMES A. GARY, POSTMASTER-GENERAL.

Post-Office Department. He has been a candidate for Congress, and also for the governorship of his State; but the opposite party always had the majority. He was born in Uncasville, Conn., in 1833.



JOSEPH McKENNA, ATTORNEY-GENERAL.

graduated at St. Augustine College, Benicia, studied law, and after admission to the California bar served one term as district attorney, and was then, in 1875, elected to the Legislature, where he delivered a notable speech on the proposal to create the State Board of Railroad Commissioners. He was twice an unsuccessful candidate for Congress, was at last elected, and served for four terms, after which he was appointed a judge of the United States Court of California in 1892. In Congress he was a political friend and associate of William McKinley, whom he assisted in framing the tariff bill. When he formed his Cabinet, President McKinley appointed Judge McKenna Attorney-General.



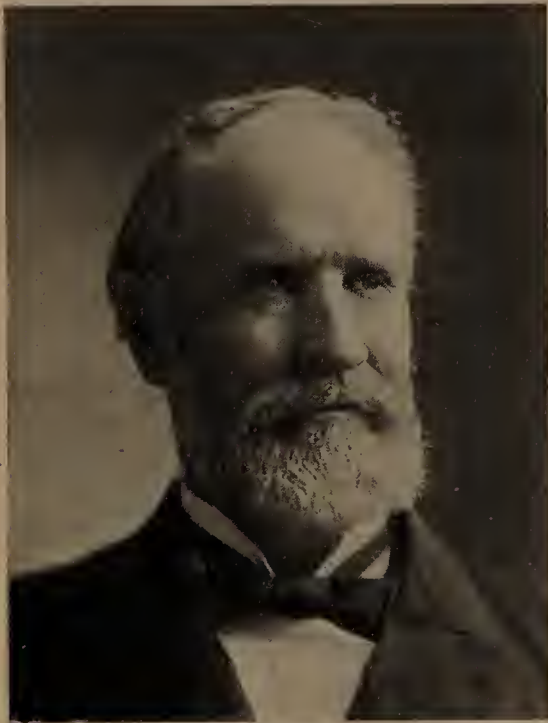
CORNELIUS N. BLISS, SECRETARY OF THE INTERIOR.

removed with his family to Maryland while very young, was graduated at Allegheny College, and went into mercantile business in Baltimore in his father's firm, of which he afterward became the

head. He connected himself with various corporations that achieved success, and for a number of successive terms was President of the Merchants' and Manufacturers' Association of Baltimore.

Cornelius Newton Bliss was born in Fall River, Mass., in 1834. He went to New York city to embark in a mercantile career early in life became an active and prominent dry-goods merchant, the head of the firm of Bliss, Fabyan & Co., and has long been prominent also as a leader in local politics, though unwilling to accept public office until President McKinley appointed him Secretary of the Interior. He has often been a delegate to State political conventions, and was chairman of a committee of the New York Chamber of Commerce that in Chicago urged the nomination of President Arthur in 1884.

James Wilson is a native of Scotland, but was educated in this country. He was born in 1835, came to the United States in 1851, passed through an academy, and became a farmer in Iowa of re-



JAMES WILSON, SECRETARY OF AGRICULTURE.

pute for practical and scientific knowledge, and a representative of agricultural interests in the State Legislature, of which he was a member for six years, serving one term as Speaker. He was elected next to Congress, where he sat for three terms. He is Secretary of Agriculture.

Area and Population.—The total area of the United States, including three Territories represented in Congress and the Indian Territory, but excluding Alaska, is 3,025,600 square miles, of which 55,600 square miles are covered with water. The area of Alaska is estimated at 531,400 square miles. The total population in 1890 was 62,831,900, including 179,321 in the Indian Territory and 30,329 in Alaska. The total population on Dec. 31, 1897, was estimated at 77,705,622.

The number of immigrants for the year ending June 30, 1897, not including those from Canada or Mexico, was 230,832, of whom 46,198 were laborers, 23,739 domestic servants, 22,560 farmers, 3,454 tailors, 3,325 shoemakers, 2,503 carpenters, 1,747 clerks, 1,743 miners, and 1,137 blacksmiths. The total number of skilled laborers was 33,161; of professional men, 1,732; of miscellaneous,

104,315; of no occupation, including women and children, 91,032; occupation not stated, 562.

The Army.—The United States regular army on June 30, 1897, consisted of the following forces:

TROOPS.	Officers.	Men.	Total.
10 regiments of cavalry.....	447	6,010	6,457
5 regiments of artillery.....	290	3,934	4,224
25 regiments of infantry.....	910	12,871	13,781
5 companies of engineers.....	18	500	518
Indian scouts, West Point, recruiting parties, hospital service, ordnance department, signal service, etc.....	514	2,038	2,552
Total.....	2,179	25,353	27,532

The infantry weapon is the modified Krag-Jørgensen repeating rifle of 7.6 millimetres caliber. The cavalry is armed with Krag-Jørgensen carbines, sabers, and Colt revolvers. The artillery forces consist of 50 batteries of foot artillery and 10 mounted batteries, the latter having each 4 pieces. The field guns are breechloaders of a new system, having a caliber of 8.2 centimetres. The organized militia of the States and Territories had on Dec. 31, 1897, a strength of 1,391 staff and general officers, 5,290 cavalry, 4,906 artillery, and 101,873 infantry, giving a total authorized strength of 116,125 officers and men. The number in actual service was 113,460. The total population capable of bearing arms and liable to military service in case of war was estimated at 10,139,788.

The Navy.—The United States navy on Dec. 31, 1897, contained 11 armored battle ships built or building as follows: The "Maine," built in 1888, of 6,682 tons displacement, 9,293 horse power, 17.4 knots speed, a main battery of 4 10-inch and 6 6-inch breech-loading rifled cannon, and a secondary battery of 7 6-pounder and 8 1-pounder rapid-firing guns [destroyed in the harbor of Havana, Feb. 15, 1898]; the "Texas," begun in 1889, of 6,315 tons displacement, 8,000 horse power, giving a speed of 17 knots, a main battery of 2 12-inch and 6 6-inch breechloaders, and a secondary battery of 6 1-pounders, 4 3.7-centimetre quick firers, and 2 Gatlings; the "Massachusetts" and "Oregon," begun in 1891, of 10,288 tons displacement, 9,000 horse power, a speed of 15 knots, and a main armament of 4 13-inch, 8 8-inch, and 4 6-inch breechloaders, with an auxiliary armament of 20 6-pounders, 4 1-pounders, and 4 Gatlings; the "Indiana," a sister ship to these, launched in the same year and having the same dimensions, protection, and armament, with engines of 9,738 horse power, developing a speed of 15.54 knots; the "Iowa," begun in 1893, of 11,410 tons displacement, with engines of 11,000 horse power, making 16 knots, and carrying 4 12-inch, 8 8-inch, and 6 4-inch guns in the main battery, with a minor armament of 20 6-pounders, 4 1-pounders, and 4 Gatlings; the sister ships "Kearsarge" and "Kentucky," laid down in 1896, of 11,525 tons, with engines of 11,000 horse power, giving a speed of 16 knots, a main battery of 4 13-inch and 4 8-inch breechloaders, and a secondary battery of 14 5-inch, 20 6-pounder, and 6 1-pounder rapid firers, 4 Gatlings, and a field piece; and the "Alabama," "Illinois," and "Wisconsin," still on the stocks, the most expensive of all, costing \$3,750,000 each, having a displacement of 11,000 tons, to be engined for a speed of 16 knots, and built to carry 4 13-inch and 14 6-inch guns in the main batteries and a subsidiary armament of 16 6-pounders, 4 1-pounders, 4 Gatlings, and a field gun. There were 2 armored cruisers, the "New York," begun in 1890, having a displacement of 8,200 tons, with engines of 17,400 horse power, developing a speed of 21 knots, and carrying a main battery of 6 8-inch

and 12 4-inch guns, and a minor armament of 8 6-pounders, 4 1-pounders, and 4 Gatlings; and the "Brooklyn," laid down in 1893, with 16,000-horse-power engines and a speed of 20 knots, carrying a main armament of 8 8-inch and 12 4-inch cannon, and a secondary armament of 12 6-pounders, 4 1-pounders, and 4 Gatlings. The cruiser ram "Katahdin," launched in 1891, of 2,155 tons, with 4,800 horse power, is capable of making 17 knots, her sole armament besides the great ram consisting of 4 6-pounder rapid-fire guns. For coast defense the navy was provided with a large number of monitors, 6 with double turrets and 13 with single turrets. Of the former the "Amphitrite," "Miantonomah," "Monadnock," and "Terror," begun in 1874, have a displacement of 3,990 tons each, with 12 to 14½ knots speed, and armed with 4 10-inch, 2 6-pounder, 2 3-pounder, and 2 1-pounder rapid-fire guns, besides which the "Amphitrite" and the "Monadnock" carry 2 4-inch breechloaders and 2 3·7-centimetre quick-firing guns. The "Puritan," begun in 1875, has a displacement of 6,060 tons, a speed of 12·4 knots, and an armament of 4 12-inch and 2 4-inch guns, with 6 6-pounders, 4 Gatlings, and 2 3·7-centimetre machine guns. The "Monterey," of 5,244 tons, can steam 13·6 knots, and is armed with 2 12-inch and 2 10-inch guns, with a subsidiary armament of 6 6-pounders 4 1-pounders, and 2 Gatlings. The old monitors, built in 1862, are each armed with 2 15-inch smooth-bore cannon. The protected cruisers number 13, besides which there are 3 unarmored cruisers. The "Atlanta" and "Boston," of 3,000 tons, begun in 1883, have a speed of 15·6 knots, and carry 6 6-inch and 2 8-inch guns, with 14 quick firers and machine guns; the "Chicago," of 4,500 tons, launched at the same time, steams 15·1 knots, and carries an armament of 4 8-inch, 8 6-inch, and 17 smaller guns; the "Charleston," of 3,730 tons, launched in 1887, can make 18·2 knots, and is armed with 2 8-inch, 6 6-inch, and 14 smaller guns; the "Baltimore," of 4,413 tons, launched in 1887, can make 20 knots, and is armed with 4 8-inch and 6 6-inch guns, besides a subsidiary armament of 14 guns: the "Newark," "Philadelphia," and "San Francisco," laid down in 1888, can make from 19 to 19½ knots, and are armed with 12 6-inch breechloaders and from 15 to 17 quick-firing and machine guns; the "Raleigh," of 3,213 tons, begun in 1889, can make 19 knots, and carries 10 5-inch, 1 6-inch, and 10 smaller quick-firing guns; the "Detroit," "Marblehead," and "Montgomery," unprotected cruisers, laid down in 1890, have a displacement of 2,089 tons, speed ranging from 18½ to 19½ knots, and an armament of 9 5-inch rapid-fire guns, 8 smaller ones, and 2 Gatlings; the "Cincinnati," built at the same time, has a displacement of 3,213 tons, a speed of 19 knots, and an armament of 10 5-inch, 1 6-inch, 8 6-pounder, and 2 1-pounder rapid-fire guns, and 2 Gatlings; the "Columbia," begun in 1890, of 7,375 tons, is a commerce destroyer able to steam 22·8 knots, 1 8-inch breechloader, carrying 2 6-inch, 8 4-inch, 12 6-pounder, and 4 1-pounder quick firers, and 4 Gatlings; the "Minneapolis," her sister ship, laid down in 1891, made 23·07 knots in her trial trip; the "Olympia," of 5,870 tons, begun in 1891, has a speed of 21·6 knots, and carries an armament of 4 8-inch breechloaders, 10 5-inch rapid-firing guns, and 20 smaller ones, besides 4 Gatlings. Of modern gunboats there are the "Yorktown," "Petrel," "Bennington," "Concord," "Castine," "Machias," "Wilmington," "Helena," and "Nashville," of 892 to 1,710 tons displacement, built between 1887 and 1894, and armed with 6-inch and 4-inch guns, and strong secondary batteries. The composite gunboats "Annapolis," "Vicksburg," "Newport," "Princeton," "Marietta,"

and "Wheeling," of 1,000 tons, laid down in 1896, are designed for a speed of 12 knots, and will carry 6 4-inch, 4 6-pounder, and 2 1-pounder rapid-fire guns. The training ship "Bancroft" is armed with 4 4-inch and 7 smaller rapid-fire guns, the dispatch boat "Dolphin" with 2 4-inch and 6 smaller ones. The dynamite cruiser "Vesuvius," built in 1887, has a speed of 21·4 knots, and is armed with 3 15-inch pneumatic guns capable of sending dynamite projectiles 4 miles. A torpedo cruiser is in course of construction. The torpedo boats "Cushing," "Ericsson," "Stiletto," "Foote," "Rodgers," "Winslow," "Porter," "Du Pont," and "Rowan," the last 6 built in 1896, have 3 ejectors for 18-inch Whitehead torpedoes. The latest have a length of 175 feet and a speed of 27½ knots. The submarine-torpedo boat "Plunger" was also built in 1896. In 1897 the keels of the "Dahlgren," "Craven," and "Farragut" were laid, which are designed for a speed of 30 and 30½ knots, also of the "Davies," "Fox," and "Morris," and the smaller "Gwin," "Talbot," "MacKensie," and "McKee," steaming 20 and 22½ knots, and of the "Stringham," "Goldsbrough," and "Bailey," built to carry the first 7, and the others 4 6-pounders, besides 2 torpedo tubes, and to make 30 knots an hour.

Pensions.—The number of invalid ex-soldiers receiving pensions under the general pension act on June 30, 1897, was 336,299; of nurses, 663; of widows, etc., 94,618; of navy pensioners, 4,788; of sailors' widows, etc., 2,375. Under the act of June 27, 1890, the number of army invalids was 378,609; of widows, etc., 110,593; of navy invalids, 13,831; of widows, etc., 5,766. There was an increase during the year of 123 nurses and a decrease of 8,504 ex-soldiers, 2,513 widows and dependents of soldiers, 33 ex-sailors, and 14 widows and dependents of sailors under the general law, and an increase of 8,122 army invalids, 8,954 soldiers' widows, etc., 500 navy invalids, and 302 sailors' widows, etc., under the law of June 27, 1890, making a net increase of 5,336, and bringing the total number of pensioners on the roll up to 976,014, not including 6,852 original pensions and 762 restorations and renewals issued during the year but not yet mailed to the pension agents at its close. The number of widows of soldiers of the Revolutionary War was 7; that of surviving pensioners of the War of 1812 was 7 and of widows of soldiers of that war 2,810; of pensioners of the Mexican War, 10,922 survivors and 8,072 widows; of pensioners of the Indian wars, 2,373 survivors and 4,288 widows. The number of claims allowed during 1897 was 3,726 for invalids and 4,612 for widows, etc. There had been filed 2,185,416 claims up to June 30, 1897, and allowed 1,526,676. The payments during the year amounted to \$140,845,772, distributed among 746,829 invalids and 229,185 widows and dependents. The total disbursements from 1861 to the end of 1897 have been \$2,138,360,926. The expenses of disbursing the pension fund during 1897 were \$3,309,387. There were 50,101 new pensions added to the rolls during the year and 3,971 pensioners whose names had been dropped were restored, a total of 54,072, while 31,960 names fell away from the rolls through death, 1,074 through remarriage of widows and mothers, 1,845 through the coming of age of minors, 2,683 through failure to claim pension for three years, and 3,560 from other causes, making a total of 41,122. The total number of pension certificates issued during the year was 94,454, while 76,234 claims were disallowed, not including applications for an increase of pensions.

Public Lands.—The homestead entries during the year ending June 30, 1897, embraced 4,452,289 acres, and entries under the timber-culture act 646 acres. The total area of lands patented by the

United States up to that date was 95,741,638 acres, viz., 4,433,073 acres to States for canal purposes, 1,987,027 acres to States for wagon roads, 1,406,211 acres under river improvement grants, and 87,915,327 acres to States and corporations for railroad purposes. The railroad selections during the year 1897 were 1,538,463 acres. The area of public lands vacant and subject to entry on June 30, 1897, was 591,343,953 acres, of which 319,949,833 acres were surveyed and 272,294,130 acres unsurveyed. The total area of public land surveyed up to June 30, 1897, was 1,061,075,643 acres, and the total area of land remaining unsurveyed was 754,448,745 acres, inclusive of Indian and other public reservations, unsurveyed private land claims and surveyed private claims in California, Arizona, Colorado, and New Mexico, the sections reserved for public schools, unsurveyed railroad, swamp land, and other grants, and unsurveyed mountain, lake, river, and other unproductive areas.

The Patent Office.—The number of applications for patents during the calendar year 1896 was 42,077; for design patents, 1,828; for reissues, 77; for registration of trade-marks, 2,005; for registration of labels, 59; for prints, 36; number of caveats filed, 2,271; total, 48,353. The number of patents granted, including designs and reissues, was 23,373; of trade-marks registered, 1,813; of labels, 1; of prints, 32; total, 25,219. There were 4,736 patents withheld for nonpayment of fees. The number of patents that expired was 12,133. The total number of applications filed since 1837 was 1,040,035, and the number of caveats filed was 107,415, while the total number of original patents granted, including designs, was 577,539. The receipts of the Patent Office during 1896 were \$1,324,059, and the expenditures \$1,113,413.

The Indians.—The appropriations of Congress for the Indian Bureau in 1896 were \$727,640 for current and contingent expenses, \$2,982,147 for treaty obligations to the Indians, \$695,625 for miscellaneous support and gratuities, \$82,050 for incidental expenses; \$549,903 for miscellaneous purposes; \$2,056,515 for support of schools, \$9,870 for interest on trust funds, and \$1,660,000 for purchase of Indian lands; total, \$8,763,751. The total Indian population of the United States, exclusive of Alaska, but including 32,567 taxable Indians counted in the general census, was 249,273 in 1890. The number of Indians on reservations, which was 256,127 in 1880 and 243,524 in 1890, was estimated at 248,815 in 1897. The number of births for the year ending June 30, 1897, was 4,326 and deaths 4,058. The area of the Indian reservations has been reduced from 241,800 square miles in 1880 to 162,991 in 1890, and 129,323 in 1897.

Immigration.—The immigration in 1897 was 230,832, of which number 1,954 were Bohemians, 15,025 Hungarians, and 16,052 other Austro-Hungarians, other than Poles, making the total from Austria-Hungary, except Poles, 33,031; 760 were Belgians, 2,085 Danes, 2,107 French, 22,533 Germans, 571 Greeks, 59,431 Italians, 890 Dutch, 5,842 Norwegians, 4,165 Poles, 1,874 Portuguese, 791 Roumanians, 22,750 Russians other than Poles, 3,066 Spanish, 13,162 Swedes, 1,566 Swiss, and 152 European Turks; 9,974 were English, 28,421 Irish, 1,883 Scotch, 870 Welsh, and 25 British not specified, making the total number from the United Kingdom 41,173 and the total from all Europe 216,397; 290 were from British North America, 91 from Mexico, 6 from Central America, 4,101 from the West Indies and Miquelon, and 49 from South America, making a total of 4,537 from America; 3,363 were Chinese and 6,299 other Asiatics, making 9,662 from Asia; 199 came from Oceanica, and 37 from Africa.

Commerce.—The total value of the imports and exports of merchandise for the year ending June 30, 1897, was \$1,815,723,968, compared with \$1,662,331,612 in 1896 and \$1,539,508,130 in 1895. In 1885 the volume of trade was \$1,319,717,084; in 1875, \$1,046,448,147; in 1865, \$404,774,883; in 1855, \$476,718,211. The excess of imports over exports in 1897 was \$286,263,144; in 1896, \$102,882,264; in 1895, \$75,568,200. The total value of imports in the fiscal year 1897 was \$764,730,412, compared with \$779,724,674 in 1896, \$731,969,965 in 1895, \$577,527,329 in 1885, \$567,406,342 in 1875, \$238,745,580 in 1865, and \$257,808,708 in 1855. The value of domestic exports was \$1,032,007,603, the highest figure ever reached, having increased from \$863,200,487 in 1896 and \$793,392,599 in 1895, yet not much exceeding the total of \$1,015,732,011 for 1892, to which the domestic exports had gradually risen from \$683,862,104 in 1888. The exports of domestic merchandise in 1885 were \$726,682,946; in 1875, \$499,284,100; in 1865, \$136,940,248; in 1855, \$192,751,135.

The values of the articles or classes of articles imported in 1897 are given in the following table:

IMPORTS.		Value.
Agricultural implements.....		\$11,469
Animals, free of duty.....		300,436
Animals, dutiable.....		3,985,019
Antimony, ore and regulus or metal.....		4,464,608
Articles, the produce of the United States, returned, free.....		3,370,107
Articles specially imported, free.....		684,102
Art works.....		4,424,533
Asbestos, unmanufactured.....		191,097
Asphaltum or bitumen, free.....		395,554
Bark, hemlock.....		133,051
Beads and bead ornaments.....		979,283
Beeswax, free.....		43,339
Beverages:		
Ginger ale.....		199,470
All other.....		124,931
Bismuth.....		138,633
Blacking.....		136,909
Bologna sausages, free.....		76,303
Bolting cloths, free.....		212,385
Bones, crude, free.....		224,039
Bone and horn, manufactures of.....		147,067
Books, maps, music, and engravings, free.....		1,806,476
Books, maps, etc., dutiable.....		1,373,230
Brass, and manufactures of.....		147,130
Breadstuffs.....		2,774,763
Bristles, crude, free.....		385
Bristles, sorted, bunched, or prepared.....		1,216,794
Brushes.....		732,802
Buhrstones.....		23,569
Buttons and button forms.....		950,061
Cement, Portland, Roman, and other hydraulic.		2,972,350
Chalk.....		48,954
Chemicals, drugs, and dyes:		
Alizarin colors and dyes, natural or artificial		1,022,970
Argol, or crude tartar.....		1,967,042
Cinchona bark, etc.....		142,512
Coal-tar colors and dyes.....		3,196,478
Cochineal.....		41,943
Logwood.....		611,010
Other dyewoods.....		119,716
Extracts of dyewoods.....		284,868
Glycerin.....		1,182,099
Gum arabic.....		85,807
Crude camphor.....		332,748
Gambier or terra Japonica.....		959,501
Shellac.....		1,082,401
All other gums.....		3,294,790
Indigo.....		1,696,641
Licorice root.....		1,022,650
Lime, chloride of.....		1,375,560
Mineral waters, not artificial.....		581,947
Opium, crude, free.....		2,184,727
Opium, prepared.....		1,132,861
Potash, chlorate of.....		458,095
Potash, muriate of.....		1,400,603
Potash, nitrate of.....		408,761
Potash, all other.....		632,203
Quinia.....		582,945
Soda, caustic.....		1,147,763
Soda, nitrate of.....		2,640,389
Sal soda and soda ash.....		1,324,016
Soda, all other salts of.....		67,684
Sulphur, crude.....		2,183,607
Sumac, ground.....		248,048
Vanilla beans.....		884,865
All other chemicals, drugs, and dyes.....		5,057,068

IMPORTS.		IMPORTS.	
	Value.		Value.
Chicory root, raw, unground.....	\$232,494	Fur skins, undressed and for hatters' furs....	\$2,938,979
Chicory root, roasted or prepared.....	13,899	Furs, manufactured.....	3,076,125
Chocolate.....	239,819	Glass and glassware :	
Clays or earths.....	689,456	Bottles, vials, demijohns, and earboys.....	600,308
Clocks, and parts of.....	448,600	Cylinder and crown glass, unpolished.....	1,181,696
Watches, and watch materials and movements.	1,118,399	Cylinder and crown glass, polished.....	301,412
Coal and coke :		Cylinder and crown glass, silvered.....	772,296
Anthracite.....	202,923	Plate glass, fluted, rolled, or rough.....	18,245
Bituminous.....	3,553,876	Plate glass, cast, polished.....	285,485
Charcoal.....	32,106	Plate glass, cast, silvered.....	21,870
Coke.....	71,692	All other.....	2,328,314
Cocoa, or cacao, crude.....	2,997,866	Glass plates or disks for optical instruments....	94,242
Cocoa, prepared.....	443,604	Glue.....	472,312
Coffee.....	81,544,384	Grease and oils, free.....	976,306
Coffee substitute.....	87,679	Grease and oils, dutiable.....	8,026
Coins, old, and other antiquities.....	300,116	Gunpowder and explosives :	
Collodion, manufactures of.....	262,675	Gunpowder.....	63,722
Copper, and manufactures of :		Firecrackers.....	509,381
Ore and regulus.....	544,868	Other explosives.....	98,727
Pigs, ingots, old, etc.....	999,824	Gut, unmanufactured.....	180,721
Manufactures.....	80,814	Hair, unmanufactured.....	1,330,632
Cork wood, or bark, unmanufactured.....	1,323,409	Hair, manufactures of.....	721,572
Corks, and manufactures of cork bark.....	428,243	Hats, bonnets, and materials for.....	1,990,735
Cotton, unmanufactured.....	5,884,262	Hay.....	1,030,497
Cotton waste or flocks.....	171,696	Hide cuttings and glue stock.....	289,686
Cotton, manufactures of :		Hides and skins :	
Cloths, not bleached, dyed, or printed.....	273,654	Goatskins.....	11,328,162
Cloths, bleached, dyed, or printed.....	4,404,025	All other.....	16,534,864
Clothing.....	2,627,222	Honey.....	27,599
Knit goods.....	5,596,703	Hoofs and horns.....	150,134
Laces, embroideries, trimmings, etc.....	12,573,207	Hops.....	629,987
Yarn and warps.....	647,388	Household and personal effects of immigrants,	
All other.....	8,307,164	etc.....	2,438,363
Diamond dust or bort.....	83,351	India rubber and gutta-percha :	
Earthen, stone, and china wares :		Gutta-percha, unmanufactured.....	100,187
China and crockery, not decorated.....	1,513,474	India rubber, unmanufactured.....	17,457,976
China and crockery, decorated.....	8,087,443	Gutta-percha, manufactures of.....	97,194
All other.....	376,880	India rubber, manufactures of.....	297,953
Eggs.....	47,760	Ink and ink powders.....	66,670
Emery :		Iron and steel :	
Ore.....	122,676	Iron ore.....	778,084
Grains, and ground or refined.....	21,584	Pig iron.....	520,745
Fans.....	359,488	Scrap iron.....	72,258
Feathers and millinery ornaments :		Bar iron, rolled or hammered.....	598,382
Feathers and downs, crude.....	2,232,908	Bars, railway.....	208,054
Feathers, downs, and birds, finished.....	712,610	Hoop and band iron and steel.....	1,930
Feathers, flowers, etc., artificial.....	2,138,215	Ingots, blooms, and bars of steel.....	1,554,438
Felt, adhesive.....	19,387	Sheet, plate, and taggers iron.....	225,410
Fertilizers :		Ties for baling cotton.....	239,498
Guano.....	91,836	Tin plates and taggers tin.....	5,344,638
Phosphates, crude.....	65,420	Wire rods.....	682,803
All other.....	954,276	Wire, and articles made from.....	389,297
Fibers, vegetable and textile grasses :		Iron and steel manufactures :	
Flax, and tow of, free.....	1,256,717	Anvils.....	44,781
Flax, hackled.....	641,259	Chains.....	52,666
Hemp, and tow of, free.....	633,288	Cutlery.....	2,339,963
Hemp, hackled.....	6,569	Files, rasps, and floats.....	47,407
Istle or Tampico fiber.....	335,841	Firearms.....	753,112
Jute and jute butts, free.....	1,640,484	Machinery.....	1,289,666
Manilla.....	3,408,322	Needles.....	309,754
Sisal grass, free.....	3,834,732	Shotgun barrels, rough-bored.....	33,089
All other.....	579,206	All other.....	1,386,666
Fibers, vegetable, and textile grasses, manufac-		Ivory, animal.....	452,461
tures of :		Ivory, manufactures of.....	32,771
Bags for grain, made of burlaps.....	2,019,856	Ivory, vegetable.....	44,618
Bagging and gunny cloth for cotton bales..	394,409	Jewelry and precious stones :	
Burlaps.....	9,243,025	Diamonds, miners', glaziers', and watch	
Cables, cordage, and twine.....	20,373	jewels.....	47,865
Coir yarn.....	118,328	Jewelry, and manufactures of gold and sil-	
Twine, binding.....	79,356	ver.....	886,969
Yarns or threads, dutiable.....	517,617	Precious stones and imitations of.....	2,624,732
All other.....	20,153,903	Lead in pigs, bars, old, and ore.....	1,943,700
Fish :		Lead manufactures.....	4,525
Salmon.....	163,133	Leather, and manufactures of :	
All other fresh fish, free.....	1,780,079	Bend or belting and sole leather.....	157,128
All other fresh fish, dutiable.....	160,309	Calf skins, tanned or dressed, and patent,	
Anchovies and sardines.....	902,742	enameled, and japanned.....	52,395
Cod, haddock, etc., dried or smoked.....	451,654	Skins for morocco.....	3,716,259
Herring, dried or smoked.....	88,085	Upper leather and skins dressed.....	2,410,862
Herring, salted or pickled.....	886,647	Gloves of kid and other leather.....	6,486,813
Mackerel, pickled or salted.....	1,164,424	All other manufactures.....	458,694
Salmon, pickled or salted.....	67,175	Lime.....	56,317
All other.....	444,466	Lithographic stones.....	68,504
Fish bladders and sounds.....	63,368	Malt, barley.....	9,384
Fruits and nuts :		Malt liquors.....	1,560,293
Bananas.....	4,086,320	Manganese, ore and oxide.....	803,660
Currants, free.....	3,599	Marble, and manufactures of.....	872,169
Currants, Zante.....	592,485	Stone, and manufactures of.....	325,039
Dates.....	284,056	Matches.....	207,671
Figs.....	535,380	Matting for floors, of straw.....	3,922,003
Lemons.....	4,043,822	Meerschaum, crude.....	23,839
Oranges.....	2,324,907	Metals and compositions not elsewhere speci-	
Plums and prunes.....	73,303	fied :	
Raisins.....	567,039	Bronze manufactures.....	519,458
Fruit, prepared or preserved.....	605,053	All other.....	3,599,140
All other fruit, free.....	672,549	Mineral substances not elsewhere specified.....	229,880
All other fruit, dutiable.....	1,138,258	Moss, seaweed, etc., unmanufactured.....	196,465
Almonds.....	880,263	Musical instruments.....	1,147,926
Cocoanuts.....	471,387	Nickel ore and matte.....	537,128
All other nuts.....	848,511	Oil cake.....	20,313

IMPORTS.		IMPORTS.	
Oils :	Value.		Value.
Whale and fish oils.....	\$179,879	Vinegar.....	\$20,519
Other animal oils.....	6,066	Wines :	
Mineral oils, free.....	20,871	Champagne and other sparkling.....	3,348,004
Mineral oils, dutiable.....	14,611	Still wines in casks.....	2,039,250
Olive salad oil.....	1,034,077	Still wines in other coverings.....	1,475,211
Other fixed or expressed oils, free.....	1,627,086	Wood, and manufactures of :	
Other fixed or expressed oils, dutiable.....	725,998	Mahogany.....	656,976
Volatile or essential oils, free.....	1,624,313	Other cabinet woods.....	544,490
Volatile or essential oils, dutiable.....	261,210	Logs and round timber.....	2,616,397
Paints and colors, free.....	110,447	Timber, hewn and sawed.....	93,777
Paints and colors, dutiable.....	1,276,906	Boards, plauks, and other sawed lumber....	9,075,981
Palm-leaf fans.....	28,067	Other lumber.....	18,979
Palm leaf, other manufactures of.....	120,419	All other unmanufactured wood.....	4,702,065
Paper, and manufactures of.....	3,121,530	Cabinet ware or house furniture.....	264,240
Paper stock, rags for.....	668,385	Wood pulp.....	800,886
Paper stock, all other.....	2,403,320	All other wood manufactures.....	1,769,624
Pencils and pencil leads.....	182,687	Wool and hair of the camel, goat, alpaca, etc. :	
Pencils, slate.....	38,888	Clothing wools.....	34,281,656
Perfumeries, cosmetics, and toilet preparations	698,095	Combing wools.....	7,187,620
Pipes and smokers' articles.....	371,072	Carpet wools.....	11,773,915
Plants, trees, and flowers, free.....	702,345	Wool and hair, manufactures of :	
Plants, trees, and flowers, dutiable.....	261,632	Carpets and carpeting.....	782,955
Plaster of Paris, unground.....	185,191	Wearing apparel.....	984,689
Plaster of Paris, ground.....	18,153	Cloths.....	17,007,273
Platinum.....	1,049,780	Dress goods.....	16,787,241
Platinum vases, retorts, etc.....	41,413	Knit fabrics.....	2,531,058
Plumbago.....	321,355	Rags, noils, and wastes, free.....	5,220,793
Provisions, including meats and dairy products :		Rags, noils, and wastes, dutiable.....	1,714,865
Meats and meat extracts.....	601,808	Shawls.....	464,835
Other meat products.....	49,484	Wool, carbonized.....	13,513
Butter.....	6,077	Yarns.....	956,443
Cheese.....	1,668,796	All other.....	2,699,227
Milk, condensed.....	58,467	Zinc or spelter, in blocks or pigs.....	57,346
Pumice and pumice stone.....	65,930	Zinc manufactures.....	21,054
Rennets.....	60,026	All other free articles.....	1,207,585
Rice from Hawaiian Islands.....	231,511	All other dutiable articles.....	840,401
Rice, dutiable.....	2,324,449		
Rice flour and broken rice.....	961,200		
Salt, free.....	734,719		
Salt, dutiable.....	19,179		
Sausage skius.....	542,817		
Seeds :			
Linseed, or flaxseed.....	108,871		
All other, free.....	839,955		
All other, dutiable.....	475,100		
Shell, unmanufactured.....	949,626		
Shell, manufactured.....	76,140		
Silk :			
Raw silk.....	18,496,944		
Silk waste.....	421,339		
Silk manufactures :			
Clothing.....	2,285,042		
Dress and piece goods.....	7,576,001		
Laces and embroideries.....	2,157,927		
Ribbons.....	963,969		
All other.....	12,216,128		
Soap :			
Perfumed and toilet soap.....	352,309		
All other.....	414,067		
Spices :			
Nutmegs.....	451,614		
Pepper, black and white.....	711,453		
All other unground.....	1,076,963		
Ground spices.....	336,686		
Spirits, distilled :			
Domestic spirits returned.....	863,558		
Brandy.....	911,721		
All other.....	2,074,835		
Sponges.....	487,143		
Starch.....	51,812		
Straw, unmanufactured.....	31,768		
Straw, manufactures of.....	1,006,201		
Sugar, molasses, and confectionery :			
Molasses, free.....	18,376		
Molasses, dutiable.....	568,137		
Beet sugar.....	33,689,158		
Cane and other sugar, free.....	13,164,379		
Cane and other sugar, dutiable.....	47,284,494		
Sugar above No. 16.....	4,928,150		
Confectionery.....	24,752		
Sulphur ore.....	687,297		
Tar and pitch.....	262,928		
Coal-tar preparations, not medicinal.....	367,115		
Tea.....	14,838,862		
Tin in bars, blocks, or grain.....	6,535,852		
Tobacco, and manufactures of :			
Leaf suitable for cigar wrappers.....	5,663,214		
Leaf tobacco, other.....	3,920,941		
Cigars, cigarettes, and cheroots.....	2,040,444		
All other.....	57,103		
Toys.....	3,295,057		
Umbrellas and parasols.....	17,368		
Varnishes.....	159,024		
Vegetables :			
Beans and peas.....	489,274		
Cabbages.....	38,906		
Potatoes.....	145,584		
Pickles and sauces.....	332,243		
All other, in their natural state.....	884,025		
All other, preserved or prepared.....	720,822		

Total merchandise imports.....\$764,330,412

The total value of dutiable merchandise was \$382,792,169; free of duty, \$381,938,243, being 49·94 per cent. of the whole. The total value of merchandise entered for consumption was \$789,251,300, of which \$381,902,414 represent articles free of duty and \$407,348,616 dutiable articles, 48·39 and 51·61 per cent. respectively. The duties collected amounted to \$172,760,361, representing an average *ad valorem* rate of 42·41 per cent. on the dutiable merchandise and 21·89 per cent. on the total imports, free and dutiable. The imports *per capita* of the population were \$10·84, the tariff duties \$2·37 *per capita*. Of the total value of imports entered for consumption \$254,657,954, or 32·27 per cent., were articles of food and animals, of which \$131,043,645 were dutiable, paying an average rate of 37·97 per cent., not including \$123,614,309 free of duty, and yielding \$49,755,484, which was 28·96 per cent. of the total duties collected; \$207,268,155 were articles in a crude state which enter into the various processes of domestic industry, being 26·26 per cent. of the total imports, and of this sum \$192,224,637 represent free and \$15,043,518 dutiable articles, paying an average rate of 20·11 per cent. and yielding \$3,025,927, which was 1·76 per cent. of the total customs revenue; \$69,822,999 represent articles wholly or partly manufactured, for use as materials in the manufactures and mechanic arts, being 8·85 per cent. of the total value of imports, and of these \$30,381,274 were free of duty and \$39,441,725 dutiable, paying an average rate of 29·10 per cent. and yielding \$11,478,985 of duties, 6·68 per cent. of the total duties; \$165,021,884 represent articles manufactured, ready for consumption, and of this sum, which is 20·91 per cent. of the total value of imports, \$27,284,175 were for articles free of duty and \$137,737,709 dutiable merchandise, on which \$55,278,753 of duties were collected, 32·18 per cent. of all duties collected, the average rate being 40·13 per cent.; \$92,480,037 represent articles of voluntary use, luxuries, etc., 11·72 per cent. of the total imports, and of these \$8,398,019 were free of duty and \$84,082,018 dutiable, on which \$52,240,044 of duties were paid, giving average rate of 62·13 per cent. and making 30·41 per cent. of all duties collected. The average rate of duty on iron and steel and their manufactured

products was 40·17 per cent.; on jewelry and precious stones, 16·33 per cent.; on leather and leather manufactures, 24·64 per cent.; on malt liquors, 38·24 per cent.; on distilled spirits, 126·92 per cent.; on wines, 49·37 per cent.; on silk manufactures, 46·85 per cent.; on sugar, 42·08 per cent.; on tobacco, 111·65 per cent.; on wood and its manufactures, 20·77 per cent.; on woolen manufactures, 46·44 per cent.

The animals imported free for breeding purposes have declined to the insignificant numbers of 204 cattle, 699 horses, and 2,382 sheep. The imports of asphaltum in 1897 showed a further increase to 122,122 tons. The imports of barley were 1,271,787 bushels; of wheat, 1,534,117 bushels. The imports of alizarin dyes were 6,148,268 pounds; of cochineal, 142,261 pounds; of logwood, 33,362 tons, little more than half as much as in the preceding year; of dye extracts and decoctions, 5,562,264 pounds; of argol or crude tartar, 23,457,576 pounds; of indigo, 3,522,016 pounds; of gambier, 31,349,545 pounds; of shellac, 7,151,459 pounds; of camphor, 1,469,601 pounds; of glycerin, 12,717,098 pounds; of cinchona and other barks from which quinia is extracted, 2,532,499 pounds; of quinia sulphate and alkaloids and salts of cinchona, 3,517,844 ounces; of crude opium, 1,072,914 pounds; of opium prepared for smoking and other containing less than 9 per cent. of morphia, 157,061 pounds; of crude sulphur, 130,133 tons; of caustic soda, 66,476,152 pounds; of soda nitrate, 83,331 tons. The imports of chicory root to be ground have increased from 7,951,042 pounds in 1894 to 16,930,162 pounds in 1897. Chocolate imports show an increase, amounting to 1,467,977 pounds, and the importation of crude cacao has grown from 17,634,779 pounds in 1894 to 31,406,612 pounds, while prepared cocoa—1,495,459 pounds in 1897—has increased but slightly. The imports of coffee in 1897 were 737,645,670 pounds, over 57,000,000 pounds more than in 1896, though the value was \$3,248,740 less. The imports of copper were 11,504,382 pounds. The importation of raw cotton fell off in 1897 to 51,898,926 pounds, after having steadily grown from 5,497,592 pounds in 1888 to 55,350,520 pounds in 1896. The imports of unbleached cottons in 1897 were 3,177,241 square yards; of bleached, dyed, colored, or printed cotton goods, 35,937,975 yards. The importation of cotton thread, yarn, and warps declined to 1,664,217 pounds from 2,431,855 pounds in the preceding year. The importation of eggs, which amounted to \$2,000,000 a year when they were free, has declined from nearly 16,000,000 dozen in 1889 to 580,671 dozen. The flax imports have grown from 5,008 tons in 1895 to 7,480 tons in 1897; those of hemp have declined from 6,177 to 5,096 tons; those of jute from 110,671 to 68,550 tons; those of istle from 12,207 tons in 1896 and 9,827 in 1895 to 6,313 tons; those of Manilla from 50,278 tons in 1895 to 46,260 tons; those of yarns and threads from 16,000,000 pounds in 1890 and 3,593,000 pounds still in 1895 to 1,859,000 pounds. The imports of sisal grass have increased from 47,596 to 63,266 tons. The imports of gunny bags and burlaps, coir yarn, and binding twine have doubled in three years. In the fish imports there is an increase in imports of salmon from 827,873 to 1,848,565 pounds, and nearly as great an increase in other fresh fish, and a concurrent decrease in the imports of salt, dried, and smoked fish. Among fruits and nuts the imports of Zante currants increased from 11,640,577 pounds in 1895 to 29,188,570 pounds, while those of plums and prunes decreased from 14,352,057 to 710,028 pounds; those of dates and figs showed a falling off; those of lemons were \$1,000,000 less in value than in the preceding year, and oranges showed a decline. The imports of manufactured furs showed a falling off

of \$4,000,000 in two years. The imports of cylinder and crown glass were considerably larger, those of plate glass less. The imports of goatskins decreased from 53,968,385 pounds in 1895 to 49,868,020 in 1897; other hides and skins from 163,650,982 to 156,232,824 pounds. The imports of hops were 2,438,363 pounds, against 2,585,749 pounds in 1896. India rubber decreased from 36,774,460 to 35,574,449 pounds. The imports of iron ore were 543,241 tons, compared with 683,056 in 1893; of pig iron, 520,745 tons, compared with 1,812,675; of bar iron, 30,148,571 pounds, compared with 45,882,274; of steel ingots, blooms, bars, etc., 39,560,628 pounds, compared with 71,432,468; of sheet, plate, and taggers iron and steel, 9,553,233 pounds, compared with 91,246,002; of tin plates, terneplates, and taggers tin, 230,073,683 pounds, compared with 628,425,902; of wire rods, 33,153,178 pounds, compared with 97,067,082; of anvils, 733,482 pounds, compared with 1,745,754. Imports of manganese ore were 217,604,593 pounds, against 140,601,989 pounds in 1896; of nickel ore and matte, 174,360 hundredweight, against 176,080 hundredweight. The imports of rags increased from 42,192,088 pounds in 1896 to 51,181,009 pounds. Platinum increased in quantity from 5,731 to 6,357 pounds. The imports of cheese increased from 10,728,397 pounds in 1896 to 12,319,122 in 1897. The imports of salt free of duty increased from 546,753,181 pounds in 1896 to 583,134,519 pounds in 1897, and dutiable salt, which was brought in to the extent of 104,387,326 pounds in 1895, and only 6,526,319 pounds in 1896, increased from this latter figure to 15,223,837 pounds. Of linseed the imports were 105,222, against 4,166,222 in 1895. Imports of raw silk in 1897 amounted to 6,513,612 pounds, against 8,000,621 pounds in 1896. Imports of brandy were 337,595 gallons, against 259,704 gallons in 1896; of other spirits, 1,727,110 proof gallons, against 1,249,895. The imports of molasses have declined from over 35,500,000 gallons in 1888 and 15,000,000 gallons in 1895 to 3,702,471 gallons in 1897. The imports of beet sugar have risen from 284,221,230 pounds in 1895 to 604,686,985 in 1896 and 1,865,577,495 in 1897; those of cane and other sugar free of duty have declined from 1,064,124,277 pounds in 1895 to 431,196,980 pounds. The imports of raw sugar paying duty were 2,422,995,089 pounds, against 2,752,012,512 in 1896 and 2,104,657,159 in 1895. The quantity of cane sugar produced in the United States in 1897 was 644,175,323 pounds. The consumption of sugar in the United States was estimated at 64½ pounds *per capita* in 1897. The duty collected on foreign sugar in 1897 amounted to \$41,253,753, the total importations amounting to 4,918,905,733 pounds. The average cost per pound in the foreign country was 2·01 cents in 1897, compared with 2·29 cents in 1896, 2·15 cents in 1895, 2·67 cents in 1885, and 4·35 cents in 1865. The imports of sulphur ore were 231,337 tons in 1897, against 176,402 tons in 1895. The quantity of tea imported was 113,347,175 pounds, against 93,998,372 pounds in 1896. The imports of leaf tobacco for cigar wrappers were 6,057,268 pounds in 1897, against 5,211,852 pounds in 1896; of other leaf, 7,747,950 pounds, against 27,713,114; of cigars, cigarettes, etc., 455,697 pounds, against 500,945. The imports of vegetables have declined in two years, beans and peas from 1,535,960 bushels in 1895 to 482,984; potatoes from 1,341,533 to 246,178 bushels. The imports of champagne in 1897 were 228,628 dozen bottles, against 246,393 in 1896; of still wine bottled, 309,281, against 314,190 dozen; of wine in casks, 2,997,952, against 2,834,898 gallons. The imports of mahogany in 1897 were 15,129 thousand feet; of logs and round timber, 333,727 thousand feet; of boards and other lumber, 883,735 thousand feet. The imports of clothing wools were 200,759,079 pounds in 1897,

against 117,233,440 pounds in 1896 and 82,615,995 pounds in 1895; of combing wools, 37,951,490 pounds, against 15,756,318 pounds in 1896 and 13,207,230 pounds in 1895; of carpet wools, 112,141,457 pounds, against 97,921,715 pounds in 1896 and 95,403,018 pounds in 1895; of woolen rags, noils, and wastes free of duty, 44,243,140 pounds, against 16,770,976 pounds in 1896 and 12,300,554 pounds in 1895; of woolen yarns, 1,842,556 pounds, against 2,023,009 pounds in 1896 and 2,403,846 pounds in 1895. The imports of carpets in 1897 were 470,757 square yards; of woolen cloths, 27,859,311 pounds; of dress goods, 22,048,526 pounds.

The values of articles of domestic merchandise exported in the year ending June 30, 1897, are given in the following table:

DOMESTIC EXPORTS.	
Agricultural implements:	Value.
Mowers and reapers.....	\$3,127,415
Plows and cultivators.....	590,779
All others.....	1,522,492
Animals:	
Cattle.....	36,357,451
Hogs.....	295,298
Horses.....	4,769,265
Mules.....	545,331
Sheep.....	1,531,645
All other, including fowls.....	68,771
Art works.....	301,362
Bark, and extract of, for tanning.....	241,979
Blacking.....	384,937
Bones, hoofs, and horns.....	280,140
Books, maps, engravings, etc.....	2,647,548
Brass, and manufactures of.....	1,171,431
Breadstuffs:	
Barley.....	7,646,384
Bread and biscuit.....	697,695
Corn.....	54,087,152
Corn meal.....	902,061
Oats.....	8,756,207
Oatmeal.....	1,071,340
Rye.....	3,667,505
Rye flour.....	7,366
Wheat.....	59,920,178
Wheat flour.....	55,914,347
All other breadstuffs, and preparations of	5,186,984
Bricks, fire and building.....	148,389
Broom corn.....	136,007
Brooms and brushes.....	186,056
Candles.....	216,565
Carriages and street cars.....	1,955,760
Cars, passenger and freight.....	990,950
Casings for sausages.....	1,514,651
Chemicals, drugs, dyes, and medicines:	
Acids.....	102,483
Ashes, pot and pearl.....	21,727
Dyes and dyestuffs.....	450,009
Ginseng.....	840,686
Medicines, proprietary.....	2,287,744
Roots, herbs, and barks.....	154,347
All other.....	5,930,582
Cider.....	77,695
Clay.....	24,810
Clocks and watches:	
Clocks, and parts of.....	968,911
Watches, and parts of.....	801,491
Coal:	
Anthracite.....	5,678,198
Bituminous.....	5,330,445
Coke.....	547,046
Coffee, cocoa, and chocolate, ground.....	128,078
Copper, and manufactures of:	
Ore.....	2,059,779
Ingots, bars, and old.....	30,711,597
All other.....	909,528
Cotton:	
Sea island.....	4,078,044
Other raw cotton.....	226,812,927
Cotton manufactures:	
Cloths, colored.....	4,770,231
Cloths, uncolored.....	12,511,389
Wearing apparel.....	878,804
All other.....	2,877,254
Cycles, and parts of.....	7,005,323
Dental goods.....	170,260
Earthen, stone, and china ware.....	177,832
Eggs.....	180,954
Feathers.....	530,313
Fertilizers.....	5,005,929
Fibers and textile grasses, manufactures of:	
Bags.....	498,373
Cordage.....	583,267
Twine.....	802,563
All other.....	331,981

DOMESTIC EXPORTS.		Value.
Fish:		
Fresh, other than salmon.....		\$59,563
Dried or cured cod.....		396,422
Smoked or cured herring.....		105,770
Other dried, smoked, or cured.....		38,571
Pickled mackerel.....		28,900
Other pickled.....		84,978
Canned salmon.....		3,215,798
Other salmon.....		284,891
Oysters.....		623,285
Other shellfish.....		309,498
All other fish.....		468,003
Fruits and nuts:		
Apples, dried.....		1,340,159
Apples, green or ripe.....		2,371,143
Canned fruits.....		1,686,723
Other preserved fruits.....		43,276
All other fruit, green, ripe, or dried.....		2,172,199
Nuts.....		125,805
Furs and fur skins.....		3,284,349
Ginger ale.....		3,264
Glass and glassware:		
Window glass.....		13,369
All other.....		1,194,818
Glucose, or grape sugar.....		2,736,674
Glue.....		132,581
Grease and soap stock.....		2,070,111
Gunpowder and other explosives:		
Gunpowder.....		118,001
Cartridges and other.....		1,437,317
Hair, and manufactures of.....		517,469
Hay.....		845,590
Hides and skins.....		2,388,530
Honey.....		22,368
Hops.....		1,304,183
Household and personal effects.....		448,892
Ice.....		51,560
India rubber and gutta-percha, manufactures of:		
Boots and shoes.....		195,490
All other.....		1,611,646
Ink, printers' and other.....		162,955
Instruments and apparatus for scientific purposes, including telegraph, telephone, and electric.....		3,054,453
Iron and steel, and manufactures of:		
Iron ore.....		34,168
Iron, scrap and old.....		193,503
Pig iron.....		2,331,771
Band, hoop, and scroll iron.....		16,984
Bar iron.....		126,646
Car wheels.....		112,187
Castings.....		989,432
Cutlery.....		178,381
Firearms.....		644,992
Steel ingots, rods, and bars.....		1,121,090
Locks, hinges, and builders' hardware.....		4,152,836
Machinery.....		19,771,856
Cut nails.....		519,471
Wire, horseshoe, and other nails and tacks		357,541
Iron plates and sheets.....		92,332
Steel plates and sheets.....		118,965
Printing presses, and parts of.....		649,710
Iron rails.....		79,488
Steel rails.....		2,482,408
Saws and tools.....		2,474,630
Sewing machines, and parts of.....		3,340,241
Fire engines.....		6,790
Locomotive engines.....		3,225,381
Stationary engines.....		323,438
Boilers and parts of engines.....		671,901
Stoves and ranges.....		325,625
Typesetting machines.....		1,453,117
Wire.....		2,242,617
All other manufactures.....		9,112,403
Jewelry, and manufactures of gold and silver.....		658,676
Lamps and illuminating appliances.....		710,997
Lead, and manufactures of:		
Pigs, bars, and old.....		474,690
Manufactures of lead.....		181,398
Leather, and manufactures of:		
Buff, grain, split, and all finished upper...		8,793,902
Patent or enameled.....		313,151
Sole.....		6,510,404
All other leather.....		813,798
Boots and shoes.....		1,708,224
Harness and saddles.....		246,490
All other manufactures.....		775,468
Lime and cement.....		72,311
Malt.....		177,292
Malt liquors.....		723,949
Marble and stone, and manufactures of:		
Unmanufactured.....		66,665
Roofing slate.....		780,112
All other.....		536,703
Matches.....		70,988
Musical instruments:		
Organs.....		799,132
Pianofortes.....		214,849
All other.....		262,736

DOMESTIC EXPORTS.

	Value.
Naval stores:	
Rosin.....	\$4,688,163
Tar.....	34,878
Turpentine and pitch.....	44,366
Turpentine, spirits of.....	4,447,551
Nickel, oxide, and matte.....	725,309
Oakum.....	19,969
Oil cake and meal:	
Cotton-seed.....	5,515,800
Flaxseed.....	4,095,244
Oils:	
Lard.....	419,803
Whale.....	21,333
Fish.....	155,052
Other animal.....	47,836
Mineral, crude.....	6,171,852
Naphthas.....	1,123,347
Illuminating.....	48,543,916
Lubricating and heavy paraffin.....	6,619,864
Residuum.....	176,058
Cotton-seed oil.....	6,897,361
Linseed oil.....	42,700
Peppermint, oil of.....	257,484
Other volatile or essential oils.....	146,569
All other vegetable oils.....	1,167,504
Paints, pigments, and colors.....	944,536
Paper, and manufactures of:	
Paper hangings.....	111,146
Writing paper and envelopes.....	110,329
All other.....	3,111,688
Paraffin and paraffin wax.....	4,957,006
Perfumery and cosmetics.....	316,913
Photographic materials.....	503,570
Plants, trees, and shrubs.....	135,647
Plated ware.....	443,032
Platinum, and manufactures of.....	10,400
Provisions, comprising meat and dairy products:	
Beef, canned.....	4,656,808
Beef, fresh.....	22,653,742
Beef, salted or pickled.....	3,514,126
Beef, other cured.....	83,701
Beef tallow.....	2,782,595
Bacon.....	34,187,147
Hams.....	15,970,921
Pork, fresh.....	94,816
Pork, pickled.....	3,297,214
Lard.....	29,126,485
Lard compounds and substitutes.....	857,708
Mutton.....	28,341
Imitation butter.....	472,856
Oleomargarine.....	6,742,061
Poultry and game.....	72,082
All other meat products.....	2,944,486
Butter.....	4,493,364
Cheese.....	4,636,063
Milk.....	524,968
Quicksilver.....	448,333
Quills.....	74,840
Rags.....	14,617
Rice.....	20,113
Rice bran, meal, and polish.....	41,832
Salt.....	15,460
Seeds:	
Clover.....	1,003,157
Cotton.....	170,604
Flaxseed or linsced.....	3,850,835
Timothy.....	574,457
All other.....	429,379
Shells.....	175,764
Silk, manufactures of.....	224,660
Silk waste.....	13,181
Soap:	
Toilet or fancy.....	204,564
All other.....	932,316
Spermaceti and spermaceti wax.....	72,568
Soices, ground or prepared.....	772
Spirits, distilled:	
Alcohol, including pure, neutral, or cologne spirits.....	140,046
Brandy.....	12,640
Rum.....	1,102,267
Whisky, bourbon.....	422,451
Whisky, rye.....	38,402
All other.....	225,897
Sponges.....	53,962
Starch.....	1,665,926
Stationery, except of paper.....	928,378
Stearine.....	70,534
Stereotype and electrotype plates.....	69,505
Straw and palm leaf, manufactures of.....	305,418
Sugar and molasses:	
Molasses and sirup.....	788,323
Sugar, brown.....	35,367
Sugar, refined.....	341,641
Candy and confectionery.....	543,631
Teeth, artificial.....	73,533
Tin, manufactures of.....	300,441
Tobacco, and manufactures of:	
Leaf.....	24,513,567

DOMESTIC EXPORTS.

	Value.
Tobacco, and manufactures of:	
Stems and trimmings.....	\$197,879
Cigars.....	41,685
Cigarettes.....	1,959,252
All other manufactures.....	3,024,880
Toys.....	133,792
Trunks, valises, and traveling bags.....	100,382
Varnish.....	431,761
Vegetables:	
Beans and peas.....	1,110,387
Onions.....	60,088
Potatoes.....	515,067
Canned vegetables.....	498,840
All other, including pickles and sauces.....	243,542
Vessels sold to foreigners:	
Steamers.....	189,413
Sailing vessels.....	2,427
Vinegar.....	11,572
Wax.....	56,462
Whalebone.....	383,603
Wine.....	698,714
Wood, and manufactures of:	
Sawed timber.....	4,036,214
Hewn timber.....	1,236,112
Logs and other timber.....	3,945,106
Boards, deals, and planks.....	13,076,247
Joists and scantling.....	423,875
Shingles.....	103,231
Box shooks.....	529,492
Other shooks.....	597,606
Staves and heading.....	3,922,031
All other lumber.....	3,162,470
Doors, sashes, and blinds.....	857,404
Moldings, trimmings, and house finishings.....	197,934
Hogsheads and barrels.....	267,345
Household furniture.....	3,785,143
Woodenware.....	531,480
All other manufactures.....	3,253,110
Wool, and manufactures of:	
Wool, raw.....	619,932
Carpets.....	189,579
Flannels and blankets.....	57,373
Wearing apparel.....	385,845
All other manufactures.....	315,011
Yeast.....	42,849
Zinc, and manufactures of:	
Ores.....	122,765
Pigs, bars, plates, and sheets.....	1,756,617
All other manufactures.....	72,943
All other articles.....	2,144,290

Total domestic exports..... \$1,032,007,603

Agricultural produce, which constituted 83·25 per cent. of the total exports in 1880 and 74·45 per cent. in 1890, made 66·23 per cent. of the total of 1897; mining products made 2·01 per cent., a smaller proportion than in any year since 1888; forest products made 3·92 per cent., showing a gradual gain for four years; fishery products formed 0·63 per cent. of the total exports of the year; miscellaneous products other than manufactures formed 0·34 per cent.; and manufactures constituted 26·87 per cent., compared with 26·48 per cent. in 1896, 23·14 per cent. in 1895, 21·14 per cent. in 1894, 19·02 per cent. in 1893, 15·61 per cent. in 1892, 19·37 per cent. in 1891, 17·87 per cent. in 1890, 12·48 per cent. in 1880, 15 per cent. in 1870, and 12·76 per cent. in 1860. The value of the agricultural products exported in 1897 was \$683,471,139, exceeding the exports of this class in any year except 1892, when it was \$799,328,232; the value of mining products exported was \$20,804,573, about the average of the previous eight years; the value of the forest products exported was \$40,489,321, more than 20 per cent. more than in 1896, nearly twice as much as in 1886, and four times the exports of 1860; the value of the fishery exports was \$6,477,951, a little less than in 1896, 13 per cent. less than in 1890, and 10 per cent. less than in 1889, but exceeding all other previous years; the value of miscellaneous products exported was \$3,479,228, a falling off from previous years; the exports of manufactured products were \$277,285,391 in value, compared with \$228,571,178 in 1896, \$183,595,743 in 1895, \$183,728,808 in 1894, \$158,023,118 in 1893, \$158,510,937 in 1892, \$168,927,315 in 1891, \$151,102,376 in 1890, \$102,856,015 in 1880, \$68,279,764 in 1870, and \$40,345,892 in 1860.

The numbers of live animals exported in 1897 were 392,190 cattle, 28,751 hogs, 39,532 horses, 7,473 mules, and 244,120 sheep. The export of horses has increased from 25,126 in 1896, 13,984 in 1895, 5,246 in 1894, and 2,000 or 3,000 in previous years; the export of cattle had expanded for two years, but was not as great as in 1892 or 1890. The exports of breadstuffs consisted mainly of 79,562,020 bushels of wheat, 14,569,545 barrels of wheat flour, 176,916,365 bushels of corn, 35,096,736 bushels of oats, 20,030,301 bushels of barley, and 8,560,271 bushels of rye. The exports of wheat to Europe were 67,512,440 bushels, of which the United Kingdom took 55,742,689 bushels. Of the exports of wheat flour 9,234,932 barrels went to Europe, of which 8,256,630 were shipped to England and 2,168,761 to the Netherlands; 2,191,741 went to North American countries, of which Canada took 709,873, the British West Indies 543,864, Cuba only 132,738; 1,297,839 barrels went to South America; and 1,235,133 barrels went to Asia. The exports of corn to Europe have undergone great fluctuations, amounting to 154,210,002 bushels in 1897, against 88,856,848 in 1896, 23,225,540 in 1895, 53,158,579 in 1894, 30,260,017 in 1893, 69,591,177 in 1892, 23,669,783 in 1891, 89,662,689 in 1890, 60,043,851 in 1889, and 19,237,241 in 1888. The coal exports in 1897 consisted of 1,274,417 tons of anthracite and 2,384,069 tons of bituminous. The exports of ginseng have fallen off from 251,205 pounds in 1893 to 179,573 pounds in 1897, but scarcity makes the smaller quantity more valuable than the greater. The copper exports in 1897 consisted of 15,001 tons of ore and 279,393,807 pounds of metal, compared with 175,580,762 pounds in 1896, 148,446,039 pounds in 1895, and 37,642,464 pounds in 1894. The exports of Sea Island cotton have recovered from 7,983,415 pounds in 1893 and 14,235,439 pounds in 1894 to 21,585,360 pounds in 1897. The exports of ordinary cotton were 6,176,365 bales, or 3,082,169,589 pounds, against 4,659,765 bales in 1896, 6,965,358 in 1895, and 5,397,509 in 1894. The total crop of 1897 was 4,397,177,704 pounds, or 8,757,964 bales, and out of this 3,103,754,949 pounds were exported, exceeding the exports of any previous crop year excepting 1895, being 70.59 per cent. of the total product, compared with 65 per cent. in 1896, 69.83 per cent. in 1895, and 71.20 per cent. in 1894. The consumption of American spinners was 1,293,422,725 pounds of domestic and 50,710,403 pounds of foreign, a total of 1,344,133,128 pounds. The exports of cotton cloth in the fiscal year 1897 were 313,533,044 yards, made up of 83,409,441 yards of colored and 230,123,603 yards of uncolored. The principal customers were China to the extent of 140,121,035 yards; the rest of Asia and Oceanica, 36,113,401 yards; Canada, 29,254,586 yards; West Indies, 15,693,546 yards; Chili, 13,419,230 yards; Brazil, 8,331,326 yards; the rest of South America, 22,837,755 yards; Central America, 10,446,766 yards; Mexico, 5,577,808 yards; Madagascar, 10,831,409 yards; the rest of Africa, 5,452,910 yards; Great Britain, 11,094,345 yards. Among the fish exports the most notable increase has been in canned salmon, of which 35,303,299 pounds were exported in 1897. The exports of dried apples were 30,775,401 pounds; of green and ripe apples, 1,503,981 barrels, against 360,002 in 1896. The export of glucose has grown from 6,263,751 pounds in 1888 to 194,419,250 pounds. There were 168,890 tons of pig iron exported, against 29,862 tons in 1896; of steel ingots and bars 92,507,017 pounds, against 5,988,502 pounds. Iron manufactures, such as car wheels, builders' hardware, machinery, nails and spikes, printing presses, saws and tools, locomotives, wire, and sheets and plates show a steady expansion. The export of pig lead has risen from 1,885,198 pounds in 1895 to

17,632,455 in 1897. The export of crude petroleum in 1897 was 131,726,243 gallons, against 110,923,620 in 1896; of illuminating oil, 771,350,626 gallons, against 716,455,565; of lubricating oil, 50,199,345 gallons, against 50,525,530. The cotton-seed oil exports were 27,198,882 gallons, against 19,445,848 gallons in 1896. The exports of paraffin, amounting to 126,365,128 pounds, have doubled in the course of five years. The exports of canned beef in 1897 were 54,019,772 pounds, 9,578,000 pounds more than in the preceding year; of fresh beef, 290,395,930 pounds, 65,612,000 pounds more; of salted and pickled beef, 67,712,940 pounds, 2,997,000 pounds less; of tallow, 75,108,834 pounds, 22,349,000 pounds more; of bacon, 500,399,448 pounds, 75,047,000 pounds more; of hams, 165,247,302 pounds, 36,211,000 pounds more; of pickled pork, 66,768,920 pounds, 2,730,000 pounds less; of lard, 568,315,640 pounds, 58,781,000 pounds more; of margarine butter, 4,864,351 pounds, 1,199,000 pounds less; of margarine oil, 113,506,152 pounds, 10,230,000 pounds more; of butter, 31,345,224 pounds, 11,971,000 pounds more; of cheese, 50,944,617 pounds, 14,167,000 pounds more. The exports of leaf tobacco in 1897 reached the total of 305,978,292 pounds, though the value was little greater than in the preceding year, when the exports were 287,700,301 pounds. The exports of beans and peas were 900,219 bushels, almost double the amount for 1896. The exports of sawed timber were 391,291 thousand feet; of hewn timber, 6,406,824 cubic feet; of boards, deals, and planks, 876,689 thousand feet.

Of the total imports by sea in 1897 only 15 per cent. were carried in American vessels, compared with 15.7 per cent. in 1896, 15.5 per cent. in 1895, and 19.4 per cent. in 1894. Of the total value \$109,133,454 arrived in American vessels and \$619,784,338 in foreign vessels, making the total by sea \$728,917,792, while \$35,812,620 came in land vehicles. Of the total exports \$65,082,305 went by land and \$985,911,251 by sea, \$905,969,428 in foreign vessels and \$79,441,823 in American vessels, the proportion being 8.1 per cent. of the sea-borne commerce, compared with 8.5 per cent. in 1896, 8.2 per cent. in 1895, and 8.7 per cent. in 1894. Of the total carrying trade the percentage falling to American ships was 11 per cent., whereas it was 12 per cent. in 1896, 12½ per cent. in 1891, 15½ per cent. in 1886, 16½ per cent. in 1881, 27¾ per cent. in 1876, 32 per cent. in 1871, 50 per cent. in 1862, and 66½ per cent. in 1860.

The commercial intercourse of the United States with the different countries of the world in the year 1897 is shown in the following table:

COUNTRIES.	Imports.	Exports.
Europe:		
Austria-Hungary	\$8,158,328	\$4,023,011
Azores and Madeira	12,535	298,809
Belgium.....	27,070,625	33,071,555
Denmark.....	356,355	10,194,857
France.....	67,530,231	57,594,541
Germany.....	111,210,614	125,246,088
Gibraltar.....	26,262	332,245
Greece.....	732,702	110,763
Greenland, Iceland, and Faröes	40,056	
Italy.....	19,067,352	21,502,423
Netherlands.....	12,824,126	51,045,011
Portugal.....	2,234,291	2,520,058
Roumania.....		42,065
Russia.....	3,199,679	7,602,276
Servia.....	21,253	29,520
Spain.....	3,631,973	10,912,745
Sweden and Norway.....	2,500,118	5,463,641
Switzerland.....	13,849,782	70,871
Turkey in Europe.....	2,766,094	54,767
United Kingdom.....	167,947,820	483,270,398
Total Europe.....	\$430,192,205	\$813,385,644

COUNTRIES.	Imports.	Exports.
North America :		
British Honduras	\$226,683	\$569,767
British North America.....	40,722,792	66,028,725
Costa Rica	3,439,374	1,357,472
Guatemala.....	1,862,589	3,047,181
Honduras.....	847,230	724,991
Nicaragua	1,262,701	1,190,695
Salvador.....	1,112,534	1,619,568
Mexico.....	18,511,572	23,421,064
Miquelon, Langley, and St. Pierre.....	139,803	167,449
British West Indies.....	12,907,716	8,798,131
Danish West Indies.....	367,289	521,765
Dutch West Indies.....	96,343	652,341
French West Indies.....	9,944	1,679,625
Hayti.....	1,460,220	3,832,388
Santo Domingo.....	2,369,424	1,098,635
Cuba.....	18,406,815	8,259,776
Puerto Rico.....	2,181,024	1,988,888
Total North America	\$105,924,053	\$124,958,461
South America :		
Argentine Republic.....	\$10,772,627	\$6,384,984
Bolivia		5,155
Brazil	69,039,389	12,441,065
Chili.....	4,730,933	3,807,165
Colombia.....	566,526	734,868
Ecuador.....		800
Falkland Islands.....	3,661,956	1,565,936
British Guiana.....	1,036,688	384,336
Dutch Guiana.....	8,137	113,674
French Guiana.....		740
Paraguay.....	722,089	1,108,436
Peru.....	3,515,054	1,213,426
Uruguay.....	9,543,572	3,417,522
Venezuela.....		
Total South America.....	\$107,389,405	\$33,768,646
Asia :		
Aden.....	\$1,503,802	\$991,397
China.....	20,403,862	11,924,433
British East Indies.....	20,567,122	3,844,911
Dutch East Indies.....	15,604,866	2,094,109
French East Indies.....		135,183
Portuguese East Indies.....	519	
Hong-Kong	923,842	6,060,039
Japan.....	24,009,756	13,255,478
Korea.....		509
Asiatic Russia.....	201,421	413,942
Turkey in Asia.....	4,009,027	74,899
Rest of Asia.....	70,330	480,005
Total Asia.....	\$87,294,597	\$39,274,905
Oceanica :		
British Australasia.....	\$5,900,144	\$17,460,283
French Oceania.....	378,144	330,364
Hawaiian Islands.....	13,687,799	4,690,075
Philippine Islands	4,383,740	94,597
Rest of Oceanica.....	50,612	77,454
Total Oceanica.....	\$24,400,439	\$22,652,773
Africa :		
British Africa.....	\$1,468,994	\$13,096,643
Canary Islands.....	49,909	297,878
French Africa	254,755	302,010
Liberia.....	7,023	11,443
Madagascar.....	17,088	473,353
Portuguese Africa.....	23,253	1,869,933
Spanish Africa.....		4,740
Egypt.....	7,027,005	323,761
Tripoli.....	119,238	37
Rest of Africa.....	562,448	573,329
Total Africa	\$13,870,760	\$16,953,127
Grand total	\$764,730,412	\$1,050,993

The imports of gold coin and bullion for 1897 were \$85,014,780, and the exports were \$40,361,580, of which \$39,152,522 were domestic and \$1,209,058 foreign, leaving an excess of imports of \$44,653,200, reversing the current, which had taken gold from the United States for eight years, the net exports in 1896 having been \$78,884,882, the largest outflow of any year except 1893, now suddenly succeeded by the greatest influx except that of 1880 and 1881, the epoch of specie resumption. The silver imports in 1897 were \$30,533,227 in coin value, and the exports were \$61,946,638, comprising \$56,-

451,823 of domestic and \$5,404,815 of foreign, exceeding by over 2 per cent. the exports for 1896, which were nearly 20 per cent. greater than those of 1894, the greatest of any other year.

Navigation.—The tonnage entered at United States ports during the year ending June 30, 1897, was 20,002,639, of which 3,845,737 tons were sailing vessels, 1,129,745 American and 2,715,992 foreign, and 16,156,902 tons were steamers, 2,481,431 American and 13,675,471 foreign. The total tonnage cleared was 19,878,405, of which 3,697,270 tons were sailing vessels, 1,139,285 American and 2,557,985 foreign, and 16,181,135 tons were steamers, 2,498,164 American and 13,682,971 foreign. Of the total tonnage entered 6,525,070 tons arrived from British, 1,667,106 from German, 1,358,663 from British Columbian, 1,038,519 from Cuban, 926,175 from Nova Scotian and New Brunswick, 908,841 from Brazilian, 758,754 from British West Indian, 661,755 from Belgian, 527,711 from Dutch, 509,373 from Italian, 489,793 from French, 353,038 from Mexican, 292,053 from Colombian, 282,321 from Australian, 262,345 from Chinese, 243,572 from Spanish, and 3,197,550 from other ports. Of the total tonnage cleared 7,163,057 tons departed for British, 2,079,382 for German, 1,360,579 for British Columbian, 1,075,623 for Nova Scotian and New Brunswick, 1,061,546 for Dutch, 864,767 for French, 798,394 for Cuban, 666,127 for Belgian, 499,315 for British West Indian, 426,772 for Italian, 311,360 for Chinese, 258,688 for Australasian, 256,715 for Mexican, 244,249 for Colombian, 198,029 for Brazilian, and 2,454,147 for other ports.

The United States mercantile marine on June 30, 1897, comprised 22,633 vessels, of 4,769,020 tons, of which 6,599, of 2,353,900 tons, were steamers, and 16,034, of 2,415,120 tons, were sailing vessels, canal boats, and barges. There were 237 steamers, of 253,816 tons, 928 sailing vessels, of 535,403 tons, and 11 barges, of 3,651 tons, employed in the foreign trade, a total of 1,176 vessels, of 792,870 tons. In the coastwise trade were engaged 6,352 steamers, of 2,100,084 tons, 11,331 sailing vessels, of 1,294,084 tons, 650 canal boats, of 73,786 tons, and 1,469 barges, of 428,872 tons, a total of 19,802 vessels, of 3,896,826 tons. There were built during 1897 a total number of 891 vessels, of 232,233 tons, of which 338, of 64,309 tons, were sailing vessels, 288, of 106,153 tons, were steamers, 70, of 10,216 tons, were canal boats, and 195, of 11,528 tons, were barges. The iron and steel tonnage built during the year was 124,385, of which 46,159 tons were sailing vessels and barges and 78,236 tons steam vessels.

Railroads.—The railroads of the United States had, on June 30, 1896, a total length of 182,776 miles, an increase during the year of 2,119 miles. The number of miles operated in 1896 was 180,891, having a capital stock of \$5,290,730,567 and a funded debt of \$5,416,074,969. The gross earnings were \$1,125,632,025, of which \$265,313,258 came from passengers, \$770,424,013 from freight, and \$89,894,754 from miscellaneous sources. The operating expenses were \$793,298,269, leaving as net earnings \$332,333,756, to which \$104,007,542 of rentals from lessor companies and other receipts must be added to give the total available revenue of \$436,341,298, out of which were paid \$59,081,058 of rentals, tolls, etc., \$242,415,494 of interest on bonds, \$7,996,456 of interest on floating debts, \$81,304,854 of dividends, and \$34,233,688 of miscellaneous outlay, making a total of \$425,031,550, and leaving a surplus of \$11,309,748. The number of passengers carried during the year was 535,120,756, and the total passenger mileage 13,054,840,243; tons of freight moved, 773,868,716, with a total freight mileage of 93,885,853,634. The total length

of track of 178,549 miles of railroads was 235,482 miles, including 56,933 miles of side tracks and sidings. Of this total 207,618 miles consisted of steel and 27,864 miles of iron rails. The total liabilities of the railroads, including capital stock, bonded debt, unfunded debt amounting to \$339,502,302, and \$386,382,440 of current accounts, amounted to \$11,432,690,278, and the total assets, comprising \$9,953,767,710 of cost of railroad and equipment, \$1,450,418,025 of real estate, stocks, bonds, and other investments, \$231,915,121 of other assets, and \$161,396,357 of current accounts, was \$11,797,497,213, leaving \$364,806,935 excess of assets over liabilities.

Telegraphs.—The Western Union Telegraph Company on June 30, 1897, had 190,614 miles of line, with 841,002 miles of wire, not including 8,000 miles of line and 60,000 miles of wire belonging to the New York Mutual Telegraph Company, 6,711 miles of line and 54,087 miles of wire of the Baltimore and Ohio Railroad Company, and 2,684 miles of line and 20,370 miles of wire of the American Rapid Telegraph Company, 8,000 miles of wire of the Northwestern Telegraph Company and other lines, making over 210,000 miles of line open to traffic, nearly all operated by the Western Union Company. The number of messages sent in 1897 was 58,151,684. The receipts were \$22,638,859; expenses, \$16,906,656; profits, \$5,732,203. The capital stock is \$100,000,000.

Arbitration Treaty with Great Britain.—On Jan. 11, 1897, a treaty providing for the settlement of future disputes arising between the United States and Great Britain by arbitration was signed at Washington by Secretary Olney and Sir Julian Pauncefote. The establishment of a system of international arbitration for the adjustment of disputes between the two governments was the subject of communications exchanged between Secretary Gresham and Sir Julian Pauncefote in the spring of 1895. When Mr. Olney, on Feb. 27, 1896, proposed a joint commission and ultimate binding arbitration for the settlement of the Venezuela boundary dispute Lord Salisbury took the view that he was not prepared in matters of high political import to admit unrestricted arbitration. On March 5, 1896, in a dispatch to the British ambassador at Washington, he proposed a general arbitration treaty, excluding issues upon which neither government was willing to accept arbitration, such as involve the national honor or integrity. In the wide region that lies within this boundary the United States desired to go further than Great Britain. A system of arbitration would be an entirely novel arrangement, and therefore the conditions under which it should be adopted were not likely to be ascertained antecedently, and the limits ultimately adopted must be determined by experiment. In the interests of the idea and of the pacific results that were expected from it, the British Minister of Foreign Affairs thought it wise to make a modest beginning. He inclosed in the dispatch a draft treaty, the adoption of which would give an opportunity for observing more closely the working of the machinery, leaving it entirely open to the contracting parties to extend its application and to bring under its action controversies to which for the present it can only be applied in a tentative manner and to a limited extent.

In the draft treaty Lord Salisbury proposed that the British and American governments should each appoint two or more judicial officers, and on the appearance of any difference between the two powers which in the judgment of either of them can not be settled by negotiation, each of them should designate one of the said officers as arbitrator, and the two should hear and determine any

matter referred to them in accordance with the treaty, having previously selected an umpire, by whom any question upon which they disagree, whether interlocutory or final, should be decided. No question which in the judgment of either power affects its honor or the integrity of its territory would be referred to arbitration except by special agreement. Any difference whatever might be referred by agreement between the two powers, with the stipulation that the decision should not be valid unless accepted by both powers.

Secretary Olney, in his answer of April 11, 1896, said that the President reciprocated in behalf of the Government and people of the United States the desire manifested in the proposals of Lord Salisbury that the two great English-speaking peoples of the world should remain in perpetual peace. In regard to the scope of arbitration, he proposed that all disputes should be considered arbitrable unless the Congress of the United States or the Parliament of Great Britain by act or resolution declare that the matter in controversy involves the national honor or integrity, and withdraw it from the operation of the treaty. In regard to the appellate arbitration machinery he proposed that a majority of the six American and English Supreme Court judges should decide, and if the court be equally divided upon the subject of the award, that three learned and impartial jurists upon whom the six judges have agreed beforehand, should be added, and the award of the court so constituted, whether rendered unanimously or by a majority vote, should be final. If the award of the original arbitrators be unanimous there should be no appeal. The British Secretary of State insisted on retaining the right to reject the award on territorial questions unless the vote of the court of appeal was five to one, and Mr. Olney finally gave way.

In the treaty which was negotiated and signed, but which the United States Senate refused to ratify in its original form, introducing amendments that were not pressed by the United States Government, the contracting governments agreed to submit to arbitration all questions in difference between them which they fail to adjust by diplomatic negotiation. Pecuniary claims or groups of claims arising out of the same transactions or involving the same issues of law and of fact, and which do not in the aggregate exceed £100,000 in amount nor involve the determination of territorial claims, were to be dealt with and decided by an arbitral tribunal composed of one arbitrator, who should be a jurist of repute, nominated by each of the high contracting parties, and a third member to act as umpire and president of the tribunal, who should be selected by the two arbitrators; or on their failing to agree on any person within two months, by an agreement between the United States Supreme Court and the Judicial Committee of the Privy Council in Great Britain; or, failing such an agreement, by the King of Sweden and Norway. The award of the majority of the members of this tribunal would be final. Pecuniary claims or groups of claims exceeding £500,000 in amount and all matters in difference in respect of which either of the high contracting parties should have rights against the other under treaty or otherwise, provided they do not involve the determination of territorial claims, were to be dealt with and decided by an arbitral tribunal consisting of five jurists of repute, two to be nominated by each of the contracting governments, and the umpire to be selected by them or by the United States Supreme Court and Judicial Committee of the Privy Council, or by the King of Sweden and Norway. The award of a majority of the members of this tri-

bunal would be final. If, however, before the close of the hearing upon a claim submitted to one of these arbitral tribunals either government should move and the tribunal should decide that a disputed question of principle of grave general importance was involved affecting national as distinguished from private rights, then the jurisdiction of this tribunal would cease, and the case would be transferred to a tribunal constituted as described below. Any controversy involving the determination of territorial claims was to be submitted to a tribunal composed of three judges of the Supreme Court or justices of the Circuit Court to be nominated by the President of the United States, and three judges of the British Supreme Court of Judicature, or members of the Judicial Committee of the Privy Council to be nominated by the British Crown. In cases where the question involved concerns a particular State or Territory of the United States, or a British colony or possession, a judicial officer of such State or Territory or of such colony or possession might be appointed to be one of the arbitrators. An award in which five of the six arbitrators concurred would be accepted by both governments as final; an award made by less than this majority would have no validity if either government should within three months protest that it was erroneous. In the event of an award made by less than the prescribed majority or of an equal division of the arbitral tribunal, it was agreed that there should be no recourse to hostile measures of any description until the mediation of one or more friendly powers had been invited by one or both of the high contracting parties. Territorial claims were defined as including all claims involving questions of servitude, rights of navigation and of access, fisheries, and all rights and interests necessary to the control and enjoyment of the territory claimed by either of the high contracting parties. It was left open to either government to ask that for all cases or for any particular case a substitute be agreed upon to name the umpire instead of the King of Sweden and Norway, on the ground that material changes of conditions had occurred, and the same would be done if the King of Sweden and Norway desired to be relieved of the functions. The treaty was concluded for five years.

Alaska Boundary Treaty.—A treaty was signed by the Secretary of State and the British Ambassador at Washington on Jan. 30, 1897, providing for the demarcation of as much of the boundary between Alaska and the Dominion of Canada as lies along the one hundred and forty-first meridian. The text of the treaty is as follows:

1. Each government shall appoint one commissioner, with whom may be associated such surveyors, astronomers, and other assistants as each government may elect.

The commissioners shall at as early a period as practicable proceed to trace and mark, under their joint directions and by joint operations in the field, so much of the one hundred and forty-first meridian of west longitude as is necessary to be defined for the purpose of determining the exact limits of the territory ceded to the United States by the treaty between the United States and Russia of March 30, 1867. Inasmuch as the summit of Mount St. Elias, although not ascertained to lie in fact upon the one hundred and forty-first meridian, is so nearly coincident therewith that it may conveniently be taken as a visible landmark whereby the initial part of said meridian shall be established, it is agreed that the commissioners, should they conclude that it is advisable so to do, may deflect the most southerly portion of said line so as to make the range with the summit of Mount St.

Elias, such deflection not to extend more than twenty geographical miles northwardly from the initial point.

2. The data relating to the determinations already made at this time by either of the two governments concerned of points on or near the one hundred and forty-first meridian for the purpose of fixing its position shall be submitted by each government to the commissioners, who shall decide which of the results of the determination shall be adopted by them. In case of disagreement between the commissioners as to the correct geographical co-ordinates of one and the same point determined by either of the two governments separately, a position midway between the two locations in question of the one hundred and forty-first meridian shall be adopted, provided the discrepancy between them shall not exceed 1,000 feet. In case of a greater discrepancy a new joint determination shall be made by the commissioners.

3. The location of the one hundred and forty-first meridian as determined hereunder shall be marked by intervisible objects, natural or artificial, at such distances apart as the commissioners shall agree upon, and by such additional marks as they shall deem necessary, and the line, when and where thus marked, in whole or in part, shall be deemed to permanently define for all international purposes the one hundred and forty-first meridian mentioned in the treaty of March 30, 1867, between the United States and Russia, and in the treaty of Feb. 28 (16), 1825, between Great Britain and Russia.

The location of the marks shall be described by such views, maps, and other means as the commissioner shall decide upon, and duplicate records of these descriptions shall be attested by the commissioners jointly, and be by them deposited with their respective governments together with their final report hereinafter mentioned.

4. Each government shall bear the expenses incident to the employment of its own appointees and of the operations conducted by them, but the cost of material used in permanently marking the meridian and of its transportation shall be borne jointly and equally by the two governments.

5. The commissioners shall diligently prosecute the work to its completion, and they shall submit to their respective governments from time to time, and at least once in every calendar year, a joint report of progress and a final comprehensive report upon the completion of the whole work.

The Sealing Question.—A convention for the determination of the damages to which British vessels seized in Bering Sea were entitled under the Paris award of August, 1893, was signed in January, 1897, with the assent of Canada. The Paris tribunal had decided that Bering Sea was a part of the high seas and pronounced the seizure of sealing vessels outside of territorial waters illegal, but declined to go into the question of damages, leaving that to the consideration of the two governments. The Senate in 1896 had rejected an agreement made with the British Government to pay over a lump sum of \$425,000 in settlement of all damages. The convention was duly ratified, and Judge William L. Putnam, of the United States Circuit Court, on the part of the United States and on the part of Great Britain, George E. King, a justice of the Supreme Court of Canada, were appointed commissioners to assess the damages.

President McKinley appointed John W. Foster and Charles S. Hamlin special commissioners to endeavor to secure from the British Government a *modus vivendi* for the suspension of seal killing in Bering Sea for the season of 1897. Two years before Mr. Gresham had urged a speedy modification of the Paris regulations in order to avert the ex-

termination of the herd, and proposed a commission to examine the question in which Japan and Russia should be invited to join, asking that sealing in Bering Sea should meanwhile be prohibited and the north Pacific restrictions extended along the thirty-fifth parallel to the Asiatic shore. After waiting four months the British Government answered that it was too late to stop the sealers and that an international commission would not lead to any useful result. When more seals were killed under the Paris regulations than before, the British authorities assumed that the seals were increasing instead of being rapidly exterminated, as the United States Government represented. In 1896 the depletion of the herd was evidenced in the pelagic catch, which was only half as great as in 1894. Dr. David Starr Jordan, the American expert who investigated the conditions of seal life, in his final report estimated that the herd on the Pribyloff Islands had decreased to about one fifth its size in 1874, and to less than half its size in 1890. His investigation in 1897 showed that the shrinkage on the rookeries in 1896 was 15 per cent., and that the number of killable males had fallen 33 per cent. owing to the starvation of pups from pelagic sealing. In his preliminary report he estimated the herd in 1896 as consisting of 143,071 breeding females, or a total number of 440,000 seals of all grades. Dr. Jordan described pelagic sealing as a suicidal industry which can be profitably continued only under conditions that must bring it to a speedy end. Since it began more than 600,000 fur seals have been taken in the north Pacific. This means the death of about 400,000 breeding females, the starvation of 300,000 pups, and the destruction of 400,000 pups still unborn, taking account only of the seals whose skins have been brought to the market, as no record is available of the animals lost after being speared or shot, though their number is known to be very great.

On May 10, 1897, Mr. Sherman, in a dispatch to Ambassador Hay, declared that the British Government had from the beginning and continuously failed to respect the real intent and spirit of the tribunal or the obligations imposed by it. The consequence was that the British sealers had practically accomplished the commercial extermination of the fur seal and brought to naught the patient labors and well-meant conclusions of the tribunal of arbitration. The British Government had opposed the demand for a conference before the term of five years fixed by the Paris tribunal, but the American Government urged that to defer the subject until after the termination of the season of 1898 would be fatal to the subject in view, as, should the destruction continue during two more seasons, there would be no occasion, owing to the disappearance of the seals, for a conference. The evasive policy that the British Government had followed was shown by the refusal to extend the regulations to the Asiatic waters; by the failure to put in operation the recommendations for a suspension of the killing of the seals for three, for two, or even for one year; by the neglect to put the regulations in force until long after the first sealing had been entered on; by the almost total evasion of the patrol duty; by the opposition to suitable measures for the enforcement of the prohibition against firearms; by the omission to enact legislation necessary to secure conviction of the guilty; and by the refusal to allow or provide for an inspection of skins in the interest of an honest observance of the regulations.

These accusations were treated by the British Government as too undiplomatic to deserve an answer except indirectly in a justificatory memorandum from the Colonial Office explaining that the British Government had withdrawn from the ar-

range for the sealing up of arms because it did not serve to save British vessels from unnecessary interference, but was actually made a pretext for unwarrantable seizures; that it had refused to ask for legislation for the inspection of skins because it was not believed that such inspection would serve any useful purpose, as the sex of young seals could not be determined accurately from an examination of their skins. The colonial authorities in this communication asserted that the British Government had performed with the utmost vigor all the requirements of the award, but had been compelled to make continual and unavailing protests against the attempts of the United States to hamper and embarrass the operations of British subjects pursuing their lawful vocation.

Prof. D'Arcy Thompson, the English scientific expert who investigated the conditions on the rookeries in 1896, declared in his reports that the accounts of the herd's immense decrease and the prophecies of its approaching extinction were overdrawn and untenable. Nevertheless there was abundant need for care and for prudent measures of conservation in the interests of all. A birth rate estimated at 143,000 per annum was not great in comparison with the drain upon the stock. A loss of over 20,000 is experienced among the pups ere they emigrate, and the dangers and loss they endure in their migration are considerable, and when to the measured loss in infancy and the unmeasured loss in youth and age is added the toll taken on the islands, and then the toll taken at sea, it is not difficult to believe that the margin of safety is narrow if it be not already somewhat overstepped. A perpetuation of the present numbers might be hoped; no increase could be counted upon. It was therefore to be hoped that a recognition of mutual interests and a regard for the common advantage would suggest measures of prudence that would keep the pursuit and slaughter of the animal within due and definite bounds.

Mr. Gresham, in March, 1894, suggested a convention between the four powers principally interested, namely, the United States, Great Britain, Russia, and Japan, to embrace a complete scheme of regulations applicable not only to the high seas, but also within the sovereignty, and he coupled it with a proposal that meantime the *modus vivendi* established during the arbitration should be renewed and extended over the whole area of the award. The British Government expressed a willingness to take part in a conference of the four powers and to renew the *modus vivendi*, but objected to its extension. The United States Government had approached the Russian and Japanese governments, which intimated that the condition of their adhesion to the regulations would be an extension of the limit laid down in the regulations, namely, 30° of north latitude, as far as the Japanese coast, so as to protect the Russian and Japanese rookeries. On July 28, 1897, Lord Salisbury answered Mr. Sherman's undiplomatic dispatch in a short note, in which he said that the British Government was willing to agree to a meeting of experts nominated by Great Britain and Canada and by the United States in October following, when the further investigations to be made on the islands during the current season would have been completed, the object of the meeting being to arrive, if possible, at correct conclusions respecting the numbers, conditions, and habits of the seals frequenting the Pribyloff Islands as compared with the several seasons previous and subsequent to the Paris award.

The Japanese and Russian governments accepted an invitation to send representatives to a sealing conference to be held in Washington in October, whereupon the British government, on Sept. 24,

acting, as in all matters connected with the seal fisheries, at the prompting of the Dominion Government, objected to the inclusion of Russia and Japanese representatives, and on Oct. 6 formally notified the Government of the United States that it would not enter an international conference in which Russia and Japan were represented, thinking that the conference should be confined to a comparison of the conclusions reached by the experts of Great Britain and the United States. Mr. Sherman expressed astonishment at Great Britain's determination not to take part in a conference including Russia and Japan, since Lord Salisbury had been informed by Mr. Hay in the beginning, both verbally and in writing, that the President hoped that those countries would be represented in the proposed conference. Mr. Sherman proposed that the American and British and Canadian experts should meet in accordance with the agreement as construed by Lord Salisbury. The international conference was held without the participation of Great Britain. Japan was represented by M. S. Fujita, Keishiro Matsui, and M. K. Mitsukuri; Russia, by Pierre Botkin, M. de Wollant, and M. Rutkovsky; the United States, by John W. Foster, Charles S. Hamlin, and Prof. David S. Jordan. These plenipotentiaries signed a convention for the suspension of pelagic sealing altogether for such time as, in the opinion of experts, the seals will require in order to insure their continued existence.

The meeting of experts took place in November. Prof. Thompson represented Great Britain, J. M. Macoun Canada, and Prof. Jordan the United States. The falling off in the seal catch of nearly half in the season of 1897, as compared with the previous year, confirmed the contention of the American experts. The total catch in the north Pacific declined from 73,000 to 38,700, of which 30,800 were taken by British, 4,100 by American, and 3,800 by Japanese vessels. In Bering Sea the catch was 29,500 in 1896, and in 1897 only 16,650, of which British vessels took 15,600 and American vessels 1,050. The United States Government offered to suspend the killing of seals on the islands for a year if the Canadian Government would agree to the suspension of pelagic fishing during 1898. This the Canadians declined to consider unless the owners of sealing vessels received compensation.

On Dec. 30 the Secretary of the Treasury issued regulations for the enforcement of an act of Congress, signed by the President on the day preceding, prohibiting the import of seal skins taken anywhere but on the Pribyloff Islands. It was ordered that no seal skins, raw, dressed, dyed, or otherwise manufactured, should be admitted, even as passengers' personal effects, unless accompanied by an invoice signed by the United States consul at the place of exportation certifying that the skins were not taken from seals killed at sea, and that all skins not certified should be seized and destroyed.

The Bimetallic Mission.—President McKinley appointed Senator Edward O. Wolcott, Adlai E. Stevenson, and Gen. Charles J. Paine special envoys to France, Great Britain, and Germany with the mission to discuss, in concert with the United States ambassadors in those countries, questions connected with the monetary problem and with plenipotentiary powers to come to some agreement for the establishment of bimetallicism. They went first to Paris, where they secured the co-operation of the French Government, and in their later conferences and negotiations with the British Government they had the active support of the French embassy. They laid the following proposals before the British Government on July 15: The opening of the Indian mints to silver coinage and the repeal of the order making the sovereign legal tender in India;

the placing of one fifth of the bullion in the issue department of the Bank of England in silver; the raising of the legal-tender limit of silver coin from 40s. to £20, together with the issue of notes for 20s. and 10s. based on silver and the withdrawal of the half sovereign; and an agreement to coin a certain amount of silver annually, or as an alternative to purchase silver at coinage value to the extent, as suggested by the French ambassador, of £10,000,000 a year. They suggested further that rupees and British dollars should be coined in England with full legal tender in the silver-standard dependencies of Great Britain and legal tender in the United Kingdom within the limit of £10, also that the self-governing British colonies be invited to follow on the same lines, and that Egypt should adopt free silver coinage. The reopening of the Indian mints was the crucial point in the negotiations. Baron de Courcel, the French ambassador, would have preferred to discuss the subject on the assumption that the English mints, as well as the Indian, should be opened to unlimited silver coinage. This was met by an uncompromising declaration of the Chancellor of the Exchequer that no such policy could possibly be entertained. The French Government insisted on the ratio of 15½ to 1 as representing the normal and natural relation between silver and gold. The English Government was bound by a unanimous resolution of Parliament, passed on March 18, 1896, and accepted by it, to do all that was in its power to secure by international agreement a stable monetary par of exchange between silver and gold on the express understanding that Great Britain would not itself depart from the gold standard. The Chancellor of the Exchequer, in speaking to this resolution, said that, while the Government would not be justified in proposing or accepting a departure from the gold standard of the United Kingdom, if it were "possible for other nations to be joined in a bimetallic league or in an agreement on this matter, which seemed good for themselves, I have little doubt but that the Indian Government would be prepared to agree with us in reopening the Indian mints to the free coinage of silver and that we might endeavor by other minor means to promote the increase of silver in coinage to aid in an international agreement on this great question." The First Lord of the Treasury said: "With this resolution in our hand we go to foreign nations and tell them that, although we are by tradition and by custom attached to a gold currency, and though they can hardly ask us to make this great change in our habits, a change far greater than any demanded of them, we will yet do for the cause of bimetallicism as much as any country in the world. For we will make this great contribution to a bimetallic system—we will go back upon the deliberately arranged method of providing a currency for India; we will reopen the Indian mints, we will engage that they shall be kept open, and we shall therefore provide for a free coinage of silver within the Indian Empire for a population greater in number than the population of Germany, France, and America put together."

The proposal to hold one fifth of the reserve of the Bank of England in silver, which the statutes allow and which at the Paris Monetary Conference of 1881 the officers of the bank promised, at the suggestion of Italy and the United States, should international bimetallicism be re-established, at first met with the approval of the governor and directors, but a storm of protests from financial circles made it impracticable for them or the Government to give effect to this suggestion. The proposal for reopening the Indian mints was submitted to the Indian Government. The answer, prepared by Sir James Westland, was dispatched on Sept. 16. The impor-

tation of the ratio of 15½ to 1 while the actual market ratio was 35 to 1, he contended, would shatter for a time at least the export trade of India, would gravely affect the relations between the state as landlord and the cultivating classes, would diminish the receipts from the state railways, and would give a shock to commercial and social relations by a sudden increase in the value of the rupee from 16*d.* to 23*d.*, to be followed in all probability, if the anticipations of the bimetalists were not realized, by as rapid a fall, probably to 9*d.* or even lower. The whole cost and risk of the experiment would be substantially borne by India alone, as France and the United States have a certain stock of gold on which they can rely if the new system were to break down, whereas India, reduced to a monometallic silver basis, would be unable to help herself. Moreover, the change in prices, to which France and the United States look with hope, would be injurious to Indian interests. India had to face her own difficulties, and saw her way through them after twenty years of monetary disturbances, if her efforts are not hampered by extraneous interference. The measures adopted to introduce a gold standard in India were at length approaching final success; the defects urged against the transition system could therefore be waived and the policy of linking India financially with Great Britain, the country to which she was most closely bound, by commercial as well as political ties, ought not to be weakened. An international agreement for the adoption of bimetalism such as was contemplated by the Indian Government in 1892 was not in question. The project of a conference put forward by the American envoys extended only to a compact which France and the United States were provisionally willing to enter into in consideration that the Indian mints were opened and that some assistance was given in other ways. This the Indian Government considered too narrow a basis, even from the point of view of the bimetalists, affording no security for the permanence of the new arrangement in the two contracting countries, which might be upset by such incidents as an effort to retain gold when other nations pour in silver or by the temporary adoption of a paper currency. That help would be given by a limited addition to the use of silver by countries outside the agreement was not considered worth counting upon, as it would have scarcely an appreciable influence in raising the gold price of the cheaper metal. The Indian Council recorded as its unanimous and decided opinion that it would be most unwise to reopen the mints as part of the proposed arrangement, especially at a time when India was to all appearance approaching the attainment of stability of exchange by the operation of its own isolated and independent action. Lord Salisbury, on Oct. 19, in an identic note to the United States and French ambassadors, indorsed this conclusion, pointing out that the Government of India could hardly be expected to give up the policy which for four years it had been endeavoring to make effective in the absence of substantial security that the system to be substituted for it was practically certain to be stable. If, owing to the great divergence between the proposed ratio and the present gold price of silver or to any other cause, the legal ratio were not maintained the position of silver might be worse than before and the financial embarrassments of India greater than any with which it had as yet had to contend. Even were these arguments less strong than they appear, the Government of India could hardly be compelled to make a second important change in Indian currency within so short a time as four years at a time of exceptional difficulty and suffering. In these circumstances the British Government was unable to accept the first proposal of the United States rep-

resentatives, and as this was, in its opinion, and also in that of the representatives of the United States and France, by far the most important contribution which could be made by the British Empire toward any international agreement, it did not feel it to be necessary to discuss the other proposals at present. The British Government was desirous to ascertain how far the views of the American and French governments were modified by the decision arrived at and whether they desired to proceed further with the negotiations.

The Supreme Court.—The result of the work of the United States Supreme Court for the past year is given below. The number of cases on the docket for the term beginning in October, 1896, was 834. Of these 447 were disposed of during the term. The number actually considered by the court was 338. Among the cases of general interest decided were the following:

South Carolina Dispensary Cases.—The cases of *Scott vs. Donald* and *Gardner vs. Donald*, decided Jan. 18, 1897, involved the validity of the State dispensary law so far as it relates to the seizure of liquors imported into the State by private citizens for their own consumption. The court, in an elaborate opinion, declared that the provisions of the law forbidding the importation of such liquors by any one except certain State officials appointed under the act was in contravention of the Constitution of the United States. This decision does not affect the merits of the law as a whole, but applies to the features that bear on interstate commerce. Justice Brown delivered a dissenting opinion, holding that the act of Congress of Aug. 8, 1890, declaring that intoxicating liquors transported into any State and remaining there for sale or consumption should be subject to the operation of the laws of the State, applied, and permitted the traffic to be regulated in such manner as the several States shall deem best for the public interest.

The Neutrality Act.—The United States *vs.* the steamer "Three Friends" was decided March 1, 1897. The steamer "Three Friends" attempted to land arms and ammunition on the island of Cuba in aid of the insurgent forces, and was seized as forfeited to the United States under the neutrality act. The United States district court of Florida decided that the Cuban insurgents were not a people, state, district, or colony within the meaning of act, and that the steamer was not liable to seizure. The opinion delivered by Chief-Justice Fuller construed the neutrality act and held the seizure to have been legal, and the cause was remanded with instructions to resume custody of the vessel. The case illustrates the distinction between recognition of belligerency and recognition of a condition of political revolt; between recognition of the existence of war in a material sense and war in a legal sense. Although the political department of the Government had not recognized the existence of a *de facto* belligerent power engaged in hostility with Spain, it had recognized the existence of insurrectionary warfare. Justice Harlan dissented.

Lotteries.—In *Douglass vs. Kentucky*, decided Nov. 29, 1897, it was held that a lottery grant by a State is not a contract within the meaning of the Constitution.

The Bell Telephone Case.—United States *vs.* the American Bell Telephone Company *et al.* was decided May 10, 1897. This suit was brought to cancel a patent issued to the company, as assignee of Émile Berliner, the alleged inventor, in 1891. The cancellation of the patent was sought on the ground that the delay of thirteen years in the Patent Office was fraudulent and through the fault of the telephone company, and that a patent for the same invention had been issued in 1880. The decision

affirmed the decree of the court below and was adverse to the contention of the Government. Its effect is to continue the control of the telephone by the Bell Company for seventeen years from the date of the patent granted in 1891. Justice Harlan dissented, but delivered no opinion.

The Antitrust Decision.—A decision was rendered in *United States vs. the Trans-Missouri Freight Association*, March 22, 1897. The case arose under the act of July 2, 1890, commonly called the "Sherman antitrust law." The Trans-Missouri Freight Association consisted of 18 railways west of the Missouri river. A suit was brought in the district of Kansas to enjoin a contract and combination among these companies to maintain rates of freight. The case was decided against the United States in the lower courts, but the Supreme Court sustained the Government's position and held that the law in question applied to common carriers by rail, and that the contract between the members of the association was a restraint of interstate trade and commerce within the meaning of the act. Justices White, Field, Gray, and Shiras dissented, holding that the subject was covered by the interstate commerce act, and that reasonable contracts, although they in some measure restrain trade, are not within the meaning of the antitrust act.

Functions of the Interstate Commerce Commission defined.—On May 24, 1897, an important decision was rendered in the case of the *Interstate Commerce Commission vs. The Cincinnati and New Orleans Railroad Company*, construing the act to regulate commerce, approved Feb. 4, 1887, which created the Interstate Commerce Commission. The opinion was rendered by Justice Brewer. The gist of it is found in the following extract: "Under the interstate commerce act the commission has no power to prescribe the tariff rates which shall control in the future, and therefore can not invoke a judgment in mandamus from the courts to enforce any such tariff by it prescribed." Justice Brewer asked, "Has the commission no functions to perform in respect to matter of rates?" Replying to his question, he said: "Unquestionably it has, and most important duties in respect to this matter. It is charged with the general duty of inquiring as to the management of the business of railroad companies, and has the right to compel full and complete information as to the manner in which such companies are transacting their business. And with this information it is charged with the duty of seeing that there is no violation of the long-and-short-haul clause, that there is no discrimination between individual shippers, and that nothing is done by rebate or otherwise to give preference to one against another; that no undue preference is given to one place against another, but that in all things that equality of right which is the great purpose of the interstate commerce act shall be secured to shippers." Justice Harlan dissented.

The *Interstate Commerce Commission vs. the Alabama Midland Railway Company et al.* was decided Nov. 8, 1897. This was another decision limiting the effectiveness of the interstate commerce law. The case arose from an order issued by the Interstate Commerce Commission against the railroads charged with violating the "long-and-short-haul clause" of the law which forbids railroads charging more for a short haul than for a long one where the circumstances are similar. The commission has held that, when lower rates were to be put in operation, the schedule must first be filed with the commission. This was negatived by the decision. On the question whether railroads can meet water competition without the consent of the Inter-

state Commerce Commission, the Court said: "We are unable to suppose that Congress intended to forbid common carriers, in cases where the circumstances and conditions are substantially dissimilar, from making different rates until and unless the commission shall authorize them to do so." Justice Harlan dissented, remarking that the opinion went far toward defeating the object of the interstate commerce law.

In the *Interstate Commerce Commission vs. the Detroit, Grand Haven and Milwaukee Railway Company* the specific charge in this case was that the railroad company furnished cartage free to merchants of Grand Rapids, and did not furnish similar service to the merchants of Ionia, 33 miles distant. The court held that the act has in view only the transportation of passengers and property by rail, and that when the passengers and property reached and were discharged from the cars at the company's station at Grand Rapids for the same charges as those received for similar service at Ionia, the duties cast upon the company were fulfilled and satisfied. The subsequent history would not concern the Interstate Commerce Commission.

State Laws affecting Railroads.—In *St. Louis and San Francisco Railway Company vs. Mathews*, decided Jan. 4, 1897, the Court sustained the constitutionality of a Missouri statute which gives property owners the right to recover damages from railroad corporations for destruction of property caused by fire communicated from locomotives.

In *New York, New Haven and Hartford Railroad Company vs. New York*, decided March 1, 1897, the court sustained the constitutionality of the statute of New York passed June 18, 1887, regulating the heating of steam passenger cars, and declared that it was clearly competent for the State, in the absence of national legislation on the subject, to forbid under penalties the heating of passenger cars in that State by stoves kept inside the cars or suspended therefrom, although such cars may be employed in interstate commerce. The power of Congress to regulate commerce among the States does not impair the authority of the States to make regulations providing for the public safety.

In *Gulf, Colorado and Santa Fé Railway Company vs. Ellis*, decided Jan. 18, 1897, the court held unconstitutional a law of Texas, passed April 5, 1889, requiring railroads to pay to the successful plaintiff attorney's fees not exceeding \$10 in certain actions wherein judgments are recovered against them. This law was held to operate to deprive railroad corporations of the equal protection of the laws, and to be within the prohibition of the fourteenth amendment. This contest over the question of a small fee established an important precedent. It is also interesting as deciding that a corporation is a "person" within the meaning of the fourteenth amendment. Chief-Justice Fuller and Justices Gray and White dissented.

In *Gladson vs. Minnesota*, decided April 12, 1897, it was held that a State statute requiring railroad passenger trains to stop at county seats is a reasonable exercise of the police power of the State, and does not unconstitutionally interfere with interstate commerce.

The Ohio Tax Law.—In *Adams Express Company vs. Ohio State Auditor*, the court, by a vote of 5 to 4, upheld the constitutionality of the Ohio law (the Nichols law) providing for taxation of telegraph, telephone, and express companies, and declared the validity of certain assessments made. The law taxed the corporations on the basis of the value of Ohio's share of the stock. It was claimed that the law was unconstitutional as a restraint upon interstate commerce, and that it was taking property of the citizen without due process of law,

and extending taxation beyond the jurisdiction of the State. Justices White, Field, Harlan, and Brown dissented from the opinion of the majority, and held the law unconstitutional.

Witnesses before Congressional Committees.—The case of Elverton R. Chapman, decided April 19, 1897, involved the power of the United States Senate to compel witnesses to give testimony before its investigating committees. The court refused the writ of *certiorari* and *habeas corpus* asked by Mr. Chapman, a New York broker, who refused to testify before a Senate committee, and was sentenced by the lower court to thirty days' imprisonment and \$100 fine. His reusancy was committed in connection with the investigation by the Senate of the alleged Sugar Trust scandal at the time of the tariff bill in 1894. It was contended that the law under which the conviction was had (section 102, R. S.) was unconstitutional. The court held that the Senate, under its constitutional right to censure and expel members, had the right to investigate any alleged improper conduct of Senators, and could compel witnesses to give testimony. It held that refusal to testify was also an offense against the United States. Congress possessed the constitutional power to enact a statute to compel the attendance of witnesses, and to compel them to make disclosures of evidence to enable the respective bodies to discharge their legitimate functions; and it was to effect this that the act in question was passed; but this act did not constitute a delegation of the power to punish for contempt. As to the allegation that the law was in violation of the fifth amendment of the Constitution, which provides that no person shall be subject for the same offense to be twice put in jeopardy of life or limb, the court said "it was quite clear that the contumacious witness is not subjected to jeopardy twice for the same offense, since the same act may be an offense against one jurisdiction and also against another; and indictable statutory offenses may be punished as such while the offenders may likewise be subjected to punishment for the same acts as contempts, the two being capable of standing together."

The President's Power to remove Officers.—The case of Lewis E. Parsons, Jr., *vs.* the United States was an appeal from the decision of the Court of Claims. It involved the point whether the President, under the Constitution, has the power to remove before the expiration of his term, an officer appointed, with the consent of the Senate, for a term fixed by law. Parsons was appointed by President Harrison, and confirmed by the Senate, as United States district attorney for the Northern and Middle Districts of Alabama, and the law fixed the term of office at four years. He was removed by President Cleveland before the expiration of his term, but declined to yield possession of his office to the new appointee until an order was issued from the United States circuit court requiring him to surrender the books and papers of the office. He complied with the order, and then brought suit for his fees up to the end of his term of office. The court held that the right of removal was an incident of the right of appointment; and that, although the appointment was with the advice and consent of the Senate, the appointing power was in the President, and, in consequence, the right to remove was his; and that the designation of four years as the term of appointment was not designed to give a term that should in all events last for four years, but should restrict the term to that period, subject to the pleasure of the appointing power.

The Thirteenth Amendment.—The decision in *Robertson vs. Baldwin*, rendered Jan. 25, 1897, is

a clear exposition of the meaning and scope of the expression "involuntary servitude" contained in the thirteenth amendment to the Constitution, particularly with reference to contracts with seamen. It was held that Congress has the power to confer upon justices of the peace of the States the authority to apprehend deserting seamen and return them to their vessels, and that the constitutional provision against involuntary servitude does not apply to contracts of seamanship. Justice Harlan dissented.

The Fourteenth Amendment.—The decision in *Allgeyer vs. State of Louisiana* held unconstitutional a State statute which had the effect of depriving a citizen of the State of his right to contract outside of the State for insurance on his property in the State. While there is power in a State to regulate the business of a foreign corporation within its borders, the fundamental rights of the citizen can not be interfered with. One of these rights is the right to make contracts.

In *Chicago, Burlington and Quincy Railroad Company vs. Chicago*, decided March 1, 1897, the court declared the potency of the fourteenth amendment to restrain action by a State through either its legislative, executive, or judicial departments which deprives a party of his property without due compensation. A judgment of a State court, even if authorized by statute, whereby private property is taken for public use, without compensation made or secured to the owner, is wanting in the due process of law required by the fourteenth amendment.

Oleomargarine.—In *re Kollock*, decided March 1, 1897, it was decided that the oleomargarine act of Aug. 2, 1886, is on its face an act for levying taxes, and the matter of designating the marks, brands, and stamps is left to the Commissioner of Internal Revenue with the approval of the Secretary of the Treasury. This involves no unconstitutional delegation of power.

Forfeiture of Land Grants.—In *Atlantic and Pacific Railroad vs. Mingus*, decided Feb. 15, 1897, the court sustained the validity of the act of Congress of July 6, 1886, forfeiting a portion of a land grant. It was held that Congress did not intend, by the statutes under which the company received its grant, to vest the lands absolutely in the company without a right to reacquire them on failure of the company to comply with the conditions. When the United States Government grants public lands upon condition subsequent it has the same right to re-enter, on breach of the condition, which a private grantor would have under the same circumstances, which right is to be exercised by legislation.

The case of *United States vs. Winona and St. Peter Railroad Company*, decided on the same date, involved the construction of the act of Congress of March 3, 1887, providing for the adjustment of land grants made by Congress to aid in the construction of railroads, and the act of March 2, 1896, which confirmed titles of *bona fide* purchasers and extended time for bringing suit.

The celebrated land-grant case of the *Southern Pacific Railroad vs. United States*, decided Oct. 18, 1897, involved nearly 1,000,000 acres of land and indirectly determined the title to more than 3,000,000 acres. The lands in southern California were those granted by Congress in 1866 to aid in the construction of the Atlantic and Pacific Railroad. As the railroad was not constructed the grant was forfeited by act of Congress in 1886. The Government's claim was upheld after a litigation which has been pending about ten years.

Several important cases were decided in the court on appeal from the Court of Private Land Claims. One of these, *United States vs. Sandoval*, in which the opinion was rendered by Chief-Justice Fuller,



THE NEW BUILDING FOR THE LIBRARY OF CONGRESS.

involved the title to the San Miguel del Bado land grant, including 315,000 acres of land in New Mexico. The court held that at the date of the treaty of Guadalupe Hidalgo neither the settlers nor the town on the grant could have demanded the legal title to the land in question from the former Government, and the Court of Private Land Claims was not empowered to pass the title, and that it was for the political department to deal with the equitable rights involved.

The court affirmed the decision of the Court of Private Land Claims in the case of the Chama Spanish land grant, Rio Arriba Land and Cattle Company *vs.* United States, involving title to 472,763 acres in Rio Arriba County, New Mexico. The decision was favorable to the contention of the Government. These decisions are decisive of several cases still pending in the Court of Private Land Claims, and will save to the public domain hundreds of thousands of acres.

In *Dunlop vs. United States* several important questions of evidence in connection with the offense of depositing in the mails a newspaper containing obscene and indecent matter were passed upon unfavorably to the accused, the publisher of the paper, and the definition of such matter was considered.

The Congressional Library.—The new building for the library of Congress, authorized by the act of April 15, 1886, was completed and opened in 1897. It is 470 × 340 feet, built of white New Hampshire granite in the style of the Italian Renaissance, with four projecting corner pavilions and one in the center, these having ornate columns and capitals, and the main building window casings carved in high relief. In the keystones of 33 windows are carved human heads representing various race types. Colossal statues of Atlas are carved below the roof of the central pavilion, surmounted by a pediment with an emblematic group in granite and sculptured American eagles. Above the arches of the three entrance doors are spandrels representing "Art," "Science," and "Letters." There is a carved balustrade surmounting the whole building, and in the center a gilded dome, the apex of which is 195 feet above the ground, while the walls are 69 feet high. There are three stories, the lower one of rustie stone, the others of a smooth bush-hammered finish, with vermiculated ornamentation at the corners. The entrance has massive granite approaches and wide staircases with heavy balustrades. In the ornamental parterre in front is a large bronze fountain. The pumps, boilers, and machinery for heating the building are in an annex in the rear. The interior is decorated with sculptures by Frederick McMonnies, Augustus St. Gaudens, Philip Martiny, and others; and with paintings by E. H. Blashfield, George W. Maynard, Walter Shirlaw, Kenyon Cox, W. L. Dodge, Robert Reid, and other American artists. The public reading-room is octagonal, with a diameter of 100 feet, the dome being supported by arches with massive pillars of Tennessee and Numidian marble, the arches intersected by an upper and lower arched gallery. The original plans for the building were submitted by Smithmeyer and Pelz, and Mr. Smithmeyer was appointed architect. Before the building was begun Gen. Thomas L. Casey was placed in charge, with Bernard R. Green as superintendent of construction, while the limit of cost was increased from \$4,000,000 to \$6,300,000. The designs for the interior architecture and decoration were made by Edward Pearce Casey. The capacity of the library as now shelved is sufficient for 1,900,000 volumes, and there is room to store more than 4,000,000. Opening out of the central reading-room on each side are two iron book stacks made from Mr. Green's designs, each nine stories

high, with floors of white marble, each stack having a capacity for 800,000 volumes. The floor area of the library on the first story is 110,000 square feet.

UNITED STATES, FINANCES OF THE. The receipts of the Government for the fiscal year ending June 30, 1897, were \$20,911,759 in excess of those for the previous year, the increase in the revenues from customs alone being \$16,532,375, due mainly to the increased importations of dutiable goods near the close of the year to avoid increased tariff rates under the bill then pending in Congress, and which became a law July 24, 1897. Notwithstanding the increased revenues, there was a deficit made up from the cash in the Treasury of \$18,052,455. The several items of receipts and expenditures for 1897 compared with like items for 1896 are shown below:

SOURCES OF RECEIPT.	YEAR ENDING JUNE 30,	
	1897.	1896.
Internal revenue.....	\$146,688,574	\$146,762,865
Postal service.....	82,665,463	82,499,208
Customs.....	176,554,127	160,021,752
Sales of public land.....	864,581	1,005,523
Tax on circulation of national banks.....	1,972,501	1,763,497
Repayment of interest on Pacific railways.....	942,148	955,500
Sinking fund for Pacific railways.....	2,277,173	1,889,078
Customs fees, fines, penalties, and forfeitures.....	586,827	622,003
Fees, consular, letters patent, and lands.....	2,881,555	2,815,250
Sales of property except lands.....	1,177,819	899,759
Profit on coinage.....	7,239,814	2,897,092
Revenues, District of Columbia.....	3,566,130	3,846,435
Immigrant fees.....	309,936	445,670
Miscellaneous.....	2,660,520	3,051,777
Total ordinary.....	\$430,387,168	\$409,475,409
Premium on public debt.....		11,166,246
Principal of public debt.....	389,930,220	482,710,363
Grand total.....	\$820,317,388	\$903,352,018

ITEMS OF EXPENDITURE.	YEAR ENDING JUNE 30,	
	1897.	1896.
Congress.....	\$4,516,777	\$7,736,610
Executive.....	11,406,732	11,368,877
Judiciary.....	6,344,797	7,873,000
Postal service.....	82,665,463	82,499,208
Deficiency in postal service.....	11,149,206	9,300,000
Foreign intercourse.....	2,076,877	1,605,011
Improving rivers and harbors.....	13,682,704	18,104,376
Other expenses, military establishment.....	35,267,564	32,726,545
Constructing new war vessels.....	14,539,911	9,453,003
Other expenses, naval establishment.....	20,021,635	17,694,729
Indians.....	13,016,802	12,165,528
Pensions.....	141,053,165	139,434,001
Constructing public buildings, including sites.....	3,758,796	2,997,382
District of Columbia.....	6,508,539	6,369,362
Interest on public debt.....	37,791,110	35,385,029
Bounty on sugar.....	4,992,631	232,691
Life-saving service.....	1,507,341	1,442,724
Mint establishment.....	945,181	774,418
Revenue-cutter service.....		1,027,617
Engraving and printing.....	1,130,502	1,116,373
Lighthouse establishment.....	3,390,090	3,114,855
Collecting customs revenue.....	7,150,913	7,304,790
Assessing and collecting internal revenue.....	3,517,596	3,769,643
Miscellaneous.....	22,005,231	21,182,882
Total ordinary.....	\$448,439,623	\$434,678,654
Public debt principal.....	353,180,877	396,190,023
Grand total.....	\$801,620,500	\$830,868,677

No new loans were issued during the year except for refunding 4-per-cent. certificates, but there was redeemed from the cash on hand of old matured loans \$252,092, of which \$6,192 was for fractional paper currency, of which there still remains

outstanding \$6,886,937, besides \$8,375,934 estimated loss or destroyed, and struck from the debt statement in 1879. There was also a net increase in the ordinary payments during the year of \$13,594,713, of which \$5,086,908 was for an increase of the navy, \$4,759,940 for increased bounty on sugar, and \$1,849,206 for an increased deficiency in the postal service.

Of the debt for which no reserve is required by law to be held there has been little change during the year except that the liability of the Treasury to the national bank redemption account was increased \$13,336,376. Legal-tender notes to meet the entire amount of the liability in this account, whatever it may be, have been received by the Treasury, and if not still in its cash have been paid out in current disbursement, and any increase or decrease in the liability is of no special moment. The several items of debt without reserve for 1897 and 1896 are as below shown:

DEBT WITHOUT RESERVE.	OUTSTANDING DEC. 31,	
	1897.	1896.
Funded loan continued at 2 per cent.....	\$25,364,500	\$25,364,500
Funded loan of 1907, 4 per cent.....	559,641,500	559,638,900
Refunding certificates, 4 per cent.....	44,220	45,890
Loan of 1904, 5 per cent.....	100,000,000	100,000,000
Loan of 1925, 4 per cent.....	162,315,400	162,315,400
Old loans matured.....	1,330,270	1,383,070
Old demand notes.....	54,347	54,347
United States notes (greenbacks).....	246,681,016	246,681,016
National bank redemption account.....	32,268,146	18,876,333
Fractional notes.....	6,886,937	6,890,504
Total.....	\$1,134,585,336	\$1,121,249,960

Any changes in the debt having a reserve dollar for dollar should have no special bearing upon the financial condition of the country. It will be seen, however, from the table herewith that during the fiscal year there was a decrease in the amount of Treasury notes outstanding of \$13,468,000, and an increase in the amount of silver certificates of \$17,042,000. The decrease mentioned is permanent, there being no authority for an increased issue of Treasury notes. The decrease in the amount of these notes has been brought about by coining the silver bullion bought with the notes into silver dollars, retiring the notes, and issuing in their place silver certificates, and also issuing such certificates on the dollars arising from the "profit on coinage" in the transaction. The original issue of the Treasury notes was \$155,931,002, but through coining the bullion to pay for which they were issued at par with gold, and redeeming the notes in manner as stated, the amount has been reduced to \$106,348,280, and the reduction is still going on, and in time, if not stopped, the entire issue of Treasury notes will have disappeared, silver certificates taking their place.

DEBT WITH RESERVE.	OUTSTANDING DEC. 31,	
	1897.	1896.
United States notes (greenbacks).....	\$100,000,000	\$100,000,000
Treasury notes (1890).....	106,348,280	119,816,280
Currency certificates (1872).....	44,555,000	50,830,000
Gold certificates.....	38,128,149	39,279,789
Silver certificates.....	387,925,504	370,883,504
Total.....	\$676,956,933	\$680,809,573

The assets and liabilities of the Treasury are shown for the close of the calendar instead of the fiscal year, reports being available for that purpose. It will be seen from the comparative tables below

that no marked change in the items of liabilities has taken place, except in Treasury notes and silver certificates, the cause of which change has already been explained. On Dec. 31, 1897, there were demand obligations against the Treasury of \$861,391,370, to meet which the Treasury held an equivalent in actual cash.

The aggregate assets increased during the year \$17,927,818, gold coin and bullion having considerably increased, also the balances held by national bank depositaries. The latter increase is owing to the temporary deposit in the banks of the proceeds arising from the reimbursement to the Government of the indebtedness of the Union Pacific Railroad Company, amounting in all to \$58,448,223.75, but the transaction did not occur until after the close of the fiscal year, hence does not show on the statement of receipts and expenditures.

ITEMS.	YEAR ENDING DEC. 31,	
	1897.	1896.
<i>Liabilities:</i>		
Gold certificates.....	\$38,128,149	\$39,279,789
Silver certificates.....	387,925,504	370,883,504
Currency certificates (1872).....	44,555,000	50,830,000
Treasury notes (1890).....	106,348,280	119,816,280
Redemption national bank notes.....	8,236,084	8,915,165
Public disbursing officers.....	34,334,799	32,747,583
Outstanding checks and drafts.....	6,338,785	2,670,851
General Treasury balance.....	235,474,769	228,320,380
Total.....	\$861,391,370	\$853,463,552
<i>Assets:</i>		
Gold coin or bullion.....	\$197,469,236	\$175,203,982
Silver dollars or bullion.....	496,611,785	495,399,819
United States notes.....	84,200,089	85,313,258
Treasury notes (1890).....	2,904,344	35,645,059
National bank notes.....	5,186,886	14,278,970
Balances in national bank depositaries.....	49,182,717	16,159,153
Gold certificates.....	1,570,460	1,392,350
Silver certificates.....	11,239,912	14,227,704
Bonds and interest checks paid....	29,288	20,803
Currency certificates (1872).....	1,240,000	500,000
Minor coins and fractional notes..	1,086,754	1,106,688
Subsidiary silver coins.....	10,679,899	14,215,766
Total.....	\$861,391,370	\$853,463,552

The increase of the monetary circulation of the country outside of the Treasury during the last fiscal year was \$70,887,240, of which \$29,825,131 was in gold coin. There was also a considerable increase in silver certificates and Treasury notes, and a small increase in national bank notes. The total circulation at the close of the year was \$1,721,100,640.

CIRCULATION OUTSIDE OF THE TREASURY.	IN CIRCULATION DEC. 31,	
	1897.	1896.
Gold coin.....	\$547,568,860	\$517,743,229
Standard silver dollars.....	61,491,073	58,581,819
Subsidiary silver.....	65,720,308	62,101,986
Gold certificates.....	36,557,689	37,887,439
Silver certificates.....	376,695,592	356,655,800
Treasury notes (1890).....	103,443,936	84,171,221
United States notes (greenbacks).....	262,480,927	261,367,758
Currency certificates (1872).....	43,315,000	50,330,000
National bank notes.....	223,827,755	221,384,148
Total.....	\$1,721,100,640	\$1,650,223,400

There was executed at the several mints during the fiscal year ending June 30, 1897, a largely increased coinage, of which that of the silver dollar piece shows the greatest increase over that of the preceding year. The bullion from which the pieces were coined was that purchased under the act of 1890 in payment for which Treasury notes were issued, and which are now being retired as before stated. The coinage in detail is as follows:



WEST POINT, AND THE MILITARY ACADEMY.

CHARACTER.	VALUE.	
	1897.	1896.
Gold—		
Double eagles.....	\$59,804,820	\$51,874,460
Eagles.....	8,043,010	4,157,490
Half eagles.....	3,739,010	2,816,640
Quarter eagles.....	59,865	29,900
Total.....	\$71,646,705	\$58,878,490
Silver—		
Standard dollars.....	\$21,203,701	\$7,500,822
Half dollars.....	1,370,887	1,805,032
Quarter dollars.....	1,228,885	2,005,705
Dimes.....	524,314	129,082
Total.....	\$24,327,787	\$11,440,641
Minor—		
Five-cent nickel.....	\$609,819	\$407,653
One-cent bronze.....	374,690	461,684
Total.....	\$984,509	\$869,337
Grand total.....	\$96,959,001	\$71,188,468

UNITED STATES MILITARY ACADEMY.

The United States Military Academy is at West Point, Orange County, N. Y., on the Hudson river, 52 miles north of New York city. The eastern side of the Point is a nearly straight, precipitous shore, while the northern side, curving and forming a bay at its western extremity, has a comparatively gentle slope, and commands a view of the river.

The academy is on a level terrace 160 feet above the water, flanked on the west by rocky heights; of these, the one on which stand the ruins of Fort Putnam is the nearest and most prominent. The principal buildings of the Academy are at the southern end of the terrace; the quarters of the officers and professors are on the west side and along the roads leading southward and westward.

The Military Academy, established for the fundamental education of the officers of the army, is the foundation on which our whole military system rests. It is believed that George Washington first broached the subject as a desirable matter for national legislation prior to 1793. He proposed prompt action to Congress during that year. In his last message, issued in December, 1796, President Washington declared that "the desirableness of this institution has constantly increased with every new view I have taken of the subject."

The act of Congress establishing the Academy was not signed until March 16, 1802. During the first ten years of its existence the Academy record was far from creditable; but this was proved to be largely due to negligence, mismanagement, and apathy on the part of the Federal authorities. Abuses became so flagrant that reorganization was ordered by an act of April 29, 1812. With the appointment of Brevet-Major Sylvanus Thayer, who was known afterward as "the Great Superintendent" and "Father of the Military Academy," on July 28, 1817, came a change. He organized the cadets into a battalion of two companies, officered by members of their own body, with a colonel at its head and an adjutant and a sergeant major for his staff; appointed an officer of the army as commandant of cadets, responsible for their tactical instruction and soldierly discipline; transacted business with members of his command only at stated office hours; classified all cadets according to their proficiency in studies; divided classes into small sections for more thorough instruction; required weekly reports, showing the daily progress of students according to a scale of marks; directed more thorough recitations and a freer use of the blackboard; greatly improved the curriculum of studies, according to a well-digested programme; reorganized a proper academic board, with the

superintendent at its head; introduced the check-book system, to curtail the prevailing extravagance of cadets; reduced the expense of educating pupils to less than half the cost at the Woolwich Military Academy, in England; had the officer of the day dine with him, enabling him thereby to learn all that was taking place in camp or barracks; required cadets to obtain a permit from him for almost everything, even to a letter from the post office, thus maintaining such constant intercourse as enabled him to call every one by name, and to understand their characters and habits.

The Academy of to-day is merely the development of that of 1833. Nothing has been added to the requirements for admission except geography and United States history. These, with reading, writing, spelling, arithmetic, and grammar, complete the list. These requirements are so simple that hundreds of boys who would never dream of being able to enter college obtain appointments to the academy.

The Academy aims at what no military institution has accomplished, to furnish our whole army with a body of well-educated officers, by instructing every pupil in all branches of scientific and military knowledge, regardless of the corps or arm to which he may be assigned. How far success has been met with in this endeavor to provide useful soldiers and creditable citizens for the republic is well told by Gen. George W. Cullom, in his "Biographical Register of the Graduates of the Military Academy": "West Point has filled every arm of the military service with talent, efficiency, and integrity; has materially aided in successfully conducting three great wars, extending our national domain and preserving the Union; has perpetually pushed the wild savage from our borders, and been the pioneer of advancing civilization; has constructed and armed our fortifications, improved our harbors, lakes, and rivers, defined our boundaries, surveyed and lighted our coasts, and explored the length and breadth of our land; has given to our militia and volunteers large numbers of valuable officers, and to our colleges able presidents and professors; has furnished distinguished civil engineers, who have bound our territory together with a network of railways and canals; has supplied valuable city, State, and Government functionaries; has improved our workshops and the cultivation of the soil; has added its mite to the countinghouse, the bar, and the pulpit; and, through the contributions and text-books of its graduates, has greatly elevated the scientific standard of most of the educational institutions throughout our country, and even extended its influence abroad."

Gen. Winfield Scott, from observation and experience during the war with Mexico, thus expresses his views as to capability of West Point graduates in times of war: "I give it as my fixed opinion that, but for our graduated cadets, the war between the United States and Mexico might, and probably would, have lasted four or five years, with, in its first half, more defeats than victories falling to our share; whereas, in less than two campaigns we conquered a great country and a peace, without the loss of a single battle or skirmish."

To this Gen. Michie, Professor of Philosophy in the Academy, adds his testimony: "The records of the civil war sufficiently attest that the graduates of West Point, in loyalty, integrity, and ability, were equal to the vast responsibilities so suddenly thrust upon them by that great uprising. I say loyalty with deliberate purpose; for, though the Southern-born graduates were cradled and reared in the belief of paramount allegiance to the State, yet 162, or nearly half of their number, remained true to the teachings of their *alma mater*, fighting

against rebellion and resisting every temptation of family and friends to swerve them from their devotion to the Union. When the war was ended many of the graduates of West Point had won the highest military fame, all had gained honorable distinction, and none had lost his integrity."

The Staff.—The Military Academy is in charge of a superintendent, who directs the studies and exercises, has command over all persons belonging to the academy, and commands the military post. The present superintendent is Col. Oswald H. Ernst, a graduate of the class of 1864, lieutenant colonel, corps of engineers.

By act of Congress, there is a board of visitors of twelve members, charged with the duties of advisory supervision. Seven of the number are chosen by the President of the United States, with due regard to State representation; two are appointed by the president of the Senate, and three are chosen by the Speaker of the House of Representatives.

The military staff of the academy consists of (1) an adjutant, who is also adjutant of the post, recruiting officer, commander of the band and of field music; (2) treasurer of the academy, who is also quartermaster and commissary of cadets; (3) quartermaster of the academy, who is also disbursing officer; (4) assistant to the quartermaster, who is also officer of police; (5) commissary and treasurer, in charge of post exchange; (6) surgeon; (7, 8) two assistant surgeons.

The academic departments and staff are as follow:

Tactics.—Commandant of cadets, who is also instructor of tactics and is charged with the discipline and administration, and commands the battalions; 3 senior instructors for cavalry, artillery, and infantry tactics respectively, and 4 assistant instructors.

Civil and Military Engineering.—One professor, 1 assistant professor, and 2 instructors.

Natural and Experimental Philosophy.—One professor, 1 assistant professor, 2 instructors, and 2 officers in charge of the observatory and astronomical observations.

Mathematics.—One professor, 1 associate and 1 assistant professor, and 7 instructors.

Chemistry, Mineralogy, and Geology.—One professor, 1 assistant, and 3 instructors.

Drawing.—One professor, 1 assistant professor, and 2 instructors.

Modern Languages.—One professor, 1 assistant professor of Spanish, 1 assistant professor of French, and 5 instructors.

Law and History.—One professor, 1 assistant professor, and 3 instructors.

Practical Military Engineering, Military Signaling and Telegraphy.—One instructor and 1 assistant instructor.

Ordnance and Gunnery.—One instructor and 2 assistant instructors.

There is also a chaplain, a master of the sword, and a teacher of music.

The entire staff embraces 57 army officers and 9 civilians holding assimilated army rank. Professors whose service at the academy as professor exceeds ten years have the assimilated rank of colonel, and all other professors the assimilated rank of lieutenant colonel.

Organization.—For instruction in infantry tactics and in military police and discipline, the cadets are organized into a battalion of four companies under the commandant of cadets. Each company is commanded by an officer of the army. The officers and noncommissioned officers are selected from those cadets who have been most studious, soldierlike in the performance of their duties, and most exemplary in their general deportment. In

general, the officers are taken from the first class, the sergeants from the second class, and the corporals from the third class.

The cadets are arranged in four distinct classes, corresponding with the four years of study. The cadets employed on the first year's course constitute the fourth class; those on the second year's course, the third class; those on the third year's course, the second class; and those on the fourth year's course, the first class.

The academic year begins July 1. On or before that date the result of the examination held in the preceding month is announced, and cadets are advanced from one class to another. At no other time is a cadet advanced from one class to another, unless prevented by sickness or authorized absence from attending at the examination, in which case a special examination is granted him; but in no case can a cadet be advanced from one class to another without having passed a satisfactory examination by the academic board.

Studies.—The course may be summarized as follows:

First year: Mathematics; English and French; infantry and artillery drill; use of the sword and bayonet and other military exercises. *Second year:* Mathematics; French and Spanish; drawing, including topography; infantry, artillery, and cavalry drill; target practice; practical military engineering. *Third year:* Philosophy; chemistry, mineralogy, and geology; drawing; drills for all branches of all arms; practical military engineering, including signaling. *Fourth year:* Civil and military engineering and science of war; law, constitutional, military, and international; history and historical geography; practical military engineering; natural and experimental philosophy; drill regulations; ordnance and gunnery.

Regulations.—The official day at the Military Academy is of sixteen hours' duration. No cadet, as a rule, has more than two distinct studies per day in which recitations are to be prepared. These two studies call for six hours of severe mental application for preparation and two and a half hours in the recitation room. Three hours are allowed for meals and recreation, and four and a half hours for drills, parade, and guard duty. In winter, when drills are suspended, two hours are available for additional study, exercise in the gymnasium, or recreation.

Every class is divided into sections of not more than twelve men in each, in the order of their ability as determined at the previous examination. These men are changed according to merits. Marks for recitations are posted every Saturday afternoon for the information of cadets. This publicity creates and maintains healthy ambition and it prevents injustice, because there is a proper time and place set apart for hearing of grievances in this connection.

In all battalion formations precedence is according to military rank. In marching to recitations, class standing determines the relative rank. Every subdivision in barracks has its cadet inspector. Every room has an orderly, responsible for cleanliness, etc. Authority to order and power to execute are limited to specific duties, times, and places. Under all other conditions cadets are comrades.

Academic duties and exercises begin Sept. 1 and continue until about June 30. Examinations of the several classes are held in January and June, and at the former such of the new cadets as are found proficient in studies and have been correct in conduct are given the standing in their class to which their merit entitles them. After either examination cadets found deficient in conduct or studies are discharged, with rare exceptions.



THE NAVAL ACADEMY AT ANNAPOLIS.

Discipline.—"The first three months' service at the academy," says Michie, "are the most trying of all. The new life and surroundings, the severe physical exercise, the unwonted muscular soreness, the multitudinous duties, orders, and regulations that are to be learned and obeyed, do not make the life of the new cadet particularly enjoyable. The first lessons in military subordination are learned when one constrains himself to repress the stinging retort in response to the peremptory command, and obeys the order promptly and without question.

"The steady goer, the patient plodder, the indefatigable student, is certain of success; but the fitful worker, the careless trifler, or the indifferent scholar soon finds that his military career is ended. Discipline is very strict—more so than in the army. The aim is to inculcate habits of prompt and cheerful obedience to lawful authority, of neatness, order, and regularity, and of thoughtfulness and attention in the discharge of duty. A scrupulous regard for one's word is also required. The system of punishment for offenses is remarkable for inflexible enforcement rather than for severity. Besides demerit marks, which count in making up the class standing, cadets are liable to three classes of punishment: (1) Privation of recreation, etc., extra duty, reprimands, arrests, or confinement to room or tent, or in the light prison, reduction to ranks of officers and noncommissioned officers; (2) Confinement in the dark prison; (3) Suspension, dismissal with the privilege of resigning, public dismission."

The age for admission is between seventeen and twenty-two years. Sons of those who have lost their lives in the defense of the nation have preference. The oath taken on entering is as follows: "I do solemnly swear that I will support the Constitution of the United States, and bear true allegiance to the National Government; that I will maintain and defend the sovereignty of the United States paramount to any and all allegiance, sovereignty, or fealty I may owe to any state or country whatsoever; and that I will at all times obey the legal orders of my superior officers, and the rules and articles governing the armies of the United States."

Pay and Expenses.—The pay of a cadet is \$540 a year, to begin with his admission, and is sufficient, with proper economy, for his support. No cadet is permitted to receive money, or any other supplies, from his parents or from any person whatsoever, without the sanction of the superintendent.

The expenses of the candidate for board, washing, lights, etc., prior to admission, will be about \$5 a week, and immediately after being admitted as a cadet he must be provided with an outfit of uniforms, etc., the cost of which is about \$90. "If, on arrival," says Gen. Michie, "he has the necessary sum to his credit on the books of the treasurer, he will start with many advantages in a pecuniary point of view over those whose means are more limited, and who must, if they arrive, as many do, totally unprovided in this way, go in debt on the credit of their pay—a burden from which it will require many months to free themselves; while, if any accident compel them to leave the academy, they must of necessity be in a destitute condition."

Qualifications.—A sound body and constitution, suitable preparation, good natural capacity, an aptitude for study, industrious habits, perseverance, an obedient and orderly disposition, and a correct moral deportment are such essential qualifications that candidates who are knowingly deficient in any of these respects should not subject themselves and their friends to mortification by accepting appointments at the academy and entering upon a career which they can not successfully pursue.

Appointments.—Each congressional district and Territory—also the District of Columbia—is

entitled to have one cadet at the Academy. Ten are also appointed at large. The appointments (except those at large) are made by the Secretary of War at the request of the Representative, or Delegate, in Congress from the district or Territory; and the person appointed must be an actual resident of the district or Territory from which the appointment is made. The appointments at large are specially conferred by the President of the United States.

Applications can be made at any time, by letter to the Secretary of War, to have the name of the applicant placed upon the register that it may be furnished to the proper Representative, or Delegate, when a vacancy occurs. The application must exhibit the full name, date of birth, and permanent abode of the applicant, with the number of the congressional district where he has his residence.

Appointments are required by law to be made one year in advance of the date of admission, except in cases where, by reason of death or other cause, a vacancy occurs which can not be provided for by such appointment in advance. These vacancies are filled in time for the next examination.

The Representative, or Delegate, in Congress may nominate a legally qualified second candidate, to be designated the alternate. The alternate will receive from the War Department a letter of appointment, and will be examined with the regular appointee, and if duly qualified will be admitted to the academy in the event of the failure of the principal to pass the prescribed preliminary examinations. The alternate will not be allowed to defer his reporting at West Point until the result of the examination of the regular appointee is known, but must report at the time designated in his letter of appointment. The alternate, like the nominee, should be designated as nearly one year in advance of date of admission as possible.

UNITED STATES NAVAL ACADEMY. The United States Naval Academy is at Annapolis, Md., on the right bank of the Severn, two miles above its entrance into Chesapeake Bay. It is 25 miles south by east of Baltimore and 37 miles east by north of Washington. The site and immediate neighborhood of the Naval Academy is historic ground. The Puritan refugees from Massachusetts under Durand settled at that place in 1649 and called it Providence. Not long afterward the name was changed to Anne Arundel Town, but subsequently it was renamed Providence, and, later, Annapolis, in honor of Anne of England. In a religious conflict between Protestants and Roman Catholics in its early history, Annapolis, then Providence, became the headquarters of the former. In 1694 Providence became the capital of Maryland, and it so remained after the final change of name.

On April 14, 1755, Gen. Braddock and Commodore Keppel, with five colonial governors, held a congress at Annapolis. At this meeting the two English officers discovered the inability of colonial officials to raise a British revenue in America for the use of the mother country. The policy of force was advocated by the congress and recommendations to that end were resolved upon before its adjournment. On Oct. 15, 1774, a vessel loaded with taxed tea, on which the duty had been paid by the owner, entered the port of Annapolis. The people became excited, declared that the ship and her cargo should be burned, and insisted with so much vigor that the owner was compelled to run the ship ashore and destroy it with its contents. On July 26, 1775, a convention at Annapolis formed a temporary government "which, recognizing the Continental Congress as invested with a general supervision of public affairs, managed its own internal affairs through a provincial committee of

safety and subordinate executive committees, appointed in every county, parish, or hundred." At the close of the Revolution Maryland offered to cede Annapolis to the General Government as the Federal capital. During the negotiation for a permanent site it was resolved in 1783 that Congress should meet alternately at Annapolis and Trenton, the first session to be held at Annapolis. At this session Washington surrendered his commission as commander in chief, Dec. 23, 1783.

History.—The Naval Academy was founded at Annapolis in 1845 by the Hon. George Bancroft, Secretary of the Navy in President Polk's administration. It was opened on Oct. 10, 1845, under the name of the Naval School. Its site had been occupied by Fort Severn. The course was fixed at five years, of which only the first and last were spent at the school, the intervening three years being passed at sea. In January, 1846, there were 56 cadets. Under a reorganization plan that was put into operation four years later the course was extended to seven years, the first two and the last two years being spent at school and the intermediate years at sea. A vessel was attached to the academy as a practice ship, and annual practice cruises were begun. After eighteen months' trial of the second plan the intermediate three years at sea was stricken from the course, making it four consecutive years of study, with a practice cruise to take the place of sea service.

When the civil war broke out in the spring of 1861, the academy was removed to Newport, R. I., but in the summer of 1865 it was returned to Annapolis, where it has since remained. By an act of Congress, March 3, 1873, the course was changed from four years to six years. The present regulation provides for four years at the academy and two years at sea. From 1866 to 1882 classes were formed and instructed especially in engineering. Two acts of Congress, passed August, 1882, and March 2, 1889, authorized many changes and practically placed the academy on its present footing.

Appointments.—One naval cadet is allowed for each member or Delegate of the United States House of Representatives, 1 for the District of Columbia, and 10 at large. The appointment of cadets at large and for the District of Columbia is made by the President. The Secretary of the Navy, as soon after March 5 in each year as possible, must notify in writing each member and Delegate of the House of Representatives of any vacancy that may exist in his district. The nomination of a candidate to fill the vacancy is made, on the recommendation of the member or Delegate, by the Secretary. Candidates must be actual residents of the districts from which they are nominated, and at the time of their examination for admission must be not under fifteen nor over twenty years of age and physically sound, well formed, and of robust condition. They enter the academy immediately after passing the prescribed examinations, and are required to sign articles binding themselves to serve in the United States navy eight years (including the time of probation at the Naval Academy), unless sooner discharged. The pay of a naval cadet is \$500 a year, beginning at the date of admission. Surplus graduates who do not receive appointments are given a certificate of graduation, an honorable discharge, and one year's sea pay.

The Staff.—The general staff consists of (1) a superintendent and 2 assistants, 1 in charge of buildings and grounds, the other acting as secretary of the Academic Board; (2) commandant of cadets and head of department of discipline, with 4 assistants. The present superintendent is Capt. P. H. Cooper. The several departments of academic and other instruction are thus divided:

Seamanship.—Head of department and 3 assistants.

Ordnance.—Head of department and 3 assistants.

Fencing.—Sword master and 2 assistants.

Navigation.—Head of department and 3 assistants.

Steam Engineering.—Head of department and 5 assistants.

Mechanics.—Head of department and 5 assistants.

Physics.—Head of department and 5 assistants.

Mathematics.—Head of department and 6 assistants.

English.—Head of department and 8 assistants.

Languages.—Head of department and 5 assistants.

Drawing.—Head of department and 3 assistants.

Naval Construction.—One instructor.

Physical Training.—One director and instructor.

The officers not attached to the academic staff are: A commander in charge of ships, 3 medical officers, a pay officer and general storekeeper, a commissary and cadet's storekeeper, a chaplain, a librarian and assistant librarian, a secretary, 2 marine officers, and 5 marine petty officers. The Academic Board consists of the superintendent, commandant of cadets, and the heads of departments of seamanship, ordnance, navigation, steam engineering, mechanics, physics, mathematics, English, languages, and drawing. The Board of Visitors includes a president, vice-president, 2 United States Senators, 2 members of the House of Representatives, and 6 citizens of States.

The cadet officers include a lieutenant commander, lieutenant and adjutant, chief petty officer, passed assistant engineer, assistant engineer, 4 lieutenants, 4 junior lieutenants, 4 ensigns, 12 petty officers of the first class and 12 of the second class.

Including marine officers, the total of naval officers engaged in the instruction of cadets at the Naval Academy, 1897-'98, is 64, including 1 captain (the superintendent), 6 commanders, 2 lieutenant commanders, 29 lieutenants, and 9 ensigns. The number of civilian professors having that distinctive title is 11.

Classification of Cadets.—According to the last annual report, the classes of the naval cadets at the beginning of the academic year, 1897-'98 corrected to Oct. 2, 1897, were distributed as follows: 1. Naval cadets of the class appointed in 1892 performing required service afloat—line division, 25; engineer division, 12. 2. Of the class appointed in 1893 performing required service afloat—line, 37; engineer, 10. 3. Naval cadets of the first class—line, 28; engineer, 11. 4. Of the second class, 55. 5. Of the third class, 71. 6. Of the fourth class, 94. A summary of cadets actually at the academy October, 1897, shows the following result: First class, 39; second class, 55; third class, 71; fourth class, 94; total, 259. At the academy, but not included in the usual totals, were 3 cadets pursuing the post-graduate course of naval construction.

Studies.—Full details under this heading can be found in the reports and annual Naval Academy registers, always to be had on application to the superintendent. Briefly, the courses of the several classes embrace the following topics: *Fourth Class.*—First term of first year of study: mathematics—algebra, geometry; English—language, history; language—French. Second term: mathematics—algebra, geometry; English—language, history; languages—French, Spanish. *Third Class.*—First term of second year of study: mathematics—geometry, trigonometry; English—language, law; languages—French, Spanish; mechanical drawing. Second term: physics—physics, chemistry; mathe-

matics—stereographic projections and solutions of the “astronomical triangle,” analytical geometry; English—language; languages—French, Spanish; mechanical drawing. *Second Class.*—First term of third year of study: seamanship; steam engineering—principles of mechanism; mechanics—differential and integral calculus; physics—physics, chemistry; English—history (United States navy); languages—French, Spanish; mechanical: drawing. Second term: Seamanship; navigation—the celestial sphere; steam engineering—marine engines; mechanics; physics; English—history (United States navy); languages—French, Spanish. *First Class.*—First term of fourth year of study: line division; seamanship—includes naval tactics; ordnance—infantry and artillery instructions, gunnery drill, guns and gun mounts; navigation—theory and practice of navigation, hydrographic surveying; mechanics—method of least squares, applied mechanics; physics. Second term: Seamanship—naval construction; ordnance—ballistics, guns, ammunition, armor, torpedoes; navigation—theory of the deviation of the compass, practical navigation, practical surveying; English—international law; physiology—special instructions from Blaisdell’s “Practical Physiology.” *Engineer Division.*—First term: Steam engineering—marine engines, boilers, designing of machinery; mechanics (same as line); physics (same as line). Second term: Seamanship—naval construction; steam engineering—marine engines, boilers, designing machinery; experimental engineering; physiology special instructions (same as line).

Instruction.—Cadets receive exhaustive practical instruction in seamanship, ordnance, navigation, steam engineering, and physical training. This is one of the most important features of the work. The following are the details of work carried on under the several headings mentioned above.

Seamanship.—Knotting and splicing; compass and lead line; ship nomenclature; cutting and fitting hemp rigging; cutting and fitting wire rigging; rowing, and the management of boats under oars and under sail; sailmaking; making up, bending, unbending, and handling sails; rigging ship; stripping ship; shifting spars; getting under way and anchoring; evolutions with vessels under sail and under steam; signaling, army and navy code; management of steam launches; steam fleet tactics with steam launches.

Ordnance.—Infantry, schools of the squad, company, and battalion, in close and extended orders; artillery, schools of the battery and battalion; exercise and target practice with small arms and guns of main and secondary batteries; exercise with cane, smallsword, and broadsword; handling and firing torpedoes, use of Riehlé and Rodman testing machines; determinations of velocities; experimental determination of range tables, also of the jump and drift; the preparation, inspection, care, and preservation of ordnance material. Six medals are awarded annually for marksmanship.

Navigation.—Observations, with sextant and artificial horizon, for time, longitude, chronometer correction, latitude, and azimuth. Surveying: Surveying and constructing a chart of a portion of the Severn river. Compass deviations: Swinging an iron ship, and observing the deviations and the times of vibration of horizontal and vertical needles on different courses; from these observations finding the approximate and the exact coefficients, and the horizontal and the vertical forces acting on the standard and steering compasses; also finding the heeling coefficients for the same compasses without heeling the ship; also correcting the deviations of a compass, using a navy compensating binnacle.

Steam Engineering.—The pattern shop: Selection and treatment of different woods for different purposes. Elementary work of the carpenter shop, through mortising, joining, etc., to finished pattern work.

The foundry: Iron and brass casting; the making of bronzes, alloys, etc.

The blacksmith shop: Forging, welding, etc.; tempering, casehardening, etc.; bending and quenching tests of metals.

The boiler shop: Riveting, soft and hard patching, calking, annealing, tube expanding, etc.; testing.

The machine shop: Vise bench work; machine tool work; including the setting of work; turning; planing; boring; slotting, etc.; pipe fitting; building, erection, and aligning of engines and engine fitting; preparation of working drawings and working from the same.

Management of main and auxiliary engines; getting up steam at leisure and in emergencies; fire-room and engine-room routine, firing, water tending, and oiling; routine under way when desirable to obtain maximum speed; same for maximum steaming radius; management of engines while manœuvring at sea; determining the condition and locating defects in machinery while in motion; causes and prevention of explosion of boilers, steam pipes, gases in uptakes and in coal bunkers; lying under banked fires; coming to anchor; overhauling machinery; cleaning boilers and condensers; preservation of machinery of a vessel when out of commission; conducting progressive and full-power trials and the collecting of data.

Ordinary casualties: Hot crown sheets, burst feed pipes, leaky boiler tubes and seams, burned grate bars, hot pins and journals, fire in bunkers, flooded compartments.

Damages received in battle: Preparations for action; temporary repairs and alternative devices and expedients to be adopted in event of receiving injury from shot or torpedoes; quick methods of disabling machinery about to fall into the hands of the enemy.

Use of slide rule, averaging machine, apparatus for testing oils and smoke gases; standardizing steam gauges and indicators; preparing specifications for purchase of machinery and stores; testing, inspection, and preservation of stores; preparation of various cements, paints, and varnishes in ordinary use; selection of coals; making estimates of the amount of coal on hand, prevention of deterioration, etc.; making of watch, quarter, and station bills.

Physical Training.—Class drills in calisthenics, free movements and with apparatus. Special exercises to promote symmetrical development when necessary. Athletic exercises, including boxing and swimming. Dancing.

Summer Cruises.—The United States practice ships “Monongahela” and “Standish” are used for the cruises of the naval cadets. In the summer of 1897 the “Monongahela,” with a commander, 7 lieutenants, an ensign, 2 surgeons, a paymaster, a chaplain, 28 cadets of the first class (line division), 54 of the second class, and 68 of the third class left Annapolis for Funchal, Madeira, on June 7; passed the capes of Virginia, June 9; arrived at Funchal, July 15; arrived at Lynnhaven Bay, Aug. 14; arrived at Annapolis, Aug. 23; and ended the cruise on Aug. 28. The “Standish,” with engineer cadets of the first class, sailed on the same day and visited Newport News, Va., Chester, Pa., League Island, Philadelphia, Pa., Newcastle, Del., Brooklyn Navy Yard, Bristol, Providence, Newport, Boston, Bath, Portland, Portsmouth, New York, and Lynnhaven Bay, returning and ending the cruise Aug. 23.

Condition and Progress.—The present condition, and the recent advancement of studies, facilities, etc., at the Naval Academy are carefully noted in the last report (Sept. 27, 1897) of the superintendent, Capt. P. H. Cooper, to the Chief of the Bureau of Navigation. In this report he says:

"During the three years that are now ending the resources have increased from nearly nothing to a sloop yacht, four catboats, and several eight-oared shells for the cadets to regard as their own, and a corresponding tendency to use their resources.

"The Naval Academy and the naval service will soon see the fruition of a hope which has long animated those who realize what is best in training young officers, in the building of the sailing practice vessel.

"During the year the improvements accomplished have been the building of two double houses for instructors, grading the land forming the last purchase, converting the same into an agreeable feature of the grounds by the planting of trees, girdling it with well-constructed roads, etc. The sea walls have been extended, a bulkhead of piling made on the east front on the line of the proposed extension, the new sewer system has been completed, proper sanitary water-closets built, and a new outfit of porcelain-lined bath tubs installed for the cadets, a new driveway of vitrified bricks and a granolithic pavement have been constructed in front of Blake Row, and porches added to the houses composing this row. The policy has been consistently followed of improving and repairing only such parts of the academy as will remain intact upon the adoption of the plan of rehabilitation, which was submitted by the board of 1895.

"The Naval Academy has marked an important advance in its career as an educational institution by the incorporation of a post-graduate course of study in naval construction. The course opens with three naval cadets of the class which completed the four years' course in June, 1897, a similar number to be added each year until nine cadets are undergoing this valuable training, the length of the course to be three years.

"The year which has just closed has been one of the most satisfactory in the history of the Naval Academy. Officers and cadets in their several spheres of duty have endeavored cheerfully and zealously to elevate the tone and character of the institution. The results have been evident to the most superficial observer; they have been indicated by the entire absence of friction, bad conduct, and serious infractions of regulations."

UNIVERSALISTS. The following is a summary of the statistics of the Universalist churches in the United States as they are published in the "Universalist Register" for 1898: Number of parishes, 991; of ministers, 781, of whom about 70 are women; of churches, 805, with 48,433 members; of Sunday schools, 653, with 53,730 members; of church edifices, 782, valued at \$10,259,963. The 13 educational institutions employ 162 professors and teachers, are attended by 1,443 students, and have property valued at \$3,786,500.

At the meeting of the General Convention for 1897 the consideration of proposed substitutes for the Winchester Profession of Faith was continued. Articles of a creed approved at the previous meeting of the Convention to be submitted to this one for ratification were rejected, and amended articles were adopted in place of them, as follows:

"The conditions of fellowship in this Convention shall be as follows:

"The acceptance of the essential principles of the Universalist faith, to wit:

"The universal Fatherhood of God;

"The spiritual authority and leadership of his Son, Jesus Christ;

"The trustworthiness of the Bible as containing a revelation from God;

"The certainty of just retribution for sin;

"The final harmony of all souls with God;

"The Winchester Profession is commended as containing these principles, but neither this nor any other precise form of words is required as a condition of fellowship, provided always that the principles above stated are professed."

The annual meeting of the Young People's Christian Unions of the Universalist churches was held in Detroit, Mich., July 7 to 11. About 800 delegates were present, representing unions in 25 States, Territories, and provinces. Twenty-three unions had been formed during the year, and the number was now about 500, with 15,000 members. More than \$6,000 had been raised in these societies for missions and other general work. The Convention decided to propose to the Unitarian Young People's Society that the next annual meetings of the two bodies be held at the same place and at the same time.

URUGUAY, a republic in South America. The Senate has 19 members, one from each department, elected indirectly for a term of six years. The Chamber of Deputies is composed of 69 members, one to 3,000 inhabitants, elected by direct suffrage for three years. The President, whose term of office is four years, was in the beginning of 1897 Juan Idiarte Borda, elected on March 21, 1894. The Cabinet in the beginning of 1897 consisted of the following members: War and Marine, Gen. J. J. Diaz; Interior and Justice, Miguel Herrera y Obes; Agriculture, Industry, Instruction, and Public Works, J. J. Castro; Finance, Federigo Vidiella; Foreign Affairs and Worship, Dr. J. Estrazulas; General Secretary, O. Hordeana.

The Army and Navy.—The permanent military force consists of 4 battalions of riflemen, armed with Remingtons, 4 cavalry regiments, and a regiment of artillery, the whole numbering 233 officers and 3,222 men. The police force numbers about 3,200 and the national guard 20,000 men.

The fleet of war in 1897 consisted of 3 small gunboats and an armed steamer, manned by 22 officers and 162 seamen.

Finances.—The budget of expenditures for the year ending June 30, 1897, was 13,647,924 pesos, of which 505,490 pesos were for the Legislature, 62,045 pesos for the presidency, 117,407 pesos for foreign affairs and worship, 2,213,694 pesos for the Interior Department, 832,026 pesos for finance, 953,346 pesos for public works, 1,730,507 pesos for war and marine, 5,721,735 pesos for the public debt, and 1,511,674 pesos for other expenses.

The consolidated external debt on June 30, 1897, amounted to 100,572,112 pesos; international debt, 4,483,125 pesos; internal unified debt, 6,623,700 pesos; guaranteed debts, 3,783,400 pesos; debt of liquidation, 1,519,993 pesos; railroad debt, 94,478 pesos; loan of 1897, 4,000,000 pesos; total public debt, 121,076, 808 pesos. The expenses of the debt in 1897 were 5,942,391 pesos, 4,875,617 for interest and 1,066,774 for amortization. During the presidency of Borda 25,000,000 pesos had been added to the debt.

Navigation.—There were 283 sailing vessels, of 200,252 tons, and 980 steamers, of 1,791,302 tons, in the foreign trade entered at Montevideo during 1896, and 204 sailing vessels, of 150,800 tons, and 949 steamers, of 1,791,061 tons, were cleared. The coastwise trade comprised 1,635 sailing vessels, of 66,609 tons, entered and 1,632, of 65,655 tons, cleared, and 1,064 steamers, of 634,979 tons, entered and 1,045, of 625,830 tons, cleared.

The merchant marine in 1895 consisted of 19 steamers, of 4,608 tons, and 45 sailing vessels, of 17,779 tons.

Commerce.—The special imports in 1895 were valued at 25,400,000 pesos and the special exports at 32,500,000 pesos. The values in pesos of the imports and exports in 1896 and their distribution among the different countries are given in the following table:

COUNTRIES	Imports.	Exports.
Great Britain.....	2,277,000	1,983,000
France.....	2,490,000	5,040,000
Belgium.....	1,711,000	5,378,000
Germany.....	2,750,000	1,480,000
Spain.....	1,959,000	678,000
Italy.....	2,283,000	477,000
Portugal.....	19,000	143,000
Brazil.....	1,445,000	7,243,000
United States.....	1,776,000	1,714,000
Argentine Republic.....	3,524,000	4,895,000
Cuba.....	143,000	14,000
Chili.....	67,000	215,000
Paraguay.....	77,000	1,000
Other countries.....	9,000	142,000
Total.....	25,530,000	30,403,000

The exports of wool in 1896 were valued at 10,248,000 pesos; hides and skins, 5,707,000 pesos; meat, 4,573,000 pesos; extract of beef, 2,104,000 pesos; cereals, 1,803,000 pesos; tallow, 1,647,000 pesos; animals, 1,491,000 pesos.

Communications.—There were 996 miles of railroad in operation at the beginning of 1896 and 191 miles under construction. The telegraphs had a total length of 3,397 miles, besides 952 miles belonging to railroad companies. The number of dispatches in 1895 was 332,477. The post office in 1895 forwarded 8,602,475 letters, etc., in the internal and 6,612,025 in the international service; receipts, 1,771,340 francs; expenses, 1,667,766 francs.

Revolutionary Uprising.—The revolutionary invasion of Uruguay from the neighboring Brazilian and Argentine provinces became formidable after the revolutionists gained a victory over the Government forces near the Argentine frontier on March 17, 1897. The revolution was supported by the whole party of the Blancos, the opponents of President Borda and the Colorados who supported him. They were goaded into revolution by his tyrannical course in depriving them of all electoral and civil rights. A new expedition of Blancos under Col. Mongrell had crossed the frontier at this point about 900 strong, and, as usual, they were quickly joined by a great number of adherents. At the same time the southern division of the rebels under Col. Lamas worked its way northward from Colonia to the Rio Negro, growing in numbers as it advanced until it formed an army nearly 2,500 strong. Gen. Villas, commanding the northern division of the Government army, advanced by forced marches and attacked the united rebel forces encamped close to Paysandu. The rebel cavalry was well mounted and armed, and contained many soldiers who had served in the Brazilian army. Owing to this superiority and to the strength of their position the Blancos repelled the Government troops, although they fought with great gallantry, returning to the attack several times. The losses on both sides were about 500 killed and 400 wounded. One of the Government regiments of rifles was nearly annihilated.

After this victory Col. Lamas worked eastward along the Rio Negro, intending to join Aparicio Saraiva, Col. Mena, and the large contingents that were pouring in from Brazil, and with the combined forces, mustering nearly 6,000 men, marching upon Montevideo. The authority of the Government was entirely suspended in the northern

department of Artigas and in four or five of the central departments. Owing to the revolution railroad traffic and internal and foreign trade fell off rapidly. The entire army was mobilized. President Borda attempted to direct operations. This caused the Minister of War to resign. He was succeeded by Gen. Perez. Montevideo was kept under martial law. In April the rebels were in complete possession of the eastern departments and collected the customs on the Brazilian frontier. Nevertheless lack of money and munitions caused a gradual decline in the strength of the rebellion, while the Government was enabled with a new loan of 4,000,000 pesos to put forth extraordinary efforts. On May 16 Gen. Villas gained a decisive success over the united forces of Lamas and Saraiva near Fructuoso. The main body of the rebels was broken up and driven back into Brazil, and the danger to the capital was averted. Still they could carry on guerrilla tactics indefinitely, and these were as disastrous to industry and prosperity as a regular campaign. Both the rebels and the Government troops seized horses where they could find them and killed sheep and cattle for food, so that production as well as commerce was paralyzed. For this reason a commission was sent to try to arrange terms with the rebels. Dr. Larreta, the head commissioner, brought back in July from Rio Grande the terms on which the rebel leaders, Aparicio Saraiva and Col. Lamas, agreed to lay down their arms, which were the dissolution of the Chamber, the resignation of President Borda, the constitution of a council of notables drawn from both political parties, and the nomination by this council of a triumvirate to administer the Government until the election of the next President in March, 1898. To such terms the Congress was as little disposed to agree as the President. Heavy skirmishing was resumed between Trienta y Tres and the Brazilian frontier. In this district about 2,000 rebels kept the army under Gen. Muñiz on the alert. One detachment of Government troops 300 strong was surprised and surrounded, and two thirds of them were killed or taken by the insurgents. The Chambers when peace was in sight had passed a bill restoring the liberty of the press. The Government generals proved themselves incapable of coping with the two rebel leaders, who conducted their operations in perfect accord with one another and displayed much military ability. The rebels managed to capture a large quantity of ammunition and stores from Gen. Muñiz. A difficulty was created with Brazil by the Government troops, who in pursuing the rebels crossed over the border. Peace negotiations were resumed, and in the middle of July an armistice was arranged to last till Aug. 5. It was not strictly observed on either side at first, but the negotiations took a hopeful turn, and the armistice was prolonged till Aug. 15. The insurgents sent peace delegates, who demanded that the Blancos should have the chief offices in eight departments. As the President would only give them the control of three the negotiations again came to a standstill.

Meanwhile the popular exasperation against President Borda became intense. When he first entered upon his office he had a reputation for personal integrity, and through the reforms that he instituted and the prosperity that flowed from them he built up an enormous party, too numerous to be kept long together by the methods of corruption, favoritism, and tyranny into which he relapsed, and which he carried to a higher degree than his predecessors. Hence a strong hostile faction sprang up in the Colorado party, which became embittered like the Blancos when the President abused the electoral machinery in order to exclude all inde-

pendent men from the Congress. The Chamber elected in November, 1896, was composed entirely of his creatures. Having assumed despotic power, Borda was held responsible by the people for all the evils that had befallen the country. A youth attempted to assassinate him in April. After the failure both of the military campaign and of the peace negotiations, which he had abruptly broken off out of sheer obstinacy and ill temper, there were many who were ready to kill him. The civil war was resumed vigorously in the interior by the Blancos, and the Government forces met with severe losses in sharp skirmishes fought on Aug. 21 and 22. Borda refused to send medical aid to the wounded because he did not wish the extent of the calamity to be known, for he had arranged an elaborate official celebration of the anniversary of national independence on Aug. 25, accompanied by a great military parade and costly operatic performances, although the Government was nine months in arrears in its payments. Borda laughed at the warnings of his friends, who told him that it would be dangerous to expose himself in public. When he issued from the cathedral after the official *Te Deum* and, accompanied by his ministers and followed by a train of diplomats and officers, passed through the plaza between the files of 4,000 soldiers, a respectable grocer's clerk stepped out from the crowd of spectators and with a revolver shot the President through the heart.

No disturbance of public order ensued. The Vice-President of the Republic, Juan L. Cuestas, at once assumed the presidency. He had been known as a decided partisan, and therefore anxiety was felt regarding the policy he would pursue toward the rebel Blancos. Moreover, it was feared that he would advance the candidacy of Dr. Julio Herrera y Obes, who had been President from 1890 to 1894 and had implanted the system of corrupt and arbitrary party rule that was the source of the national misfortunes. Señor Cuestas adopted a course that won the approbation of the commercial and foreign communities and relieved the popular tension of mind. He resumed negotiations with the rebels, and called an immediate extraordinary session of the Chambers. Confirming Gen. Perez as Minister of War, he announced the other Cabinet appointments on Aug. 29 as follows: Minister of Finance, Dr. Juan Campestegey; Minister of Public Works, Eduardo Maceacheu; Minister of Foreign Affairs, Dr. Mariano Ferreira; Minister of Public Works, Jacobo Varela. The rebels displayed extraordinary activity in extending "the zone of their occupation. Although the Government was supposed to have 20,000 men in the field, Gen. Tajés, who had recently assumed command of operations, was unable to prevent the rebel groups from moving freely in all directions, even in the immediate vicinity of his headquarters at Nico Perez. They again appeared in the neighborhood of the capital. Their bands were augmented by fresh adherents wherever they appeared. Soldiers and policemen went over to them, taking Government arms and ammunition. Señor Ramirez, the official delegate of the Government, on Sept. 10, came to an agreement with the rebel leaders, who promised to cease hostilities if their party were confirmed in the control of six departments, and if the Government paid them an indemnity of 200,000 pesos, reinstated the army officers and administrative officials who had joined the revolution, and reformed the electoral laws and procedure, introducing the representation of minorities. The rebels threatened to attack the capital with an army of 5,000 men, when the Government accepted these terms after its generals had demonstrated their incapacity to suppress or even check the movement. The Cham-

bers ratified these terms of peace, which did not even oblige the rebels to surrender their arms. From being little more than a name for a quarter of a century, the Blanco party became a strong factor in politics through the terms which it dictated to the Government without having won any signal battle. The craving of the country for tranquillity, the financial straits of the Government, which Borda had left with a deficit of 6,000,000 pesos, the stoppage of trade and of revenue receipts, and the imminent loss to the country of most of the wool crop and grain harvest if the rebellion continued, led the new President to accept the conditions demanded and the Chambers to ratify the peace convention unanimously. The local banks advanced 500,000 pesos to pay the indemnity and meet other pressing obligations.

An entirely new political situation arose out of the peace and the attitude assumed by acting President Cuestas toward Dr. Herrera, the Colorado candidate for the presidency, who had the unanimous support of Borda's Congress and a strong following in the army. Señor Cuestas himself was proclaimed a candidate for President by all political parties except the former adherents of Borda. Sustained by the moderate Colorados who had opposed Borda's methods and by the newly enfranchised Blancos, the President threatened to dissolve the Chambers and to mobilize the national guard in case the army should manifest a mutinous disposition. Meeting with opposition in the Cabinet, he appointed Dr. Salterain Minister of Foreign Affairs upon the resignation of Señor Ferreira on Dec. 2. The whole civil service was reformed with a view to economy, and a host of supernumerary officials were discharged. Several officials were arrested and prosecuted for malversation. On Nov. 18 an attempt was made to abduct and depose President Cuestas. In November Dr. Herrera and other leaders of the Opposition were arrested, and the ex-President, Gen. Tajés, Major Brian, and Dr. Aguirre were exiled by a decree of the President. On the next day a man attempted to kill President Cuestas with a knife. A Cabinet crisis was occasioned by the assumption of a dictatorship by the President, who on Dec. 22 appointed Gen. Gregorio Castro Minister of War and Dr. Mendoza Minister of Finance.

UTAH, a Western State, admitted to the Union Jan. 4, 1896; area, 84,970 square miles. The population in 1890 was 207,905; the estimated population in 1895 was 247,324. Capital, Salt Lake City.

Government.—The following were the State officers during the year: Governor, Heber M. Wells; Secretary of State, James T. Hammond; Treasurer, James Chipman; Auditor, Morgan Richards, Jr.; Attorney-General, A. C. Bishop; Superintendent of Public Instruction, John R. Park—all Republicans; Adjutant-General, John Q. Cannon; Coal-Mine Inspector, Thomas Lloyd, resigned, and succeeded in October by Gomer Thomas; Surveyor-General, G. W. Snow, succeeded in September by Jacob B. Blair; State Engineer, Willard Young; Fish and Game Warden, John Sharp; Fruit-Tree Inspector, H. J. Faust, Jr.; Regents of the University, Rebecca E. Little, James Sharp, T. R. Cutler; Board of Arbitration and Conciliation, John Nicholson, E. A. Wall, W. S. Willis; Chief Justice of the Supreme Court, Charles S. Zane; Associate Justices, George W. Barche and J. A. Miner—Republicans; Clerk, L. P. Palmer.

Finances.—The financial statement covering the first half of 1897 shows the following items: Amount of legislative appropriations, \$987,777.76; warrants drawn to June 30, 1897, \$257,992.58; unexpended balance of appropriations, \$729,758.18;

balance in treasury, Dec. 31, 1896, \$420,950.38; receipts from all sources, six months, \$282,266.99; total, \$703,217.37; less warrants paid, \$637,366.86; balance on hand, June 30, 1897, \$65,850.51; outstanding warrants, June 30, 1897, \$149,118.91.



HEBER M. WELLS, GOVERNOR OF UTAH.

The total of the State's liabilities, including bonded debt and outstanding warrants, is \$1,098,681.75. The current deficit appears to be \$105,541.90. Compared with the same period of 1896, the current deficit in the State's financial affairs shows an improvement, being then \$127,764.52.

The receipts of the office of the Secretary of State for the whole year were \$31,612.67, of which \$9,449.52 was from the tax on premiums of insurance companies.

The valuation of the State by the returns to the State board was \$102,570,000. The Board of Equalization raised the assessment of Salt Lake County 5 per cent.

In a case involving the limit to the debts of counties, the Supreme Court held that, according to the law, each year's debts must be paid by each year's taxes and revenue, and that no debt or liability can be created except such as can be liquidated by the taxes and revenue of that year.

Education.—The school population is 81,882, a gain of 2,489 over that of 1896. The amount for the first apportionment of 1898 on this basis will give \$2.97 *per capita*. The schools of Salt Lake City show an enrollment of 10,719, and an average attendance of 9,397.

Provision was made for a branch normal school to accommodate the southern part of the State, and Cedar City, in Iron County, was selected as the site. The city is to have a building ready for the opening of the school in September, 1898, and meantime temporary quarters are furnished.

The State University granted the degree of B. A. to 2 graduates this year, and B. S. to 3. Certificates for the four years' normal course were granted to 21, and for the three years' course to 25.

The attendance at the Agricultural College for the year ending June 30 was 488, a slight falling off from the previous year, when it was 497.

There were 14 graduated with the degree of B. S., compared with 7 of the preceding year. Three graduated with certificates in a two years' course.

The receipts during the year were \$22,000 from the State, \$37,000 from the Federal Government, and \$5,811 from other sources—a total of \$64,811. The expenditures were \$65,135.

Ground was broken May 4 for the new Brigham Young College building at Logan. The gymnasium and 6 class rooms were to be ready for use at the end of the year. At the nineteenth annual commencement, in June, 25 were graduated, and in October 250 were in attendance.

The School for the Deaf and Dumb and the Blind, at Ogden, sent out 2 graduates in June.

Insane Asylum.—The number of patients, Oct. 31, was about 254.

Militia.—The National Guard was in camp at South Cottonwood, Salt Lake County, five days in September.

At a meeting of the Western Federation of Miners in May, the president, in his address, urged that members see that "ways and means are provided so that every member can be furnished with the latest improved rifle, which can be obtained from the factory at a nominal price." He added: "I entreat you to take action on this important question, so that in two years we can hear the inspiring music of the martial tread of 25,000 armed men in the ranks of labor"; and further said: "The constitution should be also amended, so as to declare all members of the National Guard ineligible to membership, and withhold our patronage and assistance from all companies and individuals or organizations where any member of the National Guard is employed or admitted to membership."

Railroads.—The sale of the Oregon Short Line and the Utah Northern under the consolidated mortgage of Aug. 1, 1889, was made Jan. 1, for \$5,447,500. The Utah Southern was sold to the same bidders, representing the reorganization committee, for \$763,000, and the Utah Southern Extension for \$975,000. The separation of the first-named road from the Union Pacific and the establishment of the headquarters of the reorganized road at Salt Lake City means much for the prosperity of the State. In May an arrangement was entered into by this road and the Rio Grande Western, by which they were to combine on a division of through-freight rates on all business from the territory south of Ogden. Announcement was made that on June 1 the Ogden gateway would be opened to all connecting lines. It has been closed since 1891. This is a move of great importance in the matter of freight facilities, and will give the capital and the surrounding country the benefit of a great amount of through-passenger traffic between Denver and the Northwest.

Three short roads—the Salt Lake and Fort Douglas, the Salt Lake and Eastern, and the Utah Central—were bid off in May for \$272,600.

Banks.—The condition of the 11 national banks, as published Jan. 8, showed that since the previous report the average reserve held had decreased from 43.12 per cent. to 37.64 per cent. Loans and discounts had increased from \$2,461,804 to \$2,573,598. The reserve had decreased from \$1,618,383 to \$1,403,376, of which gold holdings decreased from \$699,262 to \$686,376, and local resources decreased from \$7,208,783 to \$7,093,901. The deposits increased from \$3,925,321 to \$3,935,242.

In December the ex-president of the late American National Bank of Salt Lake was convicted of making false entries upon the books and false representations in a report to the Comptroller of the Treasury, having reported overdrafts amounting to \$5,575.53, when they amounted to \$14,497.82.

Products.—Notwithstanding increased activity in mining in certain portions of the State, there was a material falling off in the total value of the metals produced in 1897. This decrease is confined to silver and gold; in lead and copper there was a decided increase. The total value of the output of the four metals was \$9,347,383 in 1896, and \$8,263,685 in 1897.

The gilsonite deposits have attracted much attention of late. They cover considerable territory in the Uncompahgre reservation, extending into Colorado. The report of the United States Geological Survey says there are 7 distinct veins, which vary from 1 to 18 feet in thickness, and it is estimated that their total contents will amount to 23,744,528 tons.

The same report quotes the price of this material in Chicago at \$40 to \$50 a ton. It is a sort of asphaltum, and is described as a black, tarry-looking substance of most brilliant luster, normally of absolutely homogeneous texture and exceedingly brittle.

One of the uses of gilsonite is the manufacture of mineral paint. It is expected to afford complete protection to the bottoms of ships against animals, as it will make impossible the boring into them by the creatures that now cause so much expense for repairs. It is also an absolute nonconductor of electricity.

The figures for the wheat crop of 1896 gave that of Utah as valued at \$1,906,552, representing 2,803,753 bushels, raised on 105,802 acres.

Indians and Public Lands.—A table of railroad lands patented during the year in the mountain States shows that the Central Pacific Company received patents for 285,858 acres in Utah, and the Union Pacific for 255,120 acres. Three coal land patents, embracing 355 acres in Utah, were issued. A schedule of vacant lands shows that Utah has 9,828,581 acres of surveyed land, and 34,366,489 acres unsurveyed.

By the bill passed by Congress in June, all lands on the Uncompahgre reservation will be thrown open for settlement except the mineral lands, the title to which will remain in the Government. This will go into effect April 1, 1898. Commissioners were appointed to allot lands in severalty to the Indians.

Several Ute Indians who were off their reservation with a large party, hunting game in northwestern Colorado, were killed Oct. 28, by game wardens. The number killed was 2, or 6, or 8, according to different reports, and some squaws were wounded. Much indignation was expressed at what was regarded as wanton killing, but an investigation which was ordered resulted in the vindication of the wardens.

Judicial Decision.—In a case of the settlement of an estate, the Supreme Court decided in June against the law of 1896 regarding the right of children of polygamous marriages to inherit. The act giving such children the right to share in property left by their father was declared invalid, because in its passage the Legislature assumed to exercise judicial powers, and also because they assumed the right to require the courts to regard judgments as impeachable that were unimpeachable under the laws in force at the time they were rendered and by which vested rights were established and evidenced.

The Semicentennial.—The event of the year in the history of the State was the jubilee in celebration of the fiftieth anniversary of the entrance of the pioneers into the Salt Lake valley, July 24, 1847. An incident of the festivities was the presentation to the survivors of the 146 who entered at that time of gold badges, on which were por-

traits of Brigham Young. The week of jubilee began July 20. The national colors were raised on Ensign Peak, on the spot where the first American flag was raised by the pioneers in 1847. Among the incidents of the celebration were religious exercises, addresses, and the reading of a prize poem by N. A. Sherman, the unveiling of a statue of Brigham Young, a parade of children, a cowboy tournament, and processions representing the history and progress of the State. Striking features of the processions were the Leadville drum corps, the marching Indians, 200 or 300 in number, a beautiful float representing the gulls and crickets, the hand-cart brigade, the first locomotive ever sent over the Union Pacific Railroad, the fire department, the first street car in Salt Lake, a silkworm float, a telephone float, and that with 27 girls representing the counties. In the pioneer parade on the last day were shown some of the wagons in which the first settlers arrived, and a representation of the original pioneer train as it first entered the valley. The "old sow" cannon, which was brought across the plains, was in line. The pony express riders called forth great applause by their wild gallop through the streets accompanied by the firing of revolvers. A hall of relics was established, modeled after the Parthenon. The attendance of visitors was estimated at 60,000.

Political.—At the Trans-Mississippi Congress in Salt Lake City, July 15, a resolution declaring for free and unlimited coinage of gold and silver at the ratio of 16 to 1, and without the co-operation of any foreign government, was adopted by a vote of 244 to 46. Resolutions were adopted also favoring the Nicaraguan Canal and Hawaiian annexation, and the following: "*Resolved*, That it is the sense of this Congress that the Pacific lines should be foreclosed as they become due, and that the Government should adopt such measures as will secure to the patrons of the Pacific Railway the use of said roads upon the payment of rates which yield a reasonable return upon the present value of the roads measured by the cost of reproduction."

Much comment was caused in October by a discourse of President Woodruff at a semiannual Church conference at Salt Lake City, in which he advised his hearers to lay aside party ties and vote together as Mormons. Following is the report, in part, from the "Deseret News":

"I prophesy, in the name of Israel's God, the day has come when the mouths of Wilford Woodruff, George Q. Cannon, Joseph F. Smith and these twelve apostles, should not be closed because of the opinions of the children of men. There have been feelings that these men holding high positions—the twelve apostles and presidency—should say nothing about politics. I want to say to you here, the day has come when God Almighty requires at your hands to unite together in your temporal business, and in your politics, so far as it is wisdom. I do not care whether a man is a Republican or a Democrat, in that he is free; but it is your duty to unite in electing good men to govern and control your cities, your local affairs, and I will state that when you do not do this you are losers of the blessings of Almighty God. My mouth shall not be closed upon these principles. I know it is the duty of the Latter-day Saints to unite together in your local affairs, the election of your city councils, the election of men to act for you in the affairs of State. I take the liberty as President of the Church of Jesus Christ of Latter-day Saints, of making these remarks. No matter what the feelings of men may be toward me, I shall not stay in this country very long. But I realize very well that this people are groaning under poverty, under affliction, under taxation, and in positions that they

ought not to be if they would only unite together and do their duty."

At the municipal election in November the candidate for mayor on the citizens' ticket was elected, while the Democrats carried most of the other offices. Their defeat on the vote for mayor was ascribed to Church influence. Democratic mayors were elected at Ogden, Mercur, Logan, and Eureka, and Republican at Provo and Brigham.

It appears that the women who were candidates for office in Salt Lake City were badly scratched by the woman voters. Miss Joanna Sprague, the candidate for recorder, was defeated by women, although a local paper says that practically every lawyer in the city supported her, because she had been a successful deputy in the district court clerk's office. She had no criticism to encounter from any source, and an informal canvass of the business district before the election justified the general belief that she would run ahead of her ticket. So also Mrs. La Barthe and Mrs. Bradley, who were nominated for the auditorship, although competent and experienced, were defeated by Mr. Swan, an independent candidate, through the votes of the women.

The Trial of Moses Thatcher.—This was concluded in August. The trouble began soon after Mr. Thatcher accepted the Democratic nomination for United States Senator. This breach was widened during the campaign that followed, and culminated when the Church formulated the last manifesto and Mr. Thatcher refused to sign it. At the conference of the Church following this, Mr. Thatcher was suspended from the quorum of apostles, and a little later was deprived of that office.

In the last senatorial campaign, Mr. Thatcher was again a candidate for the United States Senate, and his public utterances, interviews, and letters gave offense to the Church authorities, so that finally he was placed on trial before the high council on a charge of apostasy. The decision of the State presidency was that the charges were sustained, but it was added that Mr. Thatcher might be restored to membership in the Church by making proper submission. He accepted the decision, signed the manifesto, and was retained in fellowship with the Church.

Legislative Session.—The second session of the Legislature began Jan. 11 and ended March 16. Aquila Nebeker was chosen president of the Senate, and John N. Perkins Speaker of the House. There were 3 Republicans and 4 Populists in the Legislature, all the others being Democrats. Three of the members were women.

The contest over the election of a successor to United States Senator Arthur Brown lasted from Jan. 19 to Feb. 3. The Legislature was so overwhelmingly Democratic that no caucus was held. The leading candidates were Joseph L. Rawlins, Moses Thatcher, and Henry P. Henderson, all Democrats. The Republicans gave complimentary votes during the contest to Arthur Brown, Lafayette Holbrook, G. M. Cannon, A. L. Thomas, C. C. Goodwin, Thomas Kearns, C. W. Bennett, E. B. Critchlow, and A. C. Bishop. The Populists named H. W. Lawrence, James Hogan, Mrs. La Barthe, Warren Foster, Mrs. Anderson, and Mrs. Cannon. Others voted for were O. W. Powers, Fisher Harris, R. C. Chambers, and Aquila Nebeker. On the fifty-third ballot Joseph L. Rawlins was elected, having 32 votes, the number necessary to a choice. Following is a description of the scene on Feb. 23, from the Salt Lake "Herald": "No such spectacle was ever witnessed in any legislature in the Union as that which was presented in the Utah joint Assembly yesterday. No man was ever elected Senator amid such a storm of passion. Upon the floor of

the Assembly members boldly charged that their colleagues were the slaves of a priesthood; that they were voted like cattle, first for one candidate and then for another, all the time controlled by an unseen hand. And these charges, delivered with dramatic effect, drew forth great shouts of approval from the hundreds of Thatcher sympathizers who crowded the hall. The members thus accused uttered indignant and fiery protests against these charges, which were denounced as absolutely false. They were hissed and jeered by Thatcher sympathizers and cheered by anti-Thatcherites. The Mormon Church was bitterly assailed by Thatcher's followers, and defended by the opposition. For two hours the Assembly was tossed and swayed by the storm of excitement, and the final scene, ending in the announcement of Rawlins's election, was one of such wild frenzy, such dramatic, almost tragic, features, as to absolutely beggar description."

Resolutions were introduced in both houses calling for the appointment of a committee to investigate the alleged use of Church influence in the senatorial contest. They were amended so as to call for an investigation into all kinds of influence used during the contest, "ecclesiastical or otherwise," and an inquiry "into the alleged fact whether or not any of the newspapers of Utah have been subsidized, assisted, bought, or purchased in the interest of any candidate for the United States Senate." The committee was to consist of the Governor, the Attorney-General, and the three justices of the Supreme Court. The resolutions were adopted by the House, but failed in the Senate by a vote of 5 to 11.

The first bill that became a law was an act "to provide for the formation of railroad corporations." The immediate object of the bill was to provide for the reorganization of the Oregon Short Line and Utah Northern Railway which was sold early in January.

Another bill affecting railroads provided for land grants to be made to them. It was passed over the veto of the Governor, who objected to the section providing that railroads may have a right of way over all State lands, including certain depot privileges every 10 miles, as unconstitutional, because he believed it would be a violation of the trust imposed by the Constitution to donate any part of the granted lands to any person or corporation.

The work of the Code Commission was adopted after changes, one of which was the rejection of a provision extending the operation of the eight-hour law to all employees of the State, and of all counties and municipal governments.

Some important laws in regard to the public lands were enacted. One provides for the construction of irrigation works by persons or corporations; it will enable the State to take advantage of the act of Congress granting 1,000,000 acres on condition of the establishment of irrigation works.

The office of State Engineer was created, with a salary of \$1,000 and traveling expenses.

The Land Board is authorized to lease any State lands containing stone, coal, coal oil, gas, or any mineral, conditioned upon the payment to the State of a royalty upon the product.

A new mining law was vetoed, but was passed over the veto.

Another act provides for creating a reservoir land-grant fund.

A change was made in the form of ballots required by law, so as to simplify matters for voters.

A State Board of Horticulture was created, to consist of three members to be appointed by the Governor, for the purpose of preventing the spread of pests that attack trees, bushes, and vines. The office of State Dairy and Food Commissioner was created. Another measure makes it unlawful to

offer for sale any adulterated vinegar, and requires manufacturers to mark upon each barrel or package the standard strength of the contents.

A new fish and game law provides for county wardens. Some changes were made in the closed seasons, and after much controversy in each house the following important section was added to the bill: "It shall be unlawful for any person or persons, at any time, to ship or cause to be shipped, carried, or transported out of the State, any of the animals, birds, or fish, or any part thereof mentioned in this act."

An assignment law was made. One provision is, that in all assignments for the benefit of creditors, debts due for wages or personal services of servants or employees of the assignee for services or labor rendered within one year previous to the assignment are preferred claims.

A branch of the State Normal School is to be established in Beaver or in Iron County. The public-school laws were amended in unimportant particulars.

The newspaper libel law was amended and re-enacted.

The expenses of the session amounted to \$24,955.

The tax levy for general State purposes was fixed at $4\frac{1}{2}$ mills, a reduction of half a mill; the State school tax at 3 mills, the county tax for general purposes at 5 mills, and the county school tax may not exceed 4 mills. The amount to be raised for the years 1897 and 1898 is about \$950,000.

The sum of \$15,000 was appropriated for the State semicentennial celebration, \$8,000 for an exhibit at the Omaha Exposition, and \$2,000 for one at Nashville.

The appropriation to the State University for a period ending in June, 1899, was fixed at \$73,000; that to the Agricultural College at \$22,500; to the School for the Deaf, Dumb, and Blind, \$45,000; and \$3,500 was granted to the State Industrial School for purchase of land.

Other acts were:

Setting aside certain lands about Fish lake as a State park.

Permitting the use of automatic machines in elections.

For the building of a miners' hospital at Park City.

Providing that real estate sold under deeds of trust may be redeemed within six months.

Providing for the weighing of coal at the mine before it leaves the mine car, where miners are paid by the ton.

Making it the duty of employers to provide seats for women and girls employed in stores and shops.

For the protection of evergreen trees.

Providing that no spectator at any indoor place of amusement shall wear any headware tending to obstruct the view of any other person. Violation of the act is punishable by a fine of not less than \$1 and not more than \$10.

Raising the marriageable age of males from fourteen to sixteen, and that of females from twelve to fourteen.

Providing for the compulsory education of deaf-mute and blind children.

Prohibiting the sale of intoxicating liquor within ten miles of an Indian reservation, except in incorporated cities and towns.

Providing for a complete revision of the record of marks and brands by the State Auditor.

Providing that a suit in law or equity may be brought, prosecuted, and appealed by a person too poor to pay the costs, upon his oath that such is the case.

Several memorials were adopted, among them the following:

Asking Congress for cession to the State of all public lands in it except mineral lands.

Asking for the opening of Indian reservations.

In relation to placing a statue of Brigham Young in Washington, and appropriating \$250 for the use of the Utah Senators in forwarding the project.

For the relief of citizens who suffered from Indian depredations before becoming citizens.

Asking for a Federal grant of the Industrial Home property for educational and other purposes.

For a reserve of the head waters of Beaver river.

Permitting the cutting of timber on public lands for local purposes.

Asking compensations for veterans of the Black Hawk war.

A bill providing for an income tax was defeated in the House. Another bill that failed proposed to make silver coins of the United States of whatever denomination full legal tender in payment of all dues and settlement of all transactions, whether public or private.

The Senate refused to confirm several nominations sent in by the Governor, because the men appointed were supporters of the national Republican ticket in 1896 and not in favor of free coinage of silver. The Legislature adopted a resolution to submit to the people an amendment to the Constitution depriving the Governor of the power to appoint to office any person whose name has been rejected by the Senate for that office; but, having that power under present laws, the Governor appointed his nominees after the adjournment of the Legislature.

Several amendments to the Constitution were proposed.

V

VAN WYCK, ROBERT A., first mayor of the greater city of New York, born in New York city in 1850. His father was William Van Wyck, a lawyer, politician, and member of Tammany Hall, who was at one time president of the Board of Aldermen. President Andrew Jackson and President Martin Van Buren were confidential friends of William Van Wyck. The progenitor of the family in America was Cornelius Barents Van Wyck, who emigrated to the New Netherlands in 1650 from the town of Wyck, in Holland, and married, in 1660, in Flatbush, Ann, daughter of the Rev. Johannes Theodorus Polhemus, the first Dutch Reform minister in Kings County. All the American Van

Wycks are descended from this couple. Robert A. Van Wyck is a descendant in the seventh generation from the founder. The family has produced many men who have been conspicuous in the professions and in the public service as judges, State legislators, congressmen, and Senators. In every one of the country's wars there have been Van Wycks among its defenders. The mother of Robert A. Van Wyck was a Southern woman, and several years of his early life were spent in Virginia. He attended the public schools, but left them to go into business. He became a messenger boy, and afterward a clerk. For five years he worked as a clerk, and then went back to school and prepared



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Josh. A. Van Wyck

to begin the study of law. He was graduated in Columbia College Law School in 1872 at the head of a class numbering 124, and delivered the valedictory address. After living for a time in Germany, Mr. Van Wyck returned to New York, took up the practice of law, and was successful in the profession. He had a taste for politics, became a member of Tammany Hall soon after his return to New York, and took an active part in every canvass, always on the Democratic side. In 1880, when Tammany Hall was under the leadership of John Kelly, Van Wyck left it on account of the equivocal course which it had pursued in the presidential campaign of that year. He went over to the County Democracy, and twice was an unsuccessful candidate for office. He subsequently returned to Tammany Hall, and in 1889 was elected chief justice of the city court. Only a small percentage of the decisions that he made while holding this post have been reversed on appeal. On Sept. 30, 1897, Justice Van Wyck was nominated to be the Tammany candidate for first mayor of the greater city of New York, and on Nov. 2 he was elected by a plurality over Gen. Benjamin F. Tracy, the Republican candidate; President Seth Low, the nominee of the Citizens' Union; Henry George, who headed a party calling itself the Democracy of Thomas Jefferson; and several other candidates. Mayor Van Wyck took office on Jan. 1, 1898.

VENEZUELA, a federal republic in South America. The Congress consists of a Senate of 27 members, 3 from each State, elected for four years, and a House of Representatives of 63 members, elected also for four years by the votes of all adult male citizens. The President and the Council of Government are elected for four years. Gen. Joaquin Crespo, who was victorious in the civil war of 1892, was elected President for the term ending March 4, 1898. The Council of Government consisted in 1897 of Manuel Guzman Alvarez, President; Dr. F. Acevedo, Vice-President; and Dr. H. Rivero, Gen. Custodio Milano, Luis Zagarazu, José G. Riera, Tomás José Guillén, and Manuel Modesto Gallegos, members. The President's Cabinet was composed as follows: Interior, Dr. J. F. Castillo; Foreign Affairs, Dr. Ezequiel Rojas; War and Marine, Gen. Ramon Guerra; Treasury, H. Perez; Public Instruction, Dr. Federigo R. Chirinos; Fomento, Dr. Manuel A. Diez; Public Works, H. Perez.

Area and Population.—The area is estimated at 593,943 square miles. The population in 1894 was 2,444,816, consisting of 1,197,069 males and 1,247,747 females. The number of foreigners was 44,129, of whom 13,558 were Spaniards, 11,081 Colombians, 518 other South Americans, 232 citizens of the United States, 6,154 British, 3,179 Italians, 2,545 French, 3,729 Dutch, 962 Germans, 82 Danes, and 2,089 from other countries. The number of marriages in 1894 was 4,012; of births, 80,819; of deaths, 46,410; excess of births, 34,409. The number of immigrants was 141.

Finances.—The receipts of the treasury for the fiscal year 1898 were estimated at 40,150,000 bolivars, or francs, of which 27,000,000 bolivars are the yield of customs, 7,970,000 bolivars come from internal revenue taxes, and 5,180,000 bolivars from rents and profits of state property. The expenditures were estimated at the same total, divided into 8,387,593 bolivars for the interior, 2,516,170 for foreign affairs, 2,227,255 for fomento, 3,171,176 for public instruction, 2,633,264 for public works, 15,163,402 for finance and service of the debt, and 6,051,140 for the army and navy.

The public debt on June 30, 1897, amounted to 148,956,298 bolivars, of which the internal consolidated 6-per-cent. debt of April 14, 1896, represented

63,374,943 bolivars, the external 3-per-cent. debt 66,690,300 bolivars, and the special debt of the Caracas aqueduct 10,649,095 bolivars.

Commerce.—The value of the coffee exported in the year ending June 30, 1896, was 85,786,000 bolivars; of the cacao, 10,091,000 bolivars; of gold, 11,792,000 bolivars; of hides and skins, 2,957,000 bolivars; of animals, 1,552,000 bolivars. The trade is chiefly with Great Britain, the United States, the West Indies, France, Germany, and Colombia. The total value of the exports in 1894 was 107,655,694 bolivars. During that year 1,480 steamers and 7,620 sailing vessels were entered at the ports.

Communications.—The railroads had in 1895 a total length of 394 miles. The length of telegraph lines belonging to the Government was 3,262 miles.

The Army and Navy.—Since the reorganization of July 30, 1895, the strength of the permanent army is fixed at 11 battalions, each consisting of 6 companies of 60 men. The naval force consists of 3 steamers, to each of which is attached a company of marines, and 2 sloop gunboats.

The Guiana Boundary Arbitration.—The arbitration treaty between Great Britain and Venezuela which brought to an end the long boundary dispute that became acute after the discovery of gold in the disputed territory in Guiana, inducing the vigorous diplomatic intervention of the United States Government, was signed at Washington on Feb. 2, 1897, by Sir Julian Pauncefote, British ambassador, and Gen. José Andrade, Venezuelan minister to the United States. The Venezuelan Congress, which met on Feb. 20, ratified the treaty without a dissenting voice on April 5. Diplomatic relations with Great Britain, which had been interrupted since 1887, were resumed by the appointment of Dr. Juan Pietrie as minister to England. The final ratifications of the treaty were exchanged at Washington on June 14. The boundary commissioners were named in the treaty—Lord Herschell and Justice Henn Collins, nominated on the part of Great Britain by the Judicial Committee of the Privy Council, and Chief-Justice Fuller and Justice Brewer on the part of Venezuela, nominated the one by the President of Venezuela and the other by the justices of the Supreme Court of the United States. It was provided that these four were to select a fifth commissioner to act as president and umpire. They selected Prof. Martaens, of the University of St. Petersburg. The commissioners arranged to hold the court of arbitration in Paris in the autumn of 1898.

The Presidential Election.—The Legalists, who are the successors of the old Oligarchist or Conservative party that opposed the extension of political rights to the people and all the progressive measures since enacted by the Liberals, such as the abolition of slavery and of the death penalty for political crimes, the abolition of tithes, civil marriage, the suppression of convents, liberty of the press, financial reorganization and the gold standard, the building of railroads, and the establishment of unlimited suffrage, named as their candidate for the presidency, to succeed Gen. Crespo for the term beginning on March 5, 1898, Rojas Paul, whom they desired President Crespo to accept as the official candidate. It has been the practice of the Presidents of Venezuela to favor a particular candidate, and by the power of the Government to secure his election, barring a revolution. President Crespo determined this time to stand neutral between the parties. He declared that he would not interfere in the elections save to see that the rights of all were respected. The Liberals on April 27 nominated Gen. Ignacio Andrade. In effect the Administration supported him, and he was elected President on Sept. 16 by an overwhelming majority.

A new Cabinet was constituted on June 28, as follows: Minister of the Interior, Dr. Heriberto Gordon; Minister of Foreign Affairs, Dr. Ezequiel Rojas; Minister of War and Marine, Gen. J. R. Ricart; Minister of Public Instruction, Dr. F. R. Chirinos; Minister of Public Works, Gen. Jorge Uzlar; Treasurer, Luis Castillo; Minister of Agriculture and Improvements, Señor Agrinaldo; Minister of Posts and Telegraphs, Dr. A. Riera. Later Ernesto Garcia became Minister of Public Works and Gen. Uzlar Treasurer. Later in the year revolutionary disturbances were threatened in Caracas. Several journalists and politicians were arrested for attacking the Government. A plot to bring about a revolution in order to prevent the meeting of Congress was suspected, and on Nov. 1 some 500 arrests were made.

VERMONT, a New England State, admitted to the Union March 4, 1791; area, 9,565 square miles. The population, according to each decennial census, was 154,465 in 1800; 217,895 in 1810; 235,966 in 1820; 280,652 in 1830; 281,948 in 1840; 314,120 in 1850; 315,098 in 1860; 350,551 in 1870; 332,286 in 1880; and 332,422 in 1890. Capital, Montpelier.

Government.—The State officers in 1897 were: Governor, Josiah Grout; Lieutenant Governor, Nelson W. Fisk; Secretary of State, Chauncey W. Brownell; Treasurer, Henry F. Field; Auditor, Franklin



JOSIAH GROUT, GOVERNOR OF VERMONT.

D. Hale; Adjutant General, T. S. Peck—all Republicans; Superintendent of Education, Mason S. Stone, Independent; Inspector of Finance, Hosea Mann; Tax Commissioner, D. J. Foster; Railroad Commissioners, Olin Merrill, Z. S. Stanton, and Frank Kenfield; Chief Justice of the Supreme Court, Jonathan Ross; Associate Justices, Loveland Munson, John W. Rowell, Russell S. Taft, Henry R. Start, L. H. Thompson, and James M. Tyler; Clerk, M. E. Smilie—all Republicans.

Finances.—The report of the Treasurer for the year ending June 30, 1897, shows that the receipts during the year were \$1,342,833.37, including the balance \$209,455.94 on hand at the beginning of the year. The larger items of receipts were: From corporations, \$383,728.63; from county clerks, judgments, and balances, \$56,737.96; from towns, account of State school tax, \$83,028.17; from towns,

account State highway tax, \$83,028.17; from temporary loans, acts of 1894 and 1896, \$400,000; from superintendent of the State Prison, \$23,867.64; from United States Government, endowment of Agricultural College, \$22,000. A balance of \$67,113.80 remained at the end of the year. Temporary loans to the amount of \$280,000 were paid, and an asylum loan of \$50,000. The Auditor's orders amounted to \$664,679.46. School and highway money was distributed, each to the amount of \$86,899.88. The resources amounted to \$702,754.68, and the liabilities to \$367,149.45, leaving available for the ensuing year \$335,614.45. The funded liabilities were \$135,500; this is the agricultural college fund, represented by registered bonds due in 1910.

Education.—The latest available school statistics are for the biennial period 1895-'96. Among the items for 1896 we find: Number of "legal schools" maintained, 2,361; of graded schools, 114; number of less than twenty-six weeks, 92; average number of weeks of schools having twenty-six or more, 308; average daily attendance, 46,261; average number of days for all schools, 154; total amount received, \$887,117.24; indebtedness for necessary school expenses, \$70,436; for new buildings, \$206,656; cost per pupil, \$16.33; cost of free text-books for each child attending, \$2.11; estimated number attending parochial schools, 3,293; attending private schools, 360; number public libraries, 99; number of volumes, 171,754.

The three normal schools graduated 174 students during the two years, and drew from the State treasury \$26,028.

The summer schools of two weeks each year were attended by 1,416 for the two years.

At the University of Vermont there were 295 students in the departments of arts and sciences, and 480 in all departments, including the medical. The expenditures in 1896 were \$71,468.65.

Prisons.—The number of inmates of the State prison in July, 1896, was 159. The income was \$38,487.74, and exceeded the expenditures by \$678.58.

The number of commitments to the House of Correction, at Rutland, during the two years was 777, and the number remaining June 30, 1896, was 111. The changes made by the last Legislature in laws against intoxication and tramps have considerably decreased the commitments for those offenses since the last report. The average cost of subsistence for all connected with the institution has been 9½ cents per day.

The whole number committed to the Industrial School was 1,105, of whom 107 were girls. There were 95 boys and 14 girls remaining at the close of the period. The expense to the State for each was \$148.19.

Militia.—The National Guard of the State, as shown by the annual returns for the year ending June 30, 1896, consists of 68 officers and 680 enlisted men, organized into one 3-battalion regiment of infantry, one 4-gun battery of light artillery, and the Norwich cadets, designated by statute the Section of Artillery.

Charities.—The Brattleboro Retreat for the Insane had 162 patients June 30, 1896, 116 of whom were supported by private means. The receipts were \$167,943 and the expenditures \$167,715.

At the State Asylum there were 498 patients. The average cost was \$2.89 a week for each patient.

The Soldiers' Home, at Bennington, has received since its organization in 1887 286 soldiers; of this number, 68 have died and 127 have been discharged. The new addition to the main building of 40 × 32 feet will make it 140 feet long and 3 stories high.

Banks.—The aggregate resources of all the savings banks, savings institutions, and trust companies in the State June 30, 1896, were: Loans on

mortgages of real estate in Vermont, \$6,613,133.53; loans on mortgages of real estate elsewhere, \$11,085,427.91; loans on personal security, \$2,809,002.64; loans with bank stock as collateral security, \$244,759.65; loans on other collateral security, \$1,074,827.24; loans to towns, villages, etc., \$508,214.03; United States bonds owned, \$787,031; State, city, county, town, village, and other bonds owned, \$8,946,373.77; real estate owned for banking purposes, \$296,987.11; real estate acquired by foreclosure, \$424,512.88; bank stock owned, \$410,485; miscellaneous assets, \$299,321.59; cash on deposit in banks, \$1,136,463.74; cash on hand, \$354,806.81; total resources, \$34,991,346.90; net increase in resources, 1896 over 1895, \$1,920,713.62. The liabilities were: Amount due depositors, \$32,170,742.88; capital stock of trust companies, \$906,790; amount of surplus and accumulations, \$1,766,389.01; miscellaneous liabilities, \$147,425.01; total liabilities, \$34,991,346.90; net increase in liabilities, 1896 over 1895, \$1,920,713.62.

Railroads.—Plans have been considered for the reorganization of the Vermont Central, but none appears to have been fully decided upon. At a meeting in Boston in October the first-mortgage bondholders voted to accept the offer of the Grand Trunk Railway of Canada and turn the Central over to its control; but opposition appears to have been developed. The "Vermont Watchman" says:

"In fairness to the present management it ought to be said that the occasion of the receivership of the road originated in extravagant leases made by the old management of the Central Vermont ten or twelve years ago, at a time when the country was prosperous and everything looked favorable for the taking of these leases."

There was great rejoicing in May when ground was broken for the Mount Mansfield electric railway, which was destined to connect the village of Stowe with Waterbury and the outside world. For more than forty years the people of Stowe have been struggling for connection with Waterbury.

Products and Industries.—Reports from the clerks of 223 towns show that there were sold between Jan. 1, 1896, and Jan. 1, 1897, 1,567 farms, 170 of which were not occupied at the time of the sale. The reports show that during the year \$257,100 has been invested in new manufacturing enterprises, and that they are furnishing employment for 353 persons. This is but \$56,000 more than half as much as was invested in 1893, showing the least of any of the six years in which these statistics have been collected.

The 110 summer hotels and homes that have reported their business for 1896 entertained 36,502 persons and received \$207,772 for board and \$15,983.50 for livery. Thirty-two report business as an average with other years, 33 that it was better, and 44 that it was poorer.

The season of 1897 was remarkable in the annals of sugar making. Great quantities were made, and most of it was of the best quality, as it was made comparatively early in the season. In some sections the flow of sap was so much greater than the makers were prepared for that a great quantity was wasted.

Vermont had, Jan. 1, 1897, 263,640 cows, an average of $4\frac{1}{2}$ cows to 100 acres, and an average of $8\frac{1}{2}$ head, including horses and cattle of all ages.

The Tax on Inheritances.—The law passed in 1896 imposing a tax on collateral inheritances is apparently meeting with great unpopularity, and will probably come before the Legislature of 1898 for reconsideration. Up to June, 1897, only \$543.70 was credited as having come to the State treasury from this source.

Landslide.—The most remarkable event during the July flood was the landslide on Fayston moun-

tain. This was one of the heaviest avalanches ever known in the State. The top of the slide was in the town of Warren. A rock estimated to weigh nearly 200 tons fell ten rods from a nearly perpendicular height, and where this immense boulder struck was the beginning of the slide. It started nearly at the top of the mountain at two points, and after a distance of about 100 rods the two came together and the combined avalanche went crashing to the foot of the mountain, nearly three miles, and its momentum carried it nearly a mile farther upon comparatively level ground. About 120 acres of heavily wooded spruce timber land went down in the slide, leaving the rocks almost bare. The average width of the avalanche was 20 rods, and at several points near the top of the slide it was at least 60 feet deep. The noise was heard five miles and more. The actual fall was 2,416 feet.

VIRGINIA, a Southern State, one of the original thirteen, ratified the Constitution June 25, 1788; area, 42,450 square miles. The population, according to each decennial census, was 747,610 in 1790; 880,200 in 1800; 974,600 in 1810; 1,065,116 in 1820; 1,211,405 in 1830; 1,239,797 in 1840; 1,421,661 in 1850; 1,596,318 in 1860; 1,225,163 in 1870; 1,512,565 in 1880; and 1,655,980 in 1890. Capital, Richmond.

Government.—The following were the State officers during the year: Governor, J. Hoge Tyler, Democrat; Lieutenant Governor, Edward Echols; Secretary of the Commonwealth, James T. Lawless; Attorney-General, A. J. Montague; First Auditor, Morton Marye; Second Auditor, Josiah Ryland, Jr.; Treasurer, A. W. Harman; Adjutant General, Charles J. Anderson; Superintendent of Public Instruction, J. W. Sutthall; Commissioner of Agriculture, Thomas Whitehead; President of the Court of Appeals, James Keith; Justices, John W. Riely, John A. Buchanan, George M. Harrison, and Richard H. Cardwell; Clerk of the Court, G. K. Taylor—all Democrats.



J. HOGE TYLER, GOVERNOR OF VIRGINIA.

Finances.—The following is a synopsis of the financial operations of the State treasury for the fiscal year ending Sept. 30, 1897. On account of

the Commonwealth: Balance on hand Oct. 1, 1896, \$231,710.81; received in fiscal year 1896-'97, \$3,131,255.35; total, \$3,362,966.16; disbursed in fiscal year 1896-'97, \$3,155,458.11; balance on hand Oct. 1, 1897, \$207,508.05. On account of literary fund: Balance on hand 1896, \$228,080.52; received 1896-'97, \$273,279.81; total, \$501,360.33; disbursed, \$281,259.80; balance on hand, \$220,100.53. On account of interest on public debt: Balance on hand, 1896, \$1,301.18; received 1896-'97, \$712,928.82; total, \$714,230; disbursed, \$705,898.48; balance on hand, \$8,331.52. On account of sinking fund: Balance on hand 1896, \$340,303.57; received 1896-'97, \$30,904.23; total, \$371,207.80; disbursed, \$571.25; balance on hand, \$370,363.55. On account of Miller fund: Balance on hand 1896, \$17,900.03; received 1896-'97, \$72,163.05; total, \$90,063.08; disbursed, \$81,099.92; balance on hand, \$8,963.16. The total balance in the treasury to the credit of the several funds was \$815,530.81, in addition to which the United States direct-tax fund had to its credit \$2,029.90. The entire amount of interest paid out on the Riddleberger and century bonds and bonds held by the colleges of the State was, for 1896, \$713,000. At the preceding session of the General Assembly a law was enacted under which the Commissioners of the Sinking Fund were authorized to exchange coupon bonds of the State, issued under the act of 1892, into registered bonds, and to arrange for the transfer of registered bonds. For every bond so issued in exchange a fee of 50 cents was to be paid to the Second Auditor, and by him turned over to the Treasurer for the credit of the sinking fund. The extension of time under this act was limited to Dec. 21, 1896. Under this law State bonds amounting to \$370,668.58 were turned over to the Second Auditor, who exchanged them against century bonds in the same proportion as those founded under the law of 1892. Nearly all the exchanged bonds consisted of tax-reeivable coupon bonds. This exchange made quite a clean sweep of that class of bonds, which have caused the State a great deal of trouble. There were left only about \$125,000 worth of tax-recivable bonds outstanding, and it was assumed that a number of them had been lost.

Criminal Expenses.—Several counties were charged upon the books of the Auditor with greater sums for criminal expenses than the amounts they paid in as taxes on real and personal property. Figures from the Auditor's report show that Buchanan County expended \$5,808.57 for punishment of crime, while the largest sum to have been collected from taxes was but \$6,886.32. The county of Carroll expended more than half of the total amount of taxes assessed. In Dickinson County the sum of assessed taxes was only \$2,957.34, and \$5,179.64 was consumed by criminal expenses. Patrick County called on the State for \$7,451.36, and was assessed for only \$6,967.91. The whole amount paid by the State for criminal expenses was \$378,291.37.

The Insane.—Inmates under care and treatment in the State hospitals, Sept. 30, 1897, numbered in all 2,568, divided as follows: Western, 857; Southwestern, 325; Eastern, 537; Central, 849. Of these 209 died. The cost of support *per capita* was reported: Western, \$125.90; Southwestern, \$143.27; Eastern, \$126.50; Central, \$95.86.

Education.—The school population for the year closing July 31, 1897, was 665,865—397,162 white and 268,703 colored; there were 8,529 schools in operation—6,250 white and 2,279 colored; the total of white and colored pupils enrolled was 367,817—244,583 white and 123,234 colored; pupils in average daily attendance numbered 213,421—145,218 white and 68,203 colored; the total of pupils studying the higher branches was 11,886; total supplied

with text-books at public expense, 7,245; average number of months school was kept open, 6.01; total number of teachers, 8,575—6,448 white and 2,127 colored; average monthly salaries—male teachers \$31.98, female teachers \$26.67; cost of tuition per month per pupil enrolled, 61 cents; estimated value of school property, \$3,090,777. The revenue of the school system was reported as follows: State funds, \$737,512.07; direct appropriation by the General Assembly, \$200,000; interest on investment of the literary fund, \$46,057.88; county funds, \$254,298.60; district funds, \$270,312.22; city funds, \$315,630.56; other funds (local), \$39,892.67; total, \$1,863,704. The total cost to all sources for all purposes, including balances due for the year were: Current expenses—pay of teachers, \$1,409,289; pay of superintendents, \$50,669.96; pay of district clerks, \$19,436.83; pay of treasurers, \$42,573.67; rent, \$14,584.44; fuel and lights, \$50,126.29; insurance, \$4,790.37; text-books for indigent pupils, \$4,990.28; expenses of county and electoral boards, \$5,442.56; other contingent expenses, \$45,349.97; "School Journal," \$512.40; expenses, central office, \$5,647.51; summer normal schools, \$2,500; total amount expenses, \$1,655,913.72. Permanent improvements—real estate, buildings, furniture, and repairs, \$147,012.82; school apparatus, \$24,070.68; total, \$171,089.50. Total cost for all purposes, \$1,827,003.22. The amount due teachers at close of the year was \$27,160.

Agriculture.—The general average of crops for 1897 was given as follows: Wheat, 99; corn, 83; oats, 85; hay, 74; cotton, 90; tobacco, 93; Irish potatoes, 87; sweet potatoes, 85; peanuts, 90; pastures, 85; apples, 73; peaches, 56; pears, 48; grapes, 84. Acreage: Wheat, 93; corn, 98; oats, 89; hay, 89; cotton, 95; tobacco, 97; Irish potatoes, 87; sweet potatoes, 68; peanuts, 99; pastures, 97.

The Oyster Industry.—The State has 201,216 acres of natural oyster beds, and 400,000 acres of planting ground. From this immense area she received as revenue for the four years 1894-'97 the small sum of \$131,630, and the expense of maintaining police vessels and executing the laws amounted to \$116,885, leaving a balance of only \$14,745. In 1896-'97 the receipts from the oyster tax were \$29,985; expenditures, \$31,693.

Railroads.—There are 37 lines of railroad in the State, the total mileage being 4,499.05; the gross earnings and income of these roads amounted to \$49,763,367.48; operating expenses, taxes, and other deductions, \$36,817,080.97; interest, \$11,677,190.53; total killed during year, 124; total injured, 1,165.

State Farm.—Under an act of 1894 a farm containing 952 acres, lying on James river, was purchased for the employment of short-term convicts. The investment is reported to have increased in value 200 per cent.—that the farm could now be sold for \$50,000. During the year it produced: Corn, 20,000 bushels; wheat, 1,165 bushels; rye, 1,124 bushels; oats, 2,500 bushels; peas, 800 bushels; tobacco, 32,000 pounds; sugar beets, 24½ tons; and truck in large quantities. Besides supporting, on an average, 150 sick and disabled and 150 working convicts, the farm furnished the Penitentiary with products worth \$10,000.

Militia.—The volunteer militia consists of 227 officers and 2,518 men, comprising 46 companies of infantry, 2 troops of cavalry, and 3 batteries of artillery. Of the infantry, 8 companies are colored. In 1896 and 1897 the militia was used in aid of the civil authorities in the cities of Portsmouth and Alexandria, called out by the mayors thereof, and in the counties of Albemarle, Shenandoah, Fairfax, and Culpeper, called into service by the sheriffs thereof. The entire cost, including transportation, was \$1,066.75.

Lawlessness.—In his message the Governor said: "There have only been three occasions of open and violent defiance of law during my administration. Three men have suffered death at the hands of lynchers—one in Essex County, one in Patrick County, and one in the city of Alexandria. So far as I have been able to learn, after careful investigation, no blame attaches to the law officers of either the county of Essex or Patrick for the acts of the mob. In the city of Alexandria I regret to say that, in my opinion, there was dereliction of duty somewhere. That city has the largest military company in the State. A man was arrested charged with a vile felony. He was committed to the station house, where several policemen were on duty. The excitement became intense, and a crowd assembled at the station house in a threatening manner. Later another crowd gathered, broke into the station house, seized the policemen in charge, battered down the door of the cell in which the prisoner was confined, took him out and hung him to a lamp-post. The mayor, though clothed with the power to summon the military company to aid the civil authorities, issued no order and took no step to protect the prisoner, notwithstanding the excited condition of the city, of which he had full notice. There may be no doubt the prisoner was guilty of a most heinous crime, committed under the most diabolical circumstances, and deserved death, but he was in the custody of the law officers, safely confined, and yet a mob was permitted in a city of 18,000 population, with a strong military force at the command of the mayor, to bid defiance to the law and trample down the authority of the Commonwealth. There can be no possible excuse for the success of the mob."

VOLUNTEERS OF AMERICA, THE. An offshoot, by secession, from the Salvation Army. (See "Annual Cyclopædia" for 1883, page 710). The separation occurred in February, 1896. Commander Ballington Booth, who took charge of the Salvation Army in the United States in 1886, from time to time modified the rigid system of that organization, to adapt it more effectively to the varying conditions of its development in this country, and his administration was marked by many improvements. Differences with Gen. William Booth, his father, concerning the administration of army affairs in the United States, especially in relation to turning over certain funds to the central control in London, led to a rupture, which resulted in the recall of Commander Booth. It appears that among certain grievances which Ballington Booth had submitted to his father, was one concerning the "War-Cry" superannuation fund. The sale of the "War-Cry" in the United States had been sanctioned by Gen. Booth on condition that 10 per cent. of such sales be set apart for disabled and superannuated soldiers of the Salvation Army. It is claimed that Gen. Booth sent for this money, which amounted to \$8,000 or \$10,000, with the intention of using it for purposes other than such as had been agreed upon, and that Ballington Booth declined to accede to his father's demand, the former holding that the fund was for the American Salvation Army superannuated soldiers, and could not be otherwise used; whereupon his father ordered his removal.

It was felt by many Americans that the recall of the commander was a grave mistake, and a popular meeting was held in New York city in February,

which sent to Gen. Booth in England the expression of a hope that the order of recall might be countermanded. As this expression failed of its intended influence, Commander Booth withdrew from the Army altogether, and his place was filled by Commander Booth-Tucker. It was claimed that it was not the intention of Commander Booth to form a new or rival organization, but that, as many prominent Salvation-Army officials withdrew from the Army in sympathy with him and his wife, subsequently whole posts even withdrawing, he concluded that it was his duty to continue labor in the United States, and a new body was formed. This body was named "The Volunteers of America," and was duly incorporated under the laws of the State of New York on Nov. 9, 1896, one of the chief features of its declaration of principles being that "All properties, real estate and personal, of the Volunteer movement shall be held by a body or board composed of 5 to 7 well-known and responsible American citizens," and that "In the Volunteers property will be held by trustees chosen for the purpose, instead of being deeded over to one man."

The constitution of the Volunteers embraces 19 articles based upon the sentiment, "In righteous principles, unity; in divine doctrines, harmony; in essential methods, liberality." Following is a synopsis of the most important provisions of this constitution:

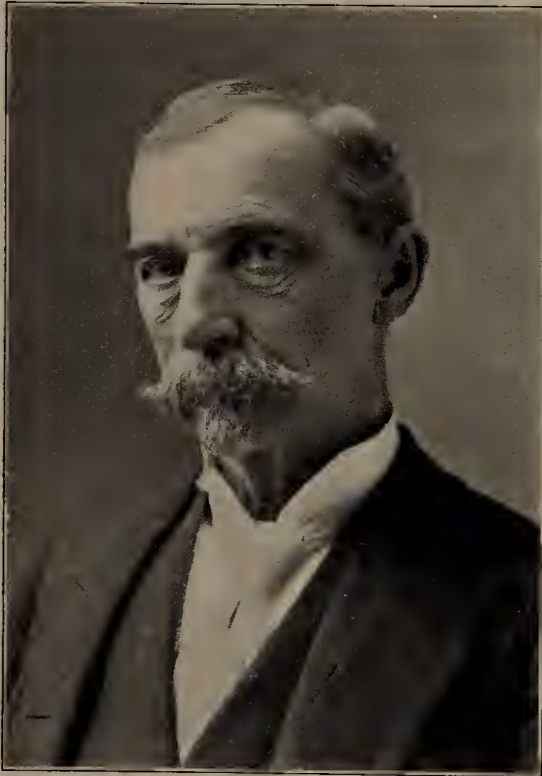
Article I declares that "The Volunteers of America is a military movement, military in its methods, organized for the reaching and uplifting of all sections of the people." Article III contains the statement: "It is, and ever must be, an American institution, recognizing the spirit and practice of the Constitution of the United States; and it is not, and never shall be, controlled or governed by any foreign power whatsoever." Article IV provides that in all foreign missionary work the principle of home rule upon which the Volunteers were organized shall be maintained, and foreign branches shall have absolutely no connection, so far as their control is concerned, with the national organization in this country. Article VI deals with the selection of a commander in chief, and reads in part: "The officer in supreme military command of The Volunteers of America shall be designated as the Commander in Chief, and he shall be elected by the soldiers. He shall have been an officer in the Volunteers for a period of not less than five years previous to his election, and he shall hold office for a period of ten years and until his successor shall be elected. The commander in chief may be removed by a three-fourths vote of the Grand Field Council." The members qualified to elect the directors of the association "must be citizens of the United States." Every Volunteer must subscribe to a belief "in one Supreme God and in the Trinity, in the inspiration of the Bible, in Jesus Christ as the Son of God, in the doctrine of the immortality of the soul, in the resurrection of the body, and in eternal punishment." It is provided that "the sacrament of the Lord's Supper and the rite of baptism shall be observed." Woman is recognized as man's equal and entitled to the same privileges in the organization.

When this body was but little over six months old it included 140 posts, 400 commanding officers, 50 staff officers, 3 regiments, and 10 battalions, with headquarters in New York city containing over 40 persons. Since then it has grown rapidly.

W

WASHINGTON, a Pacific coast State, admitted to the Union Nov. 11, 1889; area, 69,180 square miles. Population, according to the census of 1890, 349,390. Capital, Olympia.

Government.—The State officers for the year were: Governor, John R. Rogers; Lieutenant Governor, Thurston Daniels; Secretary of State, Will D. Jenkins; Treasurer, C. W. Young; Auditor, Neal Cheetham; Commissioner of Public Lands, Robert Bridges; Superintendent of Public Instruction, T. J. Brown; Justice of the Supreme Court, John B. Reavis; Attorney-General, Patrick Henry Winston—all Populists except Winston, who is a Silver Republican.



JOHN R. ROGERS, GOVERNOR OF WASHINGTON.

Finances.—The levy made by the State Board of Equalization for 1897 for State purposes is 2.6 mills; for school purposes, 2.7 mills. This levy will produce for State purposes \$587,940; for school purposes, \$610,553; a total of \$1,198,493. Last year the total amount of the State tax was \$626,615; school tax, \$655,480; a total of \$1,282,095. The total for State and school purposes is \$83,602 less this year than last.

The total valuation of railroad property in the State is placed at \$20,624,505, against \$12,910,176 last year. The State board raised these valuations from \$17,863,561, as returned by the county boards.

The total amount of taxes levied in King County for 1897 is \$1,017,120.64. The average rate of taxation is 23 mills. In Snohomish County the total amount of taxes levied for all purposes is \$287,002.90, and the average rate of taxation is 36 mills.

Legislative Session.—The Legislature, which organized on Jan. 11, 1897, passed, among others, the following bills, which were approved by the Governor:

Creating a State board of control. It creates one board for all the penal, charitable and reformatory institutions, leaving the educational, wards of the State to be managed by separate boards of regents.

Fixing order of payment of debts of decedents. Debts shall be paid as follows: Funeral expenses; the expenses of last sickness; debts having preference by law; any debts or dues owing the State; judgments rendered against deceased during his lifetime, which are liens upon real estate, on which execution might have issued.

Defining the crime of rape, and fixing the age of consent at eighteen years.

Granting bounty for production of sugar. This bill provides that the State shall pay 1 cent a pound, as bounty, to manufacturers for all sugar manufactured within the State, and provides further that no bounty shall be paid on sugar not containing at least 90 per cent. of crystallized sugar, and only upon sugar produced from beets for which as much as \$5 a ton has been paid to the producer. The bounty to be paid by the State shall not exceed \$50,000.

Providing that property assessed for street improvement may be sold on ten days' notice after the assessment falls due, without foreclosure.

Exempting from execution and attachment to householders and freeholders personal property to the amount of \$1,000. When any person dies seized of exempt property, leaving heirs, such property shall be set aside for the use of such heirs, free from all claims against the deceased.

To regulate insurance companies, requiring that policies be written by local agents; that a license be secured from the State, and that 2 per cent. on all policies be paid to the State; that statements be published in two daily papers each year; that in case of a total loss the full amount of the policy be paid, and prohibiting insurance combinations.

George Turner, Populist, was elected to the United States Senate.

Dairies.—The annual report of the Dairy Commissioner for 1897 shows in Washington an increase of more than 150,000 pounds of cheese and 200,000 pounds of butter. A total of 709,364 pounds of cheese was produced during the year 1897, compared with 554,123 pounds in 1896. The butter production was: 1897, 2,094,427 pounds; 1896, 1,853,657 pounds. The largest creamery in the State is that of Martin & Hubbard, of Spokane, where 139,876 pounds of butter and 103,235 pounds of cheese were produced last year.

Kittitas is the leading dairy county in the State, as shown by the report of the commissioner. Twice the number of dairies in other counties are located in Kittitas, and the report shows that they have done a good business during the year. The number of dairies in each county is: Adams, 2; Clallam, 4; Clark, 6; Columbia, 1; Cowlitz, 3; Douglas, 1; Island, 1; Jefferson, 1; King, 7; Kittitas, 15; Kliekitat, 1; Lewis, 6; Lincoln, 2; Pierce, 4; Snohomish, 3; Skagit, 2; Spokane, 2; Stevens, 2; Thurston, 3; Wahkiakum, 2; Whatcom, 3; Whitman, 4; Yakima, 6.

The total amount of cheese shipped to outside points was 112,402 pounds; of butter, 174,778 pounds.

Mines.—The Mine Inspector's report issued in 1897 shows that the coal mines of Washington produced nearly 2,000,000 tons of coal last year, and employed the largest number of miners ever en-

gaged in that calling within the confines of the State. There were fewer mine accidents than ever, and the precautions for the safety of the workers were more generally recognized. The production of last year was 280,000 tons larger than ever before known.

Fisheries.—The annual report of the Fish Commissioner shows that the output of the Puget Sound salmon canneries for 1897 was 494,026 cases, compared with 312,361 cases in 1896. The increase in one year's production was 175,665 cases, or over 55 per cent. The increased revenue amounts to more than \$500,000.

WEST AFRICA. Previous to the assumption of a German protectorate over Togoland and the Cameroons in 1884 the European possessions on the west coast of Africa north of the Portuguese colony of Angola consisted merely of the English trading posts at Bathurst, Lagos, and on the Gold Coast and the colony of Sierra Leone, originally peopled by liberated slaves from the West Indies, and the French colony of Senegal. Since then European powers have taken possession of the whole coast except the independent republic of Liberia, and asserted claims to the whole interior, except the Central Soudan states of Bornu, Wadai, and Kanem.

British Possessions.—The total imports of the United Kingdom from the West African colonies in 1895 were valued at £1,685,581, and the exports of British produce and manufactures to those colonies at £1,083,333. The colony of *Gambia* has an area of about 2,700 square miles and a population of 50,000. The settlement is 69 square miles in extent, with a population in 1894 of 14,978, of whom 62 were white. The Administrator is R. B. Llewellyn. The district exports ground nuts, hides, beeswax, rice, cotton, corn, and rubber. The revenue in 1895 was £20,561; expenditures, £28,867. The value of the imports was £97,399, and of the exports £93,537. The chief imports of all the colonies are cotton goods, spirits, and tobacco.

Sierra Leone has an area of 15,000 square miles, containing about 180,000 inhabitants; the colony proper, with an area of 4,000 square miles, had 74,835 in 1891, of whom 224 were whites. The Governor is Col. Frederic Cardew. The revenue in 1895 was £97,851 and the expenditure £96,690. The development of the neighboring French colonies has diverted some of the trade. The exports are palm kernels and oil, rubber, kola nuts, gum, copal, and hides. The value of the imports in 1895 was £427,337, and of the exports £452,604. Freetown, which has 30,033 inhabitants, is a British coaling station and the headquarters of the British garrison in West Africa, consisting of a regiment of blacks recruited in the West Indies and British engineers and artillery. There is also a native constabulary of 570 men employed chiefly as a frontier guard. In August, 1896, a protectorate was proclaimed over additional territory embracing 30,000 square miles, with a population estimated at from 250,000 to 500,000. A railroad is being constructed from Freetown to Songo.

Lagos has an area of about 1,500 square miles and a population estimated at 100,000. The number of whites is about 200. The protectorate has been extended over Yoruba, with an area of about 19,000 square miles and 3,000,000 inhabitants. The chief exports are palm oil and kernels, ivory, gum, copal, rubber, cotton, cacao, and coffee. The Governor is Major H. E. McCallum. The revenue in 1895 was £142,049; expenditure, £144,484. The value of imports was £815,815, and of exports £985,594.

The *Niger Coast Protectorate* includes the district formerly known as the Oil Rivers and a part of the territory formerly administered by the Niger

Company. The boundaries are indeterminate. The administrative and judicial functions are exercised by an Imperial Commissioner and Consul General, Sir H. D. Ralph Moore. The exports are palm oil and kernels, rubber, ivory, ebony, camwood, indigo, gums, barwood, hides, and cacao. The value of the imports in 1895 was £739,864, and of the exports £825,098. The protectorate embraces the country drained by the rivers Benin, Brass, Old Calabar, Bonny, Quaëbo, Opobo, and New Calabar, running back as far as the junction of the Niger and Benue, about 300 miles, and covered with rich growths of the oil palm. The British have undertaken several punitive expeditions to break down the trading monopoly which the pagan tribes living on the rivers have possessed from time immemorial. Thus the chief Nana, on the Benin, the chief of Okrika, on the Bonny, and the Brass natives have been punished successively. An expedition set out on Jan. 2, 1897, to visit Drunami, the King of Benin, one of the boldest and haughtiest of these river potentates, in whose capital the Juju worship, requiring human sacrifices, was practiced without restraint. The King refused to receive the mission, consisting of 9 English officers, with 250 Krumen, and when the party entered his dominions it was surrounded by his warriors, and acting Consul-General Phillips, the head, and the other Englishmen, excepting Capt. Boisragon and Commissioner Locke, who made their escape by hiding, were killed. An avenging expedition of 600 men was immediately equipped, which advanced through the river and lagoons, captured Gwato and Sapoba, marched 24 miles through the bush, and took Benin on Feb. 18, after a bombardment. The natives offered a determined resistance, but could not stand before the Maxim guns. The British lost 17 Europeans and 23 natives killed or wounded. The chiefs surrendered after a few days, and on Aug. 7 the King, who had escaped into the back country, gave himself up and was taken as a political prisoner to Old Calabar. A British garrison remained in the capital.

The *Niger Territories* were taken under British protection in 1886 and intrusted to the administration of the Royal Niger Company that during the previous two years had negotiated with native chiefs and tribes treaties under which the country up to the bend of the Niger and eastward to Lake Chad was claimed as British, including the territories known as Sokoto and Borgu. On Aug. 5, 1890, the French Government agreed to a line demarcating the British from the French spheres, drawn from Say, on the Niger, to Barua, on Lake Chad, in such a manner as to comprise in the sphere of the Niger Company "all that fairly belongs to the kingdom of Sokoto," the line to be determined by commissioners to be appointed. The British and German spheres are divided by an agreed line drawn from the rapids in the Cross river to a point on the Benue 30 miles east of Yola, and thence to the southern shore of Lake Chad. The extent of the regions claimed by the company is 500,000 square miles, with a population estimated variously from 20,000,000 to 35,000,000. The exports, consisting of gums, hides, palm kernels and oil, rubber, ivory, and vegetable butter, were valued at £406,000 in 1893. The importation of spirits into the country north of 7° of latitude is prohibited. The company imposes heavy duties on imports of spirits and gunpowder, tobacco, and salt, and on all exports, the effect of which is to secure for it a monopoly of the trade of these regions which the merchants of Liverpool, now antagonistic to the company, once shared with French and latterly also with German merchants. Some of the independent Liverpool merchants, on whose behoof the Govern-

ment detached the Benin and lower Niger countries from the territory of the Niger Company, formed in 1889 the African Association, limited, with a nominal capital of £2,000,000. The capital of the chartered Royal Niger Company is over £1,000,000, all subscribed, which it has power to increase indefinitely. The chairman is Sir George Taubman Goldie. The territories within the sphere of the company's influence are in part pagan Hausa states that have held their own against the Mohammedan invasion from the north and in part states that have yielded to the religious and military domination of the Mohammedan conquerors, the Fulahs, who now rule over them as a military caste. The Niger Company has concluded more than 400 treaties, 235 with separate pagan tribes, and the rest with the greater and lesser Mohammedan chiefs.

Throughout the latter part of 1896 many English officers entered the Niger Company's service, and preparations were made for a forward movement, the first one against the Mohammedans of the Niger regions, whom the British had endeavored to win by alliances and concessions in contrast with the French policy of subjugation. On Jan. 6 a column under Major Arnold marched out of Lokoja toward Kabbau, while an armed flotilla of the company's steamers proceeded up the middle Niger toward Eggau. The movement was directed against the forces of the Emir of Nupe. This emir, whose territory stretches westward of Lokoja, along the northern bank of the middle Niger to the Boussa rapids, had for five years pursued a defiant attitude toward the Niger Company, while the rulers of Sokoto, Gando, and Borgu, to whom he and the other Mohammedan chiefs were regarded as tributary by the English, and who had entered into treaties placing their foreign relations in the company's hands and binding themselves to recognize no white power except Great Britain, had assisted the company by using their influence to restrain the emirs from slave-raiding and hostile action against the British. The company had endeavored to preserve the peace with Nupe, overlooking acts of aggression and granting a subsidy of £2,000 a year to the ruler, a larger one than was paid to the Emirs of Adamawa, Muri, Bakundi, Bautshi, and Zaria. Nupe itself was tributary to the Sultan of Gando, to whom the emir was obliged to furnish thousands of slaves every year. After the accession of a new emir, Abu Bokari, in 1895, it was found impossible to avoid for a long time a conflict with him and his organized army. He attempted to form a league with the Emirs of Boussa and Ilorin, with the object of driving the Christians out of the country. Nupe, whose territory borders on the pagan states south of the Niger, which the emir has claimed as his vassals, has been the most troublesome opponent of the Niger Company, which had taken these pagan states under its protection and disputed the right of the emir to demand slaves and produce as tribute. The inhabitants of Nupe are superior in wealth and civilization to most of the Mohammedan peoples of the western Soudan, excelling as weavers and as workers in iron, brass, leather, and glass. In May, 1896, his general, the makum, crossed the river Kabba, in defiance of treaty engagements, with a force of 20,000 infantry and 2,000 cavalry, and formed a permanent camp, striking terror among the surrounding population. The emir joined him later with other forces, bringing the total number, including noncombatants, up to 50,000. The British column, consisting of about 800 Hausa troops, trained, drilled, and led by picked European officers, with six Maxim guns and two 7-pounders, accompanied by Sir George Taubman Goldie, made a rapid march of 200 miles to Egbom, where the vessels had deposited supplies

of military stores. The river was strongly held by the company's flotilla. The enemy dispersed and fled before the advancing column, which crossed the river at Egbom on Jan. 24, dragged the guns through swamps, and attained the high ground overlooking Bida, the stronghold and capital of Nupe. The British had induced the makum to betray his master by promising him the succession. Heavy fighting began on Jan. 26. The column, which had left detachments for garrison purposes along the line of march, and was now reduced to 250 men, had to cut its way by force of superior discipline and better arms, machine guns and repeating rifles, against bows and arrows, through masses of natives estimated at 20,000 to 30,000. The Fulahs rely chiefly on their cavalry, against whose onsets the company's troops were usually able to protect themselves by fencing in their position with barbed wire rapidly strung from reels mounted on wheels. There was a moment in the assault on Bida when the English force, surrounded on all sides by the enemy's cavalry, was in danger of annihilation. The Hausa troupes, with great steadiness and courage, maintained their square unbroken at this critical juncture, and executed a retreat in good order. When the heavy artillery arrived the assault was renewed, and on Jan. 27 the British entered the town and received the submission of the enemy. The Emir of Nupe was deposed, and the Makum Mohammed was placed on the throne, who on Feb. 5 signed a treaty acknowledging British protection in both southern and northern Nupe, agreeing to abandon slave-raiding, and transferring to the direct rule of the company the dependent territories on the south side of the river. A part of the expedition marched immediately for Ilorin, in the rear of Lagos, where a battle was fought and won outside of the walls of the city, and the emir made his submission on Feb. 18. In Ilorin, as in Nupe, the Fulahs are the ruling caste, but the people are Yorubas, not Hausas. Their capital was destroyed by the British shells, and in the fighting, which lasted two days, they lost 200 of their horsemen. The Emirs of Lafiagi and other neighboring states accepted the company's rule without a contest. An expedition of 200 men, with artillery, marched against the Patanis, who were accused of smuggling arms, and these made their submission without fighting. The Fulah strongholds along the river Niger were reduced by the flotilla, and new native rulers, amenable to the company's control, were placed over the populations. The authority of the company having been vindicated and its rule extended over a vast territory in which it previously exercised only trading rights, the Governor on March 6 issued a decree abolishing from June 19, 1897, the legal status of slavery throughout the territories under the direct administration of the company, embracing the country of the pagan tribes south of the Niger and a strip three miles wide along the northeast bank, over which the ganagas or river chiefs formerly held dominion. In the autumn the company's forces under Major Arnold subjugated Igarra, extending from the borders of Nupe to the mouth of the Benue, completing the conquest of all the countries south of the Niger in the undisputed English sphere.

The complaints of Liverpool merchants regarding the trade monopoly of the Niger Company and the territorial disputes with France, which had become so acute as to threaten a disturbance of international relations and to demand the assumption of all responsibility and control by the Imperial Government, forced upon the imperial authorities the necessity of placing the territories of the Royal Niger Company under their direct control. Negotiations were accordingly begun with the governor

and council of the company, looking to the surrender either of its trading activity or of its political powers, and in all events the restriction of the latter to administrative functions under the control of the home authorities.

The *Gold Coast* colony has an area of about 15,000 square miles, and the neighboring protectorate 31,600 square miles. The population of the colony is estimated at 1,473,882, of whom only 150 are whites. The Governor is Sir W. E. Maxwell. The revenue in 1895 was £230,076; expenditure, £265,289. The value of the imports was £931,537; exports, £877,804. Rubber, palm oil and kernels, and gold dust are the chief exports. Ashanti was conquered and placed under British protection early in 1896, with a Resident at Kumasi, Capt. Donald Stewart. A new labor ordinance permitting natives to be impressed as carriers was issued to facilitate the military operations undertaken on an extensive scale in 1897. It had the effect of totally stopping trade on the Gold Coast.

Samory, chief of the Sofas of the upper Niger region, who entered into an alliance with the English and took refuge within their sphere after the French by great military sacrifices had nearly succeeded in crushing his power, turned against his friends when they also proceeded to reduce to European rule the countries that were the field of his freebooting and slave-raiding exploits. In February, 1897, he captured the party of Lieut. Henderson, who had just made a treaty with the chief of Wa. Mr. Ferguson, the valued colored political agent of the English, died of his wounds. An expedition was sent against the Sofas, who were driven out of Bontuku. Samory retreated to Lobi, on the right bank of the Volta, where the French had posts. A detachment of French troops were sent under Major Caudrelier to expel the Sofas, who, however, surrounded the expedition near Bontu and killed 46. Bontuku, being within the French sphere, was evacuated by the British in November. Samory took up a strong position northwest of Seguskoro, in the bend of the Niger, where he was supplied with modern arms obtained from the Tuaregs and had 12,000 troops, who were drilled in European fashion.

French Possessions.—By the Anglo-French agreement of Aug. 5, 1890, Great Britain recognizes as within the French sphere all territories north of the Say-Barua line. The French occupy the coast from Cape Blanco south to Portuguese Guinea, except Gambia; beyond Portuguese Guinea to Sierra Leone; the Ivory Coast between Liberia and the British Gold Coast; and the Slave Coast between Togo and Lagos, with the conquered kingdom of Dahomey in the rear, beyond which the regions in the bend of the Niger are the subject of dispute between France and England. The French sphere extends northward across the Desert of Sahara until it joins Algeria and Tunis. The coast line from Cameroon to the Congo, except the Spanish settlement at Corisco Bay, belongs to France, and by an agreement with Germany in 1894 the region behind Cameroon northward east of the Shari to Lake Chad. Eastward the French sphere extends across the continent north of the Congo Free State, along the right bank of the Congo and of the Mobangi north of 4° of north latitude, to the region of the upper Nile formerly occupied by Egypt and claimed as within the British sphere. The two spheres are separated by the still independent countries to the east and north of Lake Chad, which both France and England hope to absorb. The northern sphere embraces an area of 550,000 square miles south of Sahara, the French part of which is 1,000,000 square miles in extent, and the southern sphere 330,000 square miles.

Senegal is a French colony, represented by a

Deputy in the Chamber. It includes the communes of St. Louis, which has a population of 20,000, Dakar, Rufisque, and the island of Gorée, together with territories or stations on the coast and the river Senegal. Including the annexed countries of Walo, Cayor, Toro, Dimar, and Danga, the area is 58,000 square miles, having in 1891 a population of 1,029,540. The Governor General of French West Africa, M. Chaudié, is Governor of Senegal, and resides at St. Louis, where he is assisted by a Colonial Council. The troops in 1896 numbered 2,508, with 66 officers. There are 246 miles of railroad. The telegraphs have a length of 574 miles, with 1,022 miles of wire. The local revenue in 1895 was 3,951,400 francs. The expenditure of France in 1897 was 5,951,841 francs. The imports in 1893 amounted to 13,866,000 francs; the exports, consisting of ground nuts, gums, rubber, palm nuts, palm oil, hides, mats, and gold dust, amounted to 17,985,000 francs. The protectorates attached to Senegal have an area of 96,500 square miles, with an estimated population of 80,000.

The *French Soudan* embraces the regions of the upper Senegal and the upper and middle Niger, including the protected states of Samory and Tieba. The Lieutenant Governor, residing at Kayas, is Col. de Trentinian. The area of the annexed territories is about 54,000 square miles, with an estimated population of 360,000. The protectorates have an estimated area of 230,000 square miles, with 2,500,000 inhabitants. There is a railroad from Kayes, at the head of navigation on the Senegal, to Bamako, on the Niger, 320 miles. The troops in 1896 numbered 178 officers and 3,637 men. The local revenue in 1895 was 1,447,400 francs, and the expenditure 1,437,827 francs. The expenditure of the French Government in 1897 was 7,801,500 francs.

French Guinea, embracing the Rivières du Sud, the Gold Coast settlements of Grand Bassam, Assinie, Grand Lahou, and Jackeville and the Benin settlements of Porto Novo, Kotonu, Grand Popo, and Agoué, has an area, including protectorates, of 25,000 square miles. The population of the colony proper was 47,555 in 1891. The negro pagan kingdom of Dahomey, containing 4,000 square miles, was subjugated in 1894, and Guthili was made King instead of Behanzin. The inhabitants, numbering about 150,000, are industrious cultivators of the soil and produce the finest palm oil in Upper Guinea. The protected country attached to Grand Popo has 100,000 inhabitants; Mahis and Ajuda, 150,000; Porto Novo, 150,000; Abeokuta, 120,000. About 20,000 tons of palm kernels and 10,000 tons of oil are exported annually from Whydah and Kotonu. The imports of Dahomey in 1894 were valued at 10,750,000 francs, and exports at 9,950,000 francs. The budget of French Guinea in 1895 was 548,000 francs, besides 1,100,000 francs for the Ivory Coast settlements. The local revenue of Dahomey amounted to 1,600,000 francs. The protectorate of Fouta Djallon, not included in the above estimate, has an area of 42,460 square miles and about 600,000 inhabitants. Of the protected kingdom of Kong and neighboring territories no estimates have been made of area and population. The Governor of French Guinea, residing at Conakry, is N. E. Ballay. The Ivory Coast, or Grand Bassam, has L. Mouttet for its Governor, and Dahomey and its dependencies P. V. Ballot, residing at Kotonu. A telegraph line, 370 miles long, connecting all the posts, was constructed in 1897.

The preparations of the Niger Company for making military conquests in the Soudan aroused the suspicions of the French who disputed the claims of the Niger Company to the countries in the west, where there was no agreed line of delimitation separating the French and British spheres. The

French Government asked and received a pledge from the British Government, a pledge that the company's troops would not be employed farther north than 9° of latitude. A French expedition of 400 men under Lieut. Bretonnet set out from Dahomey and reached the Niger, and then descended the river from Illo, and occupied and garrisoned the town of Boussa and several other positions. Boussa is a pagan kingdom on the west bank of the Niger that lies back of Lagos, 150 miles to the east of an extension of the frontier of Dahomey. The Niger Company made treaties with the Boussa chiefs in 1890, and in 1895 the British Government notified the powers that the country was under its protectorate. A French expedition made an advance into this district, and was withdrawn in October, 1895, in response to a protest from the Niger Company communicated to the French Government. Subsequently the company established two fortified posts on the west bank of the Niger within this territory, one at Leaba and one at Fort Goldie, a post originally established by the French under the name of Fort Aremburg during their former expedition. Sir George Goldie went to Boussa after the British captured Ilorin, and found M. Carron established there as French resident and the French troops in possession of the district and not disposed to acknowledge the prior British claims. Lieut. Bretonnet assumed the title of French resident of the middle Niger. He had acted under instructions from the Minister of the Colonies directing him to proceed to the occupation of points in the valley of the middle Niger not already occupied by the English. The King of Boussa was at first unwilling to acknowledge the French protectorate, but he accepted the aid of a force of French soldiers in an expedition against his rebellious vassal, the King of Kworra, which resulted in the capture and destruction of the town of Wa after a fight in which 100 persons were killed. Nearer Dahomey Capt. Baud and Capt. Verneersch occupied the district of Gurma, to which the Germans had a claim under treaties with native chiefs, and Commandant Estenave and Lieut. Voulet, coming from the Sudan, took possession of Mossi. The Sultan of Gurma placed his 8,000 warriors at the disposition of the French. Another expedition rendered effective the French title to Futa Jallon. The chance of a territorial conflict with Germany was averted by an agreement arrived at by French and German commissioners, who as the result of mutual concessions settled on a frontier line which gives to France the whole of Gurma and permits Germany to annex Sansanne Mangu to Togoland. The convention was signed at Paris on July 23, 1897. The region obtained by France, while less productive than the country conceded to Germany, is of much greater extent, and it establishes the long-desired communication between Dahomey and the French Sudan. The line of demarcation proceeds from the end of the previously settled boundary, in 9° of north latitude, in a nearly northwesterly direction to 11° of latitude, then bends due west, and subsequently turns, following the river Volta in a southwesterly and afterward in a southerly direction until it reaches the neutral territory of Salaga. The German sphere embraces Ganda, Kirikri, Kunjari, Bafilo, Gambaga, and Walwale, besides Sansanne Mangu, while the French obtain in addition to the whole of Gurma the districts of Dje, Pregno, Pama, Wangara, Semere Alejo, and Sugu. In the course of the negotiations it was found that native chiefs had repeatedly concluded treaties simultaneously with French and German agents, and had also declared that their territories extended farther than they actually did and in other cases claimed an independence that they did not possess. It be-

came evident, furthermore, that it was impossible to base claims on the mere fact that territory had been duly occupied by one or the other of the negotiating powers, since French and German expeditions had often founded stations in the immediate neighborhood of each other, sometimes in the same place. The delegates of both powers agreed that where treaties had been regularly concluded priority of date should govern.

The boundary between the French possessions and the English sphere back of Lagos was fixed by the agreement of August, 1889, as far as 9° of north latitude. The French encroached on the English sphere by building a military road and establishing posts for the passage of expeditions from Dahomey at a point near the intersection of the frontier by the eighth parallel.

In the back country of the British Gold Coast colony the French have been as active as in the disputed *Hinterland* of Lagos. To secure this region for England a colored man named Fergusson has for years circulated among the tribes as far north as the line from Say to Segou, beyond which is the acknowledged French sphere in the Sudan, and he and other British agents have obtained treaties purporting to establish a British protectorate over Gurunsi, Mamprusi, Dagarti, Daboya, Chakosi, Bona, Lobi, Gonja, and the rest of the native states. Treaties made in 1892 were signed over again in 1894, and in 1897 other British missions traversed the region and secured fresh treaties. French agents also obtained like treaties from the same persons or others assumed to have the right to cede native territories. At Wagadugu, the capital of Mossi, in the extreme north, Mr. Fergusson obtained a treaty in 1894, also at Wa, the capital of Dagarti, and Mr. Henderson made a treaty on Feb. 2, 1897, at Leo, in the Gurunsi states. Successive treaties were made covering Bona and the other states. The validity of such treaties unaccompanied with effective possession has been denied by the French Government, and when the Niger Company undertook to establish its military power in the regions of the middle Niger the French dispatched armed expeditions both from the coast and from their military centers in the interior north of the line between Say and Segou to occupy as much as they could of the valley of the middle Niger before the British forces from the Gold Coast and the expedition of the Niger Company took actual possession. French expeditions coming down from the north attacked and took Wagadugu, took also Leo, secured the submission of Daboya, and at Wa induced the King of Dagarti to cancel his prior treaty with Great Britain, and substitute a French treaty in its place. In the *Hinterland* of Lagos the French still remained in possession of the Boussa district in the face of vigorous diplomatic representations, occupying Boussa, Illo, Niki, Kiami, and other towns. The British Government assumed the direction of affairs, and emphasized its serious diplomatic remonstrances by sending additional military forces into the territories of the Niger Company and considerable expeditions into the back country of the Gold Coast. In the autumn the French and British military forces stood watching each other, and there were moments when a collision was narrowly escaped. Capt. Stewart, the British officer, and Lieut. Voulet, at Wagadugu, and Capt. Seal, at Leo, effected temporary agreements equivalent to an armed truce in order that the questions at issue might be referred to their respective Governments for a diplomatic settlement. At Wa the French under Capt. Hugot promised to withdraw if the British officer would also retire, and afterward re-entered the town on the plea of securing themselves against attack. A

French for e occupied Saki, 20 miles south of the ninth parallel, and still farther east of the Dahomey frontier, but retired when Major McCallum appeared with a detachment of troops from Lagos. Kishi, farther to the north in the same region, was occupied in spite of a British treaty made by Capt. Lugard, and was made a French station in order to afford a short cut to Boussa. In consequence of representations from the British Government the Paris authorities ordered the expeditions that marched northward from Dahomey later to avoid passing through British territory. Two powerful British gunboats, the "Heron" and "Jackdaw," were placed on the middle Niger, to patrol the river from Boussa to Say, in order permanently to establish British influence on both banks. A large expedition under Lieut.-Col. Northcott was sent into the back country of the Gold Coast. Here, in the beginning of November, Major Jenkinson seized Buna, which is in the middle of the French sphere of influence back of the Ivory Coast. In October the Baribas attacked and defeated a British detachment under Capt. Humfrey at Ilesha, west of Saki, where the English established a post after the French had evacuated the place.

When a mixed boundary commission met in Paris in May, 1896, with the object of trying to effect an agreement for the delimitation of the French and English spheres beyond 9° of north latitude, it was found that the English commissioners were not empowered to conclude an arrangement, and the commission separated without accomplishing anything. The commissioners were summoned to meet again on Oct. 21, 1897, to discuss the questions that now threatened to precipitate an armed conflict in Africa, and to settle all the frontier questions. Before they could begin their labors the two Governments discussed the bases of an agreement, and found that irreconcilable differences as to the principles of the delimitation still kept them apart. At the same time active military preparations were prosecuted on both sides in West Africa. The French complained that the English were distributing arms among the natives to be used against the French, and that British officers were inciting rebellion in Borgu and the Niki region effectively occupied by France.

The boundary commissioners, empowered to discuss plans and arrangements to be referred to their respective Governments, held their first meeting on Oct. 29.

The French Congo, formerly known as Gabun-Congo, is under a Commissioner General, H. de Lamotte. The area is over 300,000 square miles, and the estimated population 5,000,000. The country is covered with great forests. The exports are rubber, cacao, coffee, ivory, ebony, sandalwood, palm oil and nuts, and gum copal. The imports were valued at 3,166,000 francs in 1893; exports, 2,345,000 francs. The local budget for 1895 was 3,090,546 francs. The expenditure of the French Government for 1897 was 2,197,861 francs.

French expeditions advanced in 1897 by way of the upper Ubangi and the Welle, with the probable object of establishing French posts in the Nile valley on the Bahr el Ghazal and the White Nile and thus anticipate the English advance from Uganda and the Anglo-Egyptian military movement in the direction of Khartoum. The ultimate aim was to extend French influence across the continent from the French possessions in Senegambia and on the Congo to those of Obok, on the Gulf of Aden, and this French colonial adventurers hoped to accomplish with the aid of the Emperor Menelek of Abyssinia. Major Marchand's expedition set out from Brazzaville on March 1 for the Ubangi, where Capt. Liotard was engaged in taking pos-

session of regions in the upper Shari basin assigned to France in the Congo convention of 1895. Lieut. Dye had the parts of a steamer, which he expected to put together on the Bahr el Ghazal. The expedition struck across from Semio, in the Niam Niam country, on the right bank of the Mbomu river, and in September was reported to have reached Nozziobe, on one of the affluents of the White Nile. Major Marchand and his companions intended to organize a military force of the natives, for whom they had a large supply of arms, and they hoped to meet at Fashoda the party of M. Bonchamps, arriving from Jibutl by way of Abyssinia.

German Possessions.—The German protectorate of *Togoland*, administered by an Imperial Commissioner, Herr Köhler, has an estimated area of 23,160 square miles, with a population of 2,500,000. The white population in 1895 was 88, all Germans except 9. There is a police force of 150 natives. The chief exports are palm oil and kernels, gum, and ivory. The imports in 1894 were valued at 2,240,642 marks; exports, 2,894,393 marks. The revenue was 376,580 marks; expenditure, 410,140 marks.

Cameroon has an area of 191,130 square miles, and about 3,500,000 inhabitants. The Imperial Governor is J. von Putt Kamer. The Europeans in 1896 numbered 235. The budget for 1898 makes the revenue 1,270,300 marks, including a contribution of 690,300 marks from the Imperial Government. The imports in 1896 were valued at 5,377,943 marks; exports, 4,323,656 marks. The chief exports are palm nuts, ivory, palm oil, and rubber. Some cacao is exported, and plantations of coffee and tobacco have been begun.

Portuguese Possessions.—Portugal resumed possession of the Cape Verde Islands and a strip of the coast of Upper Guinea in 1885. The area of *Cape Verde* is 1,650 square miles, with 110,930 inhabitants. The estimated revenue in 1895 was 259,170 milreis; expenditure, 265,757 milreis. The imports were 252,000 milreis, and exports 240,000 milreis in value.

Portuguese Guinea has an estimated area of 14,000 square miles, and about 800,000 inhabitants. The revenue was estimated for 1895 at 67,990 milreis, and expenditure at 174,708 milreis. The value of the exports is about 43,000 milreis a year.

The area of *Prince's* and *St. Thomas islands* is 454 square miles, with a population of 21,040. The revenue for 1895 was estimated at 293,490 milreis, and expenditure at 232,359 milreis. The imports in 1893 were valued at 1,035,063 milreis. The exports, consisting mainly of coffee and cacao, were 1,046,820 milreis in value.

Angola, including Ambriz, Benguela, Mossamedes, and the Portuguese Congo, has an area of 457,500 square miles, and about 2,000,000 inhabitants. The revenue for 1895 was estimated at 1,634,800 milreis, and the expenditure at 1,532,637 milreis. The imports are 2,870,000 milreis, and the exports 3,250,000 milreis a year. There are 180 miles of railroad in operation and 230 miles under construction or projected. The length of telegraphs is 260 miles.

Spanish Possessions.—The coast region of the Sahara south of Morocco is claimed as a Spanish protectorate. The right to the banks of the Muni and Campo rivers is disputed by France. The settlements of *Rio di Oro* and *Adrar* are placed under the direction of the Governor of the Canary Islands. The area of the protectorate is about 243,000 square miles, with a population of 100,000, not including the disputed region, which has an area of 69,000 square miles, and a population of 500,000.

Near Cape Nun is the Spanish station of *Ifni*,

with an area of 27 square miles, and 6,000 inhabitants.

The area of the Spanish island of *Fernando Po*, and of *Annaboni*, *Corisco*, *Elobey*, and *San Juan*, on the Guinea coast, is 850 square miles, with a population estimated at 30,000.

WEST INDIES. The West Indian islands are colonies of European powers with the exception of the island of Hayti, which is divided between two independent republics (see HAYTI and SANTO DOMINGO). Cuba and Puerto Rico are the only remaining Spanish colonies in America (see CUBA). The majority of the inhabitants of the West Indies are descendants of enfranchised negro slaves, who constitute on some islands almost the entire population. The Guianas are in South America.

British Colonies.—The British possessions in the West Indies are divided into 6 groups, each of which is administered by a Governor. The total imports of the British colonies in 1895 amounted to £6,545,426, including bullion and specie, and the total exports to £5,351,124. In 1893 the exports were £6,974,652 in value. The aggregate revenue of all the colonies in 1895 was £1,843,637, and their expenditure £1,932,358. The imports of Great Britain from these colonies in 1895 were £1,863,673, of which £492,369 represented sugar, £158,044 rum, £565,555 cacao, and £187,446 dyes. The British exports to the islands were valued at £2,104,374, of which £547,760 represented cotton goods, £247,384 apparel, £128,348 leather and leather goods, £151,062 iron manufactures, and £57,124 machinery.

The Bahamas have an area of 5,450 square miles, and a population estimated at 51,517. There were 2,004 births and 1,182 deaths in 1895. The revenue in 1895 was £63,232, and expenditures £62,110. The value of the imports was £172,581, and of exports £124,011. The products of the sponge fisheries was £67,565. The exports of fresh pineapples were £22,784. Preserved pineapples are also exported. The cultivation of the risal plant is increasing. The Bahamas have become an important winter resort. The Governor is Sir W. F. Haynes Smith. The public debt amounts to £114,126.

Jamaica has an area of 4,200 miles, and a population estimated in 1894 at 672,762. The white population in 1891 was 14,692. Kingston, the capital, had 46,542 inhabitants. The number of marriages in 1895 was 3,629; of births, 25,298; of deaths, 14,321; excess of births, 10,977. The immigration of coolies, suspended in 1886, was resumed in 1891. There were 13,828 East Indian immigrants in 1893. The Governor is Sir Henry Arthur Blake. The West India regiments maintained in Jamaica by the British Government had in 1897 a strength of 1,567 officers and men. There are 119 miles of railroad. The imports in 1895 were valued at £2,228,945; exports, £1,873,105. The largest exports were sugar for £195,459, rum for £164,600, and coffee for £284,821. The revenue was £814,341; expenditure, £836,513. The largest items of expenditure were £63,831 for public works, £81,111 for the debt, and £55,468 for police. The debt amounts to £2,174,049, including guarantees. It was mainly incurred for public works, such as railroads, canals, and roads. The decline in the cultivation of sugar cane is gradual but persistent; the increase in coffee, cacao, ginger, and tobacco has been great, and in bananas still greater. The destruction of the Florida orange groves in 1894 led to a large increase in the Jamaica fruit exports. The export of sugar is only 11 per cent. of the total exports, whereas it was 32 per cent. twenty years ago. About half the imports come from Great Britain, and nearly half from the United States, whose proportion is increasing.

Turks and Caicos Islands, attached to Jamaica, have an area of 169 square miles, and a population of 4,745, employed mainly in raking salt, which is exported to the United States, Canada, and Newfoundland. The Cayman Islands, with a population of 4,322, export cocoanuts and green turtles.

Barbadoes has an area of 166 square miles, and a population estimated at 188,000. The revenue in 1895 was £146,314; expenditure, £152,039. The public debt is £405,100. The Governor is Sir James Shaw Hay. The headquarters are here of the European garrison of the West Indies, numbering 30 officers, and 747 men in 1896. There are 24 miles of railroad. The local revenue in 1895 was £6,396. The sugar crop, the only important one, declined from 66,262 hogsheads in 1894 to 36,451 in 1895. The fisheries yield about £17,000 annually. The total value of exports in 1895 was £587,298, and of imports £956,921. The export of sugar was £282,257; of molasses, £97,856. The sugar crop in 1895 was greatly reduced by drought and the cane disease. In 1896 there was a good crop, and the total exports, consisting mainly of sugar and its products, amounted to £758,228. The Government had proposed to assist emigration. This project was abandoned for the time, owing to the opposition of the Legislature, for work happened to be plentiful, and food cheap and abundant.

The Leeward Islands, consisting of Antigua, with Barbuda and Redonda, the Virgin Islands, Dominica, St. Kitts, Nevis, Anguilla, and Montserrat, have a total area of 701 square miles, with an estimated population of 127,800. Their revenue in 1895 was £119,080, and the expenditure £165,996. They have a debt of £301,771. The imports in 1895 were valued at £414,238, and exports at £288,345. The export of sugar was £173,652; of molasses, £23,290. The Governor is Sir Francis Fleming.

The Windward Islands have an area of 784 square miles, with 146,800 inhabitants, as estimated in 1895. The revenue for 1895 was £132,491, and expenditures £150,164. There is a debt of £315,750. The value of the imports in 1895 was £395,449; exports, £381,056. The group consists of Grenada, St. Vincent, the Grenadines, and St. Lucia. The cultivation of cacao, cotton, spices, and coffee is replacing that of sugar cane. The Governor is Sir Cornelius Alfred Maloney.

Trinidad has an area of 1,754 square miles, and a population estimated in 1895 at 237,934. The capital is Port of Spain, with a population of 42,000. The number of marriages in 1895 was 2,032; of births, 8,059; of deaths, 5,876; excess of births, 2,183. There are 56 miles of railroad and 30 miles more in course of construction. The telegraphs have a length of 690 miles. The dependent island of Tobago, where cotton and tobacco are grown, has an area of 114 square miles, and 20,039 population. The agricultural products of Trinidad are sugar, coffee, cacao, yams, and cocoanuts. From the pitch lake in the center, belonging to the Government and leased to an American company, 86,148 tons of asphalt were exported in 1895. The total value of imports in 1895 was £2,276,864; of exports, £2,000,748. The imports of Tobago were £13,643; exports, £10,517. The revenue of Trinidad was £552,275; expenditure, £549,771. There is a public debt of £569,679. Tobago's revenue was £8,591; expenditure, £8,278. The Governor of Trinidad is Sir H. E. H. Jenningsham.

British Guiana has an estimated area of 109,000 square miles, including the area between the Essiquibo and the Schomburgk line, which is claimed also by Venezuela. The population in 1896 was 283,278. The revenue in 1896 was £567,749; expenditure, £596,493. The revenue from customs

was £299,891; from licenses, £113,571; rum duty, £54,262; royalty on gold, £22,740. The expenditure on the civil establishment was £158,891; ecclesiastical, £22,884; judicial, £38,391; education, £31,442; public works, £28,382. There is a public debt of £932,704. The Governor is Sir A. W. L. Hemming. The imports for the fiscal year 1896 were £1,443,553 in value; exports, £1,769,500. The principal exports were sugar for £1,046,160, rum for £121,145, molasses for £15,987, and gold for £441,991. There are 20 miles of railroad. The population in 1891 comprised 2,533 born in Europe, 99,615 negroes, 105,465 East Indians, and 3,714 Chinese. There were 90,492 living on sugar estates and 125,757 in villages and settlements. The number of immigrants from India in 1896 was 2,412, while 2,071 coolies were returned. The gradual abandonment of the sugar estates imposes the obligation upon the Government of transporting to their homes the indentured Indian coolies who are thrown out of work. The free coolies have taken up the cultivation of rice on such a scale as to replace sugar cultivation in some measure and create a large demand for labor. The gold diggings have given employment under three months' engagements to about 7,000 negro laborers, though they have not yet increased the general wealth of the colony. A great amount of local capital has been sunk in the exploitation of unprofitable claims, and no large amount of British capital has been attracted to the mines. The mining operations have been chiefly confined to placer washings, and for every dollar taken out one has been sunk. Of two quartz mines opened with English capital, one has ceased operations, and the other has been condemned by mining experts. The colonists consider the costliness of transportation and the insecurity of tenure due to the boundary dispute with Venezuela to be chief drawbacks to the development of mining into a profitable industry. The decline in the yield of gold from 138,279 ounces in 1893 to 119,422 ounces in 1896 is attributed to the withdrawal of capital from the placer mines for speculation in quartz-mining ventures and to the exhaustion of old placers by wasteful methods of mining. The yield in the year ending June 30, 1897, showed an improvement, amounting to 128,333 ounces. The Government levies a royalty of 5 per cent. on all gold brought down from the gold fields, besides a license fee of \$10 on each claim.

Puerto Rico.—The Spanish colony of Puerto Rico, which is one of the most fertile and salubrious of the Antilles, is administered by a Captain General—Lieut.-Gen. Marin in the beginning of 1897—assisted by an Administrative Council appointed by the Government at Madrid.

The area is about 3,550 square miles, and the population at the beginning of 1888 was 813,937, of whom over 300,000 were negroes. San Juan, the capital, had 23,414 inhabitants; Ponce, 37,545; and San German, 30,146.

The revenue for 1894 was estimated at 3,903,655 pesos, of which 2,300,000 pesos came from customs and 1,358,800 from taxation, direct and indirect. The estimated expenditure was 3,879,813 pesos, of which 1,050,006 pesos were for military expenses and 250,045 pesos for financial administration.

The export of coffee in 1895 was 16,884 tons, valued at £1,755,931 sterling; of sugar, 54,861 tons, valued at £712,131; of tobacco, 1,807 tons, valued at £152,722. The total value of imports in 1893 was £3,464,090, and of exports £3,349,078. Spanish imports in 1894 were valued at 21,580,125 pesetas, and exports to Spain at 28,678,899 pesetas.

Danish Colony.—The Danish Antilles consist of the islands of Santa Cruz, St. Thomas, and St. John, having a total area of 118 square miles and a popu-

lation of 32,786. The chief products are sugar and rum. The Governor is Col. C. E. Hedemann.

French Colonies.—*Guadeloupe* has an area of 583 square miles. The dependencies of Marie Galante, La Désirade, Les Saintes, the French part of St. Martin, and St. Barthélemy have an area of 103 square miles. The population of Guadeloupe is 167,099, and of the dependent islands 23,605. The exports of Guadeloupe in 1894 were valued at 21,060,000 francs, of which 20,914,000 francs went to France; imports, 22,636,000 francs, of which 12,890,000 francs were French products and manufactures. The Governor is D. Moracchini.

Martinique has an area of 381 square miles, with a population of 189,599. The imports in 1894 were valued at 29,117,000 francs, of which 13,850,000 francs were from France; exports, 22,511,000 francs, of which 21,190,000 francs went to France. There are 120 miles of railroad. The Governor is N. Pardon.

French Guiana has an area of 46,850 square miles, with a population of 29,650. The imports in 1893 were 10,921,000 francs in value, of which 7,400,000 francs came from France; exports, 4,734,000 francs, of which 4,387,000 francs went to France. The Governor is H. E. Danel. There were 90,273 ounces of gold exported in 1895.

Dutch Colonies.—The island of *Curaçao* and the dependencies of Bonaire, Aruba, St. Eustache, Saba, and part of St. Martin have a total area of 403 square miles, with a population of 48,972. There were 209 marriages, 1,795 births, and 1,016 deaths in 1895. The revenue in 1897 was estimated at 610,017 guilders; expenditures, 702,217 guilders. The Governor is C. A. H. Barge. The imports for 1895 were 2,633,000 guilders in value.

Dutch Guiana has an area of 46,060 square miles, with 76,500 inhabitants, besides 12,000 Indians and Boschnegers. Paramaribo, the capital, has 29,261 inhabitants. The revenue in 1897 was estimated at 2,016,730 guilders; expenditure, 2,241,498 guilders. The imports were valued at 5,203,000 guilders; exports, 5,490,000 guilders. The Governor is W. Tonckens. The chief products are sugar, cacao, bananas, coffee, rum, molasses, and gold, of which the export was 1,618,793 guilders in 1894.

The Governors of British Guiana, the Leeward Islands, the Windward Islands, and Trinidad addressed repeated complaints during a series of years to the British Colonial Office as to the depressed state of the sugar industry, which the colonists attributed to the Continental system of sugar bounties. In April, 1895, the Chamber of Commerce of British Guiana proposed that the British Government should protest against the bounties on beet sugar, or should adopt measures that would enable West Indian sugar to compete with beet sugar on fair terms. The Marquis of Ripon, while he sanctioned special remissions of taxation on sugar estates in British Guiana, Trinidad, and the Leeward Islands, declined to take any action, but in November, 1895, Mr. Chamberlain, who had succeeded him, wrote that the British Government would lose no opportunity of bringing home to the minds of other governments the inadvisability of continuing the bounty system, of which there was hope that they were beginning to realize the mischievous effects. A year later, when the price of sugar was still further depressed, and when the German and Austrian governments had on Aug. 1 practically doubled their bounties and France was on the point of doing the same thing, he proposed the appointment of a royal commission to inquire into the effect of these bounties on the colonial sugar industry and on the conditions and prospects of this industry and the financial and economic outlook in the West Indies. There had been heavy

deficits in Antigua and St. Kitts, notwithstanding an abundant sugar crop, and labor riots in the latter island. The governments of the Windward Islands were insolvent and that of Barbadoes in financial difficulties, notwithstanding severe retrenchments and an increase of taxation. The abandonment of sugar estates in St. Vincent had been announced, and cultivation was being reduced in Trinidad and with serious rapidity in British Guiana, involving the loss of capital invested in expensive machinery. There seemed to be no prospect of an alternative industry soon taking the place of sugar cultivation in British Guiana or Barbadoes, where a large amount of capital was invested, and if this industry were abandoned the coolies in the former colony and the negroes in the latter would be thrown on the hands of an insolvent Administration, which would be unable to provide for their repatriation in the one case, although bound by contract to do so, or for their support or immigration in the other case. The circumstances of Antigua, St. Kitts, and Nevis were analogous on a smaller scale. The banking establishments in the West Indies were involved in the sugar industry to such an extent that a collapse of that industry would bring about a disastrous financial crisis. The special danger in the outlook lay in the fact that the sugar industry employs far more labor per acre than any possible substitute, and that no possible substitute was immediately available; that the revenue depended directly on the industry, so that the administrations were liable to be financially crippled, when they would be subjected to the greatest strain; and that any general failure of employment could be confidently expected to produce, if not immediate rioting, at least a very dangerous and unstable situation, in which more efficient police arrangements than existed in the majority of the islands, and possibly the presence of troops or ships of war, might be necessary to maintain order. The position of affairs had become so serious that Mr. Chamberlain was unwilling to acquiesce longer in the policy of nonintervention in regard to the sugar bounties without studying the probable cost to the British exchequer, and without knowing as clearly as possible at what cost it might be to the welfare and stability of the West Indian colonies and to industries in which English capital was largely invested. The English Government had not pressed a bill introduced in 1889 to give effect to the sugar-bounties convention for the reason that these bounties gave a substantial advantage to certain British industries. It had now become a question whether the continued enjoyment of this advantage did not involve the ruin of the British sugar-producing colonies. The new German export bounties were from £1 5s. to £1 15s. a ton; the French bounty was already equivalent to a grant of £3 5s. a ton, and by the new law this bounty was raised to £4 10s. a ton. The effect of these liberal bounties and of the protective customs duties and the excise duty which is £10 a ton in Germany and £24 a ton in France was to make sugar 3*d.* or 3½*d.* cheaper in England than it was on the Continent.

The Treasury concurred in Mr. Chamberlain's proposition for a royal commission, which was appointed in December, 1896, consisting of Gen. Sir Henry Norman, chief commissioner, and Sir David Barbour and Sir Edward Grey. The commissioners visited all the colonies and made an elaborate report, which was issued on Oct. 2, 1897. During the fifteen years in which the manufacture of beet sugar in Europe had been rapidly developed under the bounty system, which cost the taxpayers of Germany, France, and Austria £32,000,000 a year to maintain, the world's production of sugar

had risen from 3,799,284 tons in 1882 to 7,474,000 tons, and prices had fallen from 29.14*s.* to 14.75*s.* per hundredweight for refined and from 21.15*s.* to 10.34*s.* for unrefined sugar. In the same period the cost of production had been reduced in British Guiana, the principal sugar-raising colony, from £16 1*s.* 7*d.* a ton to £9 and in some exceptional cases to £8 0*s.* 6*d.* a ton. The world's production of sugar had doubled in fifteen years, but that of the West Indies had not increased in the same proportion. At the same time the average cost of production had been reduced to half what it formerly was, but only the most advanced of the West Indian producers had succeeded in halving the cost.

Not all the colonies are dependent on sugar exclusively for their prosperity. Jamaica and Trinidad have other economic resources. Grenada has already given up the production of sugar for export, and the export from Dominica has been largely reduced. The commissioners found the condition of things in the sugar colonies very serious and rapidly approaching a crisis. They did not believe that the abolition of the bounty system on the Continent of Europe would restore the West India industry to its former prosperity. They believed, however, that it would render possible the maintenance of a large proportion of the present area of cane cultivation, and advised the Government to aim at the abolition, even at some sacrifice. In British Guiana and Barbadoes, where the soil is exceptionally favorable for the production of rich cane, and where the latest processes and the best machinery are already employed, only a few estates can now manage to make both ends meet. In the bulk of the colonies the governments will soon be unable to meet the absolutely necessary expenses of administration, to provide for the interest in their debts, pensions, even the maintenance of the poor and the wages of the police. The commissioners expressed the decided opinion that the mother country must submit to sacrifices in one shape or another in behalf of the colonies. The British Government stands under a direct moral responsibility for the black population, brought originally to the islands as slaves. The establishment of the negroes as small landowners, the introduction of new crops by the aid of botanic stations, the improvement of communications between the islands, and the encouragement of the fruit trade with New York were the palliatives suggested, for which the British Government was advised to contribute £27,000 a year for ten years, with a further grant of £20,000 a year for five years to enable the colonial governments to meet their ordinary expenditure, an immediate grant of £60,000 to clear off the floating debts of some of the smaller islands, and one of £30,000 for the settlement of the laboring population on the land. Sir Henry Norman proposed to meet the bounties with a countervailing duty, making sugar perhaps a halfpenny a pound dearer to the British consumer. The other commissioners did not join in this recommendation. The policy of some of the States of the American Union to encourage the cultivation of the sugar beet threatened the sugar colonies with a new danger, for the United States are the principal market for West Indian sugar. At the suggestion of West Indian planters and proprietors, the British Government instructed its ambassador at Washington to ascertain the views of the United States Government in regard to reciprocity trade relations between the British West Indian colonies and the United States under the clause of the Dingley tariff bill by which a reduction of 20 per cent. on the import duties in the United States may be obtained in exchange for equivalent remissions of duties on American goods.

WEST VIRGINIA, a Southern State, admitted to the Union June 19, 1863; area, 24,780 square miles. The population, according to each decennial census, was 442,014 in 1870; 618,547 in 1880; and 762,749 in 1890. Capital, Charleston.

Government.—The following were the State officers during the year: Governor, George W. Atkinson; Treasurer, M. A. Kendall; Auditor,



GEORGE W. ATKINSON, GOVERNOR OF WEST VIRGINIA.

J. M. Lafollette; Attorney-General, E. P. Rucker; Superintendent of Schools, J. R. Trotter—all Republicans; Presiding Judge of the Supreme Court of Appeals, John W. English; Associate Judges, Marmaduke H. Dent, Henry Brannon, and H. C. McWhorter; Clerk, O. S. Long—all Democrats except McWhorter, Republican.

Finances.—The biennial report of the Treasurer shows that at the beginning of the fiscal year 1895-'96 there was in the treasury the sum of \$883,683.74; receipts from all sources during the fiscal year ending Sept. 30, 1896, \$1,524,879.45; total in treasury during the same fiscal year, \$2,408,563.19; amount disbursed during the year, \$1,581,233.76; balance in treasury Oct. 1, 1896, of all funds, \$827,329.43. This balance was made up of: The State fund, \$238,980.63; the general school fund, \$327,076.98; the school fund, \$261,271.82. The Auditor made the following estimate of the receipts at the treasury for the year ending Sept. 30, 1897: For the State fund, \$795,000; balance on hand, \$238,980.63; total, \$1,033,980.63; charges for the year, \$721,158; leaving a balance of \$312,822.63. Receipts for the general school fund, \$376,500; add balance on hand, \$327,076.98; total, \$703,576.98. Receipts for the school fund, \$30,000; add balance on hand, \$261,271.32; total, \$291,271.32. Estimated receipts for the fiscal year ending Sept. 30, 1898: For the State fund, \$785,000; add estimated balance on hand, \$312,822.63; total, \$1,097,822.63; estimated charges for the year, \$555,825; leaving a probable balance of \$541,997.63.

Valuations.—The following valuations were reported for the year: Real estate, \$141,925,633; personal property, \$51,307,197; railroad property, \$22,437,102; total value of all property, \$215,669,932.

Banks.—The State Bank Examiner reported the condition of the State banks, savings banks, and trust and investment companies as follows for the year ending Sept. 30, 1896: Resources—loans and discounts, \$10,585,202.05; overdrafts, \$51,011.93; real estate, furniture, and fixtures, \$969,884.29; stocks and bonds, \$989,106.45; due from banks, \$1,714,153.46; current expenses, \$123,386.09; cash and cash items, \$1,325,254.94; other resources, \$5,611.09; total, \$15,763,610.30. Liabilities—capital stock paid in, \$3,265,550; surplus fund, \$903,915.81; undivided profits, \$301,332.89; dividends unpaid, \$3,223.80; due to banks, \$543,218.67; deposits, \$10,609,880.96; bills payable and rediscounts, \$136,357.17; other liabilities, \$131; total, \$15,763,610.30. The Bank Examiner compares these results with those of 1891, when the first State report on banks was made, as showing "the marvelous progress in material wealth and in banking" during the five years. In 1891 the total number of State banking institutions was only 42, against 60 in 1896, an increase in five years of nearly 43 per cent. Then the total capital stock paid in was \$2,470,884.16, against \$3,265,550 in 1896, an increase of over 33 per cent. Then the deposits subject to check were \$8,331,940.97, against \$10,609,880.96 in 1896, an increase of over 27 per cent. A similar gain appears in the loans and discounts. In 1891 the surplus fund was \$526,388.18, against \$903,915.81 in 1896, an increase of nearly 72 per cent. A comparison of the surplus fund of 1895 with that of 1896 shows an increase in one year of \$113,472.71, and the undivided profits for 1896 were \$50,527.56 more than in 1895.

The following is a summary of the condition of the 33 national banks of the State for the year ending Oct. 6, 1896: Resources—loans and discounts, \$8,405,921.11; overdrafts, \$54,605.01; stocks and bonds, \$1,917,987.83; real estate, furniture, and fixtures, \$613,931.01; due from banks and reserve agents, \$1,173,352.85; cash and cash items on hand, \$1,209,037.23; total, \$13,374,835.04. Liabilities—capital stock paid in, \$3,451,000; surplus fund, \$832,457.27; undivided profits, \$297,415.40; national bank circulation, \$1,151,120; due to banks, \$337,642.90; dividends unpaid, \$10,748.58; deposits, \$7,200,450.89; bills payable and rediscounts, \$94,000; total, \$13,374,835.04. With an aggregate of capital stock slightly in excess of that of the State banking institutions, and with an increase in capital from 1895 to 1896 slightly in excess of that of the latter, the national banks of the State increased their deposits a little over 6 per cent. In the same time the State banks increased their deposits over 9 per cent. The national banks gained in deposits in one year \$421,945.56, and the State banks \$911,812.86. The loans and discounts for the same time grew in substantially the same proportions. The surplus fund of the State banks grew from \$790,443 in 1895 to \$903,915 in 1896, an increase of nearly 15 per cent., while for the same year the surplus of the national banks increased from \$792,417 to \$832,457, a gain of but little more than 5 per cent., or scarcely more than one third as much as that of the State banks. The examiner observes that, with a smaller capital and without any note-issuing department, the State institutions outstripped the national banks, not only in the business done, but also in the profits realized.

Insurance.—In 1896 73 fire insurance companies were doing business in the State with these results: Risks written during the previous year, \$29,102,414.84; premiums received, \$397,006.78; losses paid, \$214,608.96. The 37 life insurance companies wrote risks to the amount of \$7,335,554; premiums received, \$678,162; losses paid, \$170,844. The 29 assessment life companies wrote risks to the amount of \$880,950; premiums received, \$45,302;

losses paid, \$24,607. The accident, plate-glass, and other miscellaneous companies wrote risks amounting to \$8,313,724; premiums received, \$66,251; losses paid, \$47,448.

Education.—The Superintendent of Free Schools reported the total enumeration of school children in the State, white and colored, at 296,517, an increase over the previous year of 7,243; total enrollment, 215,665, a decrease of 2,043; total number not attending school, 80,825, an increase of 9,251; average daily attendance, 141,081; teachers employed, 6,454; total number of schoolhouses, 5,475; value of schoolhouses, \$2,462,196; value of school lands, \$351,589. The chief part of the school revenues is derived from "local levies"—that is, magisterial districts, independent school districts, and city levies, as laid by the various boards of education. These levies are made up of what is known as the "teachers' fund" and the "building fund," the former of which in 1896 amounted to \$1,255,396.96, and the latter to \$560,189.28, an aggregate of \$1,815,586.25, which, added to the gross amount of the general school fund, viz., \$405,650.98, gives a total of \$2,221,273.22 expended for school purposes in 1896. Adding to this amount the sum of \$21,200 expended by the State for the improvement and maintenance of the State University, and \$56,950 expended for the State Normal School and its branches, there results a grand total of \$2,299,387.22 expended by the State in 1896 for primary, secondary, and higher education. Enrollment in the normal schools amounted to 1,202, and 27 teachers were employed.

Coal and Oil.—The coal product of the State was reported as follows: Number of mines, 190; loaded at mines for shipment, 8,858,256 short tons; sold to local trade and used by employees, 445,023 short tons; used at mines for steam and heat, 50,595 short tons; made into coke, 2,034,087 short tons; total product, 11,387,961 short tons; total value, \$7,710,575; average number of employees, 19,159.

The product of the oil fields was 8,120,125 barrels, of which 8,109,782 barrels were classed as illuminating and 10,343 barrels as lubricating oil; total value of product, \$11,038,770, an average of \$1.36 a barrel. The average per barrel of the illuminating oil was \$1.35½, and the lubricating oil as \$2.04.

Agriculture.—The Commissioner of Labor reported: Total number of farms in the State, 73,128. Acres in farms—total, 10,321,326; improved, 4,554,000; unimproved, 5,767,326. Valuation—land, fences, and buildings, \$155,635,801; improvements and machinery, \$3,245,420; live stock, \$17,254,575; estimated value of farm products, \$14,717,866; estimated cost of fertilizers purchased, \$414,529. Farm acreage and products were given as follow: Wheat, 348,229 acres, 3,695,975 bushels; corn, 593,608 acres, 16,126,183 bushels; oats, 203,144 acres, 3,033,628 bushels; buckwheat, 14,113 acres, 125,014 bushels; rye, 14,541 acres, 118,167 bushels; potatoes, 26,503 acres, 1,938,106 bushels. Farms cultivated by owners, 60,152; farms under 10 acres, 1,535; 10 acres and under 20, 2,239; 20 acres and under 50, 9,735; 50 acres and under 100, 17,329; 100 acres and under 500, 27,294; 500 acres and under 1,000, 1,465; 1,000 acres and over, 555. Farms rented for fixed money value, 4,296; rented for share of product, 6,680.

Legislative Session.—By the passage of a joint resolution the Legislature organized a commission to revise the Constitution of the State, the commission consisting of 9 members of the House and 6 of the Senate, appointed by the presiding officers of the respective bodies. This commission will report to the next session of the General Assembly. It voted down a proposition to grant the right of suffrage to women.

Among the acts passed by the General Assembly were the following:

Appropriating \$2,000 to mark the positions occupied by West Virginia troops at the battle of Gettysburg.

Requiring the removal of hats and bonnets during theatrical performances where an admission fee is charged.

Establishing an industrial home for girls.

Providing for a game and fish warden.

To prevent the administering of anæsthetics or narcotics to females by any physician or dentist except in the presence of some third person.

Creating a dairy and food commission.

WIRE GLASS. This name is given to a woven netting of wire imbedded in sheets of molded glass for use in skylights and other places where there is liability to breakage. It was first introduced as a successful article of merchandise in 1893, and is now in general use in large railway stations, factories, etc., all over the United States. The principal factories are at Philadelphia and St. Louis, operating under the patents of Frank Shuman, of Philadelphia, who perfected the process. Before the introduction of wire glass it was customary to protect large skylights with screens of wire netting on the inside so that when breaks occurred glass might not fall on persons below. Such protection was absolutely necessary in the case of glazing placed 50 or 100 feet above the level, where a large number of people were obliged to pass. The separate wire netting was unsatisfactory, however, in that it allowed small pieces of glass to drop through and in that it interfered with the cleaning of the glass, thus tending to darken the interior, a serious matter in large workshops and railway stations where the glass was being continually smoked. As long ago as 1871 efforts were made to cast wire netting within the glass by Thomas Hyatt, of England, but he failed to find means to keep the wire in the center of the glass, and could only make it in small panes. In 1882, 1887, and 1888 processes were patented in Germany and England, but they proved to be commercially impractical. The Shuman United States patent of 1892 solved all the difficulties and secured for the inventor the John Scott legacy and premium medal from the Franklin Institute. With this process it is necessary that the wire netting shall be kept at a heat within a few degrees of the temperature of melted glass. The iron casting table is set in the floor of the shop and the molten glass poured on with a large ladle. A frame carrying four large iron rollers is then run over the glass. The first roller smooths and levels the hot glass; the second roller carries in the red-hot netting and imbeds it in the glass by means of corrugations or ridges in the roller surface; the third roller resmooths the surface of the glass, completing the covering of the wire; and the fourth roller serves to keep the glass, which becomes plastic at this stage, from curling up behind the third roller, and also adds a smoother finish to the glass. The glass is next annealed so as to toughen it, and trimmed to the size of the wire netting, which determines the size of the sheet. Netting of almost any size may be introduced in the glass in this way, practice differing from the quarter-inch mesh to meshes in which the crossed wires are three inches apart. Sometimes for special purposes the wire is corrugated within the glass, this being accomplished by altering the form of one of the rollers. The thickness of this glass varies from three sixteenths to an inch, and the common sizes are 2 × 7 and 3 × 8 feet. The cutting of the glass to small sizes is slow work, as the lines are first scratched with a diamond and the glass cracked and then worked back and forth until the crack opens suffi-

ciently to admit the blade of a fine steel saw, with which the wire is severed. When wire glass is broken by accident, the fractured pieces tend to hang on the wire. Wire glass is cheaper than ordinary glass protected by a screen, because the interior wire adds so much to its strength that it is practical to use it in much thinner sheets to secure a given strength. This also lessens the weight to be carried by the roof, an important item in some cases.

WISCONSIN, a Western State, admitted to the Union May 29, 1848; area, 56,040 square miles. The population, according to the United States census of 1890, was 1,686,880; by the State census of 1895, it was 1,937,915. Capital, Madison.

Government.—The following were the State officers during the year: Governor, Edward Scofield; Lieutenant Governor, Emil Barusch; Secretary of State, Henry Casson; Treasurer, Sewell A. Peterson; Attorney-General, William H. Mylrea; Superintendent of Public Instruction, John Q. Emery; Railroad Commissioner, Duncan J. McKenzie; In-



EDWARD SCOFIELD, GOVERNOR OF WISCONSIN.

urance Commissioner, William A. Fricke—all Republicans. Chief Justice of the Supreme Court, John B. Cassoday; Associate Justices, Silas W. Pinney (Democrat), Alfred W. Newman (Republican), John B. Winslow, and Roujet D. Marshall (Republican). At the spring election in April, Roujet D. Marshall was re-elected Associate Justice for the full term of ten years, beginning in January, 1898.

Finances.—On Sept. 30, 1896, the amount on hand belonging to the general fund was \$49,815.56. The amount received during the year, including \$340,000 borrowed from the trust funds, was \$2,324,572.01. The largest items of the receipts were from railway companies, \$1,264,270.98; from insurance companies, \$128,964.18; from taxes on the counties, \$391,438.09; from charitable and penal institutions, \$79,916.32; telegraph companies, \$10,684.28; telephone companies, \$10,777.14; Secretary of State, office fees, \$10,887.45; Insurance Commissioner, office fees, \$38,292.87; peddler licenses, \$12,499.90. The disbursements during the year aggregat-

ed \$2,340,709.36. The balance on hand Sept. 30, 1897, was \$33,678.21. Some of the largest items disbursed were: Salaries and permanent appropriations, \$123,175.75; legislative expenses, \$153,832.03; publishing laws in newspapers, \$49,700; State Hospital for Insane, \$119,310.91; Northern Hospital for Insane, \$130,661.75; School for Deaf, \$59,837.37; School for Blind, \$47,322.07; Industrial School for Boys, \$70,644.41; State Prison, \$114,380.96; Home for Feeble-Minded, \$135,792.86; State Public school, \$65,971.09; printing, \$31,324.41; Normal School and teachers' institutes, \$49,099; common schools, \$110,373.51.

Education.—The opening of the School for the Feeble-Minded at Chippewa Falls, June 15, 1897, completed the educational system of the State.

The faculty of the University of Wisconsin, at Madison, consists of 135 professors, instructors, and lecturers. The number of students in attendance is about 1,700. The whole number graduated at the commencement in June, 1897, was 213.

The seven State normal schools are at Platteville, Whitewater, Oshkosh, River Falls, Milwaukee, Stevens Point, and Superior. All these, except the one at Milwaukee, provide two standard courses. The number of graduates of the seven schools during the year was: From the elementary course, 183; from the advanced course, 264. There are about 200 free high schools in the State. They are supported in part by an annual State appropriation of \$50,000, and in part by local taxation. About 60 of these schools have three-year courses. In the others the course embraces four years' work.

The Legislature of 1895 authorized any board of education in the State having charge of a high school to establish and maintain a department of manual training in connection with the schools under its control and management. The school boards at Menomonie, Eau Claire, Appleton, Janesville, and Florence have complied with the law.

The common schools of the State, outside of the cities, in all of which graded school systems are maintained, are administered according to two different systems. In the southern and the central part of the State the district system is almost universal. There are 6,400 districts in charge of 19,200 officials. In many of the newer counties in the north the township system is common. There are 400 schools with an enrollment of fewer than 10 pupils each, and 1,650 with an enrollment of fewer than 20 pupils each. In Fond du Lac County, the second richest county in the State, there are 67 schools whose teachers are paid \$20 a month, out of which sum they pay their board and traveling expenses. In most of the older portions of the State conditions are similar. In spite of low wages, the cost per pupil of maintaining these schools is very great. The Legislature of 1893 appointed O. E. Wells a commissioner to prepare a proposed revision of the school code; Mr. Wells reported to the Legislature of 1895 by a bill which did not pass; but interest in the question did not die out, and the Legislature of 1895 appointed J. Q. Emery commissioner to investigate the township system of school government, and to report by bill or otherwise. Mr. Emery did not agree with Mr. Wells that the township system should be made mandatory. Any district is authorized to vote a tax for the free transportation of children residing in the district who live more than a mile and a half from the schoolhouse.

The School for the Deaf is at Delavan. The average number of children in attendance is about 200.

Since 1885 the State has encouraged the maintenance of day schools for the deaf and dumb in the larger cities. For every pupil taught for nine months in one of these schools the State appro-

priates \$125. The cities of Milwaukee, La Crosse, Wausau, Manitowoc, Sheboygan, Eau Claire, Fond du Lac, Marinette, and Oshkosh maintained these schools. The total number of children taught in the nine schools was 121 in 1896.

The School for the Blind is at Janesville. The number in attendance is about 100.

The Industrial School for Boys is located at Waukesha. The average number of inmates in recent years is about 350.

The Industrial School for Girls is at Milwaukee. This school was founded by private charity, and is still under the control of a self-perpetuating board of managers. The school is large enough for the accommodation of 160 inmates.

The State Public School is at Sparta. It was opened Nov. 13, 1886. Its primary object is to furnish a temporary home for dependent and neglected children. The average number of inmates is about 250.

There are in the State about 3,000 feeble-minded and idiotic persons. Until the opening of the Home for the Feeble-Minded at Chippewa Falls, the State had made no provision for their care and instruction. The buildings already erected are adequate for the care of 250 inmates. Early in 1898 additional buildings will be opened for the reception of as many more. Up to Jan. 1, 1898, 239 inmates had been received.

The Legislature of 1897 provided for the founding of the State Reformatory, and the Board of Control has located this institution at Green Bay. Buildings are now in course of erection with a capacity sufficient for 600 inmates. The institution is designed for the custody and training of male offenders, whose ages at commitment are from sixteen to twenty-five years.

The thirty-sixth annual meeting of the National Educational Association was held in Milwaukee, July 6-9, 1897. The meeting was notable in the largeness of the attendance, and in the great value of the papers, lectures, and discussions.

Legislative Session.—Some of the important acts of the Legislature of 1897 were:

The election of John C. Spooner to succeed William F. Vilas as United States Senator.

The revision of the statutes of the State, and providing for the printing and publication of the same by Sept. 1, 1898.

Providing for an increase in the income of normal schools.

Authorizing the Governor to designate a day to be known as "Arbor and Bird Day."

To promote physical education.

To encourage the production of beet sugar.

To prohibit pool-selling.

To provide for enlarging and equipping the State Historical Library building.

To regulate casualty insurance corporations.

To increase the efficiency of the Free Library Commission.

Relating to libel suits by newspapers.

To organize the Wisconsin State Board of Agriculture.

To revise the banking laws.

To prohibit the sale of cigarettes to minors.

To prevent corrupt practices in elections.

A joint resolution in favor of the Torrey bankrupt bill.

A joint resolution requesting the Governor to issue a proclamation for the celebration of the fiftieth anniversary of the State.

A memorial to Congress for the passage of an act to strengthen the national credit.

Semicentennial.—The State Historical Society of Wisconsin is actively engaged in pushing the organization of local historical societies, and in

giving them suggestions and directions relative to work in preparation for county semicentennial observances to be held Saturday, May 28, 1898.

State Prison.—The State Prison is at Waupun. The whole number of prisoners received from the opening of the prison up to Sept. 30, 1896, the date of the latest printed report, was 6,892. The number in confinement Sept. 30, 1896, was 582, of whom 19 were women. The board in their latest report say: "The sanitary condition of the prison for years has been deplorable."

The sanitary conditions have been greatly improved. An electric-light plant has been put in. Open air ducts from each cell have been opened into a large galvanized iron chamber over the roof, exhausting into a receiving room in the attic and thence into the open air.

About 300 convicts are employed in shoemaking under the contract system, at 50 cents a day. During the two years covered by the report the State received \$103,718.37 from this source. The contract expired Dec. 31, 1897. The knitting shop is not so successful. The net income to the State for the last year covered by the report, for 17,067 days of convict labor, was only \$1,322.64, or $7\frac{1}{2}$ cents a day for the labor of each convict. This shop is run on the piece-price contract system. The tailor shop plant netted \$3,951.45 for 8,016 days' labor, or $49\frac{3}{10}$ cents a day for the labor of each convict employed. In 1895 the net daily cost *per capita* was 22.2 cents. In 1896 it had been reduced to 13.1 cents.

The Insane.—The State maintains two institutions for the care of the insane—the State Hospital at Mendota, near Madison, and the Northern Hospital at Winnebago, near Oshkosh. The whole number of patients in the State Hospital, Sept. 30, 1896, was 402; in the Northern Hospital the number was 520. The Wisconsin system of caring for the insane is unique, but very simple. The fundamental principle of the system is that the State hospitals shall have for their sole function the cure of the curable. So long as there is any hope that hospital treatment will benefit the patient, either physically or mentally, he is retained in the institution. When it is plain that there is no hope of his recovery, he is transferred to one of the 23 county asylums. On Sept. 30, 1896, there were 2,816 inmates in these institutions, and the State had paid for the care of these inmates for the two years ending on the date named \$419,966.02.

Railways.—From the report of the Railroad Commissioner it appears that on June 30, 1896, the total mileage of railways in the State was 6,279.46. The capital stock was \$106,157,479.40; the funded debt was \$153,445,697.89; the unfunded debt was \$3,300,006.22. Dividends were declared amounting to \$2,666,151.60 for the two years covered by the report. The annual license fees, which are in lieu of all State, county, and local taxes, are as follows: 1. Four per cent. of the gross earnings of all railroads, except those operated on pile and pontoon, or pontoon bridges, whose gross earnings equal or exceed \$3,000 a mile per annum of operated railroad. 2. Five dollars a mile of operated railroad of all railroads whose gross earnings exceed \$1,500 a mile per annum, and are less than \$3,000 a mile per annum of operated road; and in addition 2 per cent. of their gross earnings in excess of \$1,500 a mile per annum. 3. Five dollars a mile of operated road by all companies whose gross earnings are less than \$1,500 a mile per annum. 4. Two per cent. of the gross earnings of all railroads operated upon pile or pontoon, or pontoon bridges, which gross earnings shall be returned as to such parts thereof as are within the State. These license fees constitute by far the largest single item in the annual revenues of the State.

Decisions.—Jan. 26, 1894, the State Board of Health made a rule which, in June, 1894, was modified to read as follows:

"SECTION 1.—No child shall be allowed to be enrolled as a pupil in any public, private, or parochial school without first presenting to the principal or teacher of the school in which he applies for enrollment or attendance the certificate of a reputable physician that he has been successfully vaccinated, or, in lieu of such certificate of successful vaccination, a certificate from a reputable physician that such child has been vaccinated at least twice within a period of three months next preceding the date of such application; such latter certificate, however, shall be void after the expiration of one year from its date."

The Board of Education of Beloit made an order for the enforcement of this rule in the public schools of that city. E. J. Adams, a resident of Beloit, father of three school children, refused to allow his children to be vaccinated on account of his belief, as a Christian Scientist, that the laws of God do not permit the operation or treatment of vaccination. The children, thereupon, were expelled from the schools in which they had been enrolled. Mr. Adams, in the circuit court, secured a writ of peremptory mandamus for the reinstatement of his children. The Board of Education took an appeal to the Supreme Court, and on Feb. 23, 1897, the judgment of the lower court was affirmed. The Supreme Court held that "in the absence of a statute making vaccination compulsory or a condition precedent to the right of children of proper qualifications to attend the public schools, a rule by the State Board of Health, which was authorized to take general supervision over the public health, and to make regulations to preserve it and to guard against contagious diseases, that no child should be allowed to attend a public or private school within the State without presenting a certificate of vaccination, can not be sustained as an exercise of police power. Also, that the State Board of Health is merely an administrative body, and can not be clothed with legislative powers."

The Legislature of 1895 passed an act entitled "An Act to protect all citizens in their civil and legal rights." The act provided "that all persons within the State shall be entitled to the full and equal enjoyment of the accommodations, advantages, facilities, and privileges of inns, restaurants, saloons . . . eating houses . . . and all other places of public accommodation or amusement, subject only to the conditions and limitations established by law, and applicable alike to all persons of every race and color."

Isaac T. Bryan, a colored man, entered an eating house in the city of Milwaukee, seated himself at a table, and waited forty minutes for some one to take his order. He was informed that his order was not taken because he was colored. He complained to the proprietors, who requested one of their waiters to serve the colored man. The waiter refused, whereupon the colored man left the restaurant. He afterward sued in the Superior Court for damages. Losing his suit, he appealed to the Supreme Court, and the Supreme Court reversed the judgment of the lower court. The court held that the statute prohibits persons from doing what the State is forbidden to do by the Constitution of the United States, and makes the offender liable in damages to the person aggrieved.

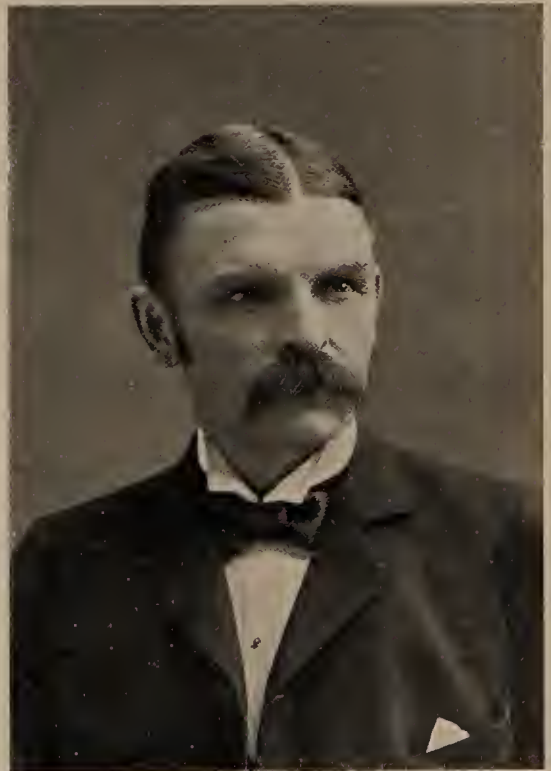
Libraries.—The Wisconsin Library Association, organized in 1891, has held annual conferences since that date, except in 1892. The Legislature of 1895 passed a law providing for the establishment of the Wisconsin Free Library Commission,

and the Legislature of 1897 strengthened the commission by increasing the annual appropriation for its support from \$500 to \$4,000, and in other ways. The duty of the commission is to "give advice to all free libraries in the State, and to all communities which may propose to establish them, as to the best means of establishing and administering such libraries, the selection of books, cataloguing, and other details of library management. The commission may also send its members to aid in organizing new libraries or in improving those already established." The commission consists of five members.

The law for the establishment of free libraries, as amended in 1897, provides that: "The Common Council of every city not exceeding in population 50,000 inhabitants, and the village board, or board of trustees, of every village, and the town board of every town containing over 1,000 inhabitants, shall have power to establish and equip a public library and reading room; and may annually levy a tax upon the property of such city, village, or town, to provide a library fund. The number of free libraries is now 49, and the number is increasing rapidly. It is made the duty of the State superintendent to prepare lists of books suitable for school district libraries, and the town clerk in purchasing books must select from this list. Nearly 900 township libraries have been established. They are not for the exclusive use of school children; the law makes them free to all residents of the district.

WYOMING, a Northwestern State, admitted to the Union July 10, 1890; area, 97,890 square miles. Population in 1890, 60,705. Capital, Cheyenne.

Government.—The following were the State officers during the year: Governor, W. A. Richards; Secretary of State, Charles W. Burdick; Treasurer, Henry G. Hay; Auditor, William O. Owen; Adjutant General, Frank A. Stitzer; Attorney-General, B. F. Fowler; Superintendent of



WILLIAM A. RICHARDS, GOVERNOR OF WYOMING.

Education, Estelle Reel—all Republicans. Supreme Court—Chief Justice, A. B. Conaway, Republican; Associate Justices, Samuel T. Corn, Democrat, and C. N. Potter, Republican; Clerk, R. H. Repath.

Finances.—The balance of cash on hand in the treasury Sept. 30, 1896, was \$102,304.86; cash received from all sources during the year ending Sept. 30, 1897, \$256,729.96; total, \$359,034.82. The disbursements during the year ending Sept. 30, 1897, amounted to \$245,227.59; cash charged to the Treasurer, \$113,807.82. The bonded indebtedness of the State was given as follows: Capitol building, \$150,000, 6 per cent., one tenth in the year 1901 and one tenth each year thereafter, interest payable Jan. 1; university, \$50,000, 6 per cent., payable in the same way; Insane Asylum, \$30,000, 6 per cent., one tenth in 1912 and one tenth each year thereafter, interest payable Jan. 1; public buildings, \$90,000, 6 per cent., one tenth in 1918 and one tenth each year thereafter, interest payable July 1; total, \$320,000. At the end of the fiscal year the counties were charged with delinquent taxes to the amount of \$27,958.58.

The valuation for State revenue as made to the several counties by the Board of Equalization was as follows: Albany, \$3,673,660.04; Big Horn, \$1,051,442.91; Carbon \$3,411,775.63; Crook, \$1,568,184.46; Converse, \$1,523,800.50; Frémont, \$1,219,278; Johnson, \$1,163,745.05; Laramie, \$5,433,052.37; Natrona, \$1,062,078.58; Sheridan, \$1,924,433.41; Sweetwater, \$3,590,106.01; Uinta, \$3,504,701.60; Weston, \$1,174,203.75; total valuation, \$30,300,462.31. The total tax levy was \$181,802.77.

The sum of \$24,000 was appropriated for distribution among the counties for the payment of bounties on predatory wild animals.

Banks.—The deposits of national, State, and private banks at the close of the fiscal year amounted to \$3,643,328, or a *per capita* of about \$50. The average reserve of the banks was: National, 42.83 per cent.; State, 59.80 per cent.; private, 40.50 per cent. The aggregate deposits increased approximately \$900,000 during the year, while the loans and discounts remained practically the same as in the previous year.

Insurance, etc.—There were 42 fire insurance companies doing business in the State. Insurance written, \$6,799,072.45; premiums received, \$121,616.96; losses paid, \$23,579.11. Thirteen life insurance companies paid during 1896 claims to the amount of \$14,655, and collected premiums to the sum of \$125,507. Six assessment life insurance companies paid claims to the amount of \$11,072. Six building and loan associations had 8,096 shares in force.

Valuations.—The report of the State Board of Equalization contained this statement: "The increase in the assessed valuation of property in this State is an indication of an actual increase in the value of property in general, and especially is this true in regard to range cattle. The average price of

Wyoming range steers in the Chicago market has increased from \$31.01 in 1893 to \$38.35 in 1897; cows increased from \$16.80 in 1893 to \$27.04 in 1897; calves from \$5.31 in 1893 to \$11 in 1897. These figures are for common range cattle, and do not include sales of high-grade stock. The assessed value of live stock has been increased during this time in proportion to the increase of other property assessed by this board." The year 1897 was noted as "one of the brightest and most productive years for Wyoming cattle men since the balmy days of 1880."

Education.—The number of children of school age in the State was reported at 11,387; the average number of days' schooling, 106.8. Illiteracy, compared with the population, was reported decreased.

Land Grants.—The report of the State board calls attention to the fact that on Sept. 30, 1894, there were in effect 453 leases, which number has since been increased to 570. This does not simply imply the issuing of 117 additional leases, but also the reissuing of the greater part of those in force in 1894. Over 200 of this number expired in 1896, which, with few exceptions, were renewed at the same valuation. In calling attention to the high price fixed upon State land, the report says: "Under the acts of the General Government granting lands to the State, and also by a provision of the State Constitution, no lands owned by the State can be sold under \$10 an acre. This is an effectual barrier to the sale of lands, which probably can not be removed for many years, if at all. Even if the limit of price was reduced to \$5, or even to \$1.25, it is doubtful if sale could be found for State lands, for it must be remembered that the General Government at the present time owns over 50,000,000 acres of public lands in this State subject to entry under its various land acts, and with this amount of land at its disposal the General Government will be a competitor of the State in disposing of lands for many years."

Coal.—The output of coal in 1897 was 2,663,133 tons. The capacity of the coal mines under the supervision of the State Mine Inspector is 18,650 tons per day, indicating an output, if needed, of 5,595,000 per year.

Legislative Session.—Among the acts passed by the General Assembly are the following:

Providing for the rebuilding of the Wyoming General Hospital, and making available \$15,000.

For the organization of a State militia.

To encourage the beet-sugar industry.

To increase the State library.

For the protection of game and fish.

To rebuild the Rock Springs Hospital.

To encourage the destruction of predatory wild animals.

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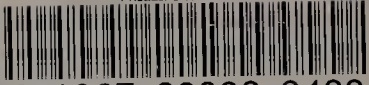
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